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# International law and governance of the Arctic in an era of climate change

A. SARRIS



*International law and governance of the Arctic in an era of climate change*



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

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*To Veatriki and Ismini ...*



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## Abbreviations

ABNJ	Area beyond national jurisdiction
ACAP	Arctic contaminants action program
ACIA	Arctic Climate Impact Assessment
AEPS	Arctic Environmental Protection Strategy
AIRS	Arctic Ice Regime System
ALDE	Alliance for Liberals and Democrats for Europe
AMAP	Arctic Monitoring and Assessment Programme
AMSA	Arctic Marine Shipping Assessment Report
APMS	Associated Protective Measures
AR4	Fourth Assessment Report
ARTA	Alpha Ridge Test of Appurtenance
AWPPA	Arctic Waters Pollution Prevention Act 1970 Canada
BEAR	Barents Euro-Arctic Region
BLG	Bulk Liquids and Gases
CAFF	Conservation of Arctic Flora and Fauna
CAO	Central Arctic Ocean
CASD	Commission on Arctic Sustainable Development
CBD	Convention on Biological Diversity
CBMP	Circumpolar Biodiversity Monitoring Program
CAMLR	Conservation of Antarctic Marine Living Resources
CFCS	Chlorofluorocarbons
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
CLCS	Commission on the Limits of the Continental Shelf
CLRTAP	Convention on Long-Range Transboundary Air Pollution
COFI	Committee on Fisheries
COMSAR	Sub-Committee on Search and Rescue
CPAN	Circumpolar Protected Areas Network
DE	Ship Design and Equipment
DOALOS	Division of Oceans Affairs and the Law of the Sea
EAF	Ecosystem Approach to Fisheries
EBM	Ecosystem-Based Management
EBSAS	Ecologically and Biologically Significant Areas
EEA	European Environment Agency
EEZ	Exclusive Economic Zone
EIA	Environmental Impact Assessment
EJIL	European Journal of International Law
EPPR	Emergency Prevention, Preparedness and Response
EU	European Union

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FAO	Food and Agriculture Organization of the United Nations
FMPS	Fishery Management Plans
GCI	Gwich'in Council International
GRIS	The Greenland Ice Sheet in a Changing Climate
IAATO	International Association of Antarctic Tour Operators
IASC	International Arctic Science Committee
IBCAO	International Bathymetric Chart of the Arctic Ocean
ICC	Intergovernmental Consultative Committee
ICC	Inuit Circumpolar Conference
ICCAT	International Commission on the Conservation of Atlantic Tunas
ICCPR	International Covenant on Civil and Political Rights
ICES	International Council for the Exploration of the Sea
ICJ	International Court of Justice
IEA	International Energy Agency
IGO	Intergovernmental Organisation
IHO	International Hydrographic Organization
IISD	International Institute for Sustainable Development
ILC	International Law Commission
IMO	International Maritime Organisation
IPCC	Intergovernmental Panel on Climate Change
IPCC	United Nations Intergovernmental Panel on Climate Change
IPHC	International Pacific Halibut Commission
IPOAS	International Plans of Action
ISOPE	International Offshore and Polar Engineering Conference
IUCN	International Union for Conservation of Nature
IUU	Illegal, Unreported and Unregulated Fishing
IYB	International Year on Biodiversity
JPOI	Plan of Implementation of the World Summit on Sustainable Development, Johannesburg
IPY	International Polar Year
LOMROG	Lomonosov Ridge Off Greenland
LORITA	Lomonosov Ridge Test of Appurtenance
LMES	Large Marine Ecosystems
LRTAP	Long Range Transboundary Air Pollution
MARPOL	International Convention on the Prevention of Pollution From Ships
MAST	Mapping of Arctic Sediment Thickness
MEPC	Marine Environment Protection Committee
MOU	Memorandum of Understanding
MPA	Marine Protected Area
MSC	Maritime Safety Committee
NAFO	Northwest Atlantic Fisheries Organization
NAMMCO	North Atlantic Marine Mammals Commission
NASCO	North Atlantic Salmon Conservation Organization
NATO	North Atlantic Treaty Organization
NAVAREAS	Regional Navigation Areas
NEAFC	North East Atlantic Fisheries Commission

NIMBY	“Not in My Back Yard”
NGO	Non-Governmental Organisation
NOAA	National Oceanic and Atmospheric Administration (USA)
NORDREG	Arctic Canada Traffic System
NPAFC	North Pacific Anadromous Fish Commission
NPFMC	North Pacific Fishery Management Council
OAS	Organization of American States
OPRC	Convention on Oil Pollution Preparedness and Response
OSPAR	Protection of the Marine Environment of the North-East Atlantic
PAME	Protection of the Marine Environment
PCB	Polychlorinated Biphenyls
PICES	North Pacific Marine Science Organization
POAC	Port and Ocean Engineering Under Arctic Conditions
POPS	Persistent Organic Pollutants
PSC	Pacific Salmon Commission
PSGS	Project Steering Groups
PSSA	Particularly Sensitive Sea Area
RAIPON	Association of Indigenous Minorities in the Far North, Siberia, the Far East of Russia
RFMO	Regional Fisheries Management Organisation
ROMO	Regional Oceans Management Organization
SAO	Senior Arctic Officials
SCAR	Scientific Committee for Antarctic Research
SCPAR	Standing Committee of Parliamentarians of the Arctic Region
SDWG	Sustainable Development Working Group (Arctic Council)
SEA	Strategic Impact Assessment
SLCF	Short-Lived Climate Forcers
SOAER	State of the Arctic Environment Report
SOLAS	International Convention on Safety of Life At Sea
SWIPA	Snow, Water, Ice and Permafrost in the Arctic
TAC	Total Allowable Catch
TENORM	Technologically Enhanced Naturally Occurring Radioactive Materials
UNCLOS	United Nations Convention on the Law of the Sea
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNFCCC	Un Framework Convention on Climate Change
UNGA	United Nations General Assembly
UNTS	United Nations Treaty Series
VCLT	Vienna Convention on the Law of Treaties
WCPFC	Western and Central Pacific Ocean Fisheries Commission
WMO	World Meteorological Organization



# Introductory chapter

## BACKGROUND

During the Cold War, the strategic rivalry between East and West also played out in the Arctic. This changed drastically from the early 1990s. The Arctic entered a period marked no longer merely by rivalry but equally by cooperation founded on common interests and a sense of shared purposes. At the same time, the Arctic was marginalized in the new global geopolitics and overshadowed by emerging threats and crises, notably the wars in the Balkans, the Great Lakes region and Afghanistan, and the fight against international terrorism.

By the turn of the millennium, however, evidence emerged suggesting the North Pole would experience fundamental change. Two main drivers of change can be identified. First, there were increasingly clear signs of the impact of global warming in the Arctic, notably the rapid reduction of the ice cap that would, at least seasonally, open up new areas to human activity. Second, a reassessment of the oil and gas resource potential of the North held out the prospect of massive untapped resources at a time when pessimism over petroleum's finite nature – the “end of oil” argument – was prevalent. The Norwegian government was among the first to respond when, in 2005, it declared the High North to be Norway's most important strategic priority in the years ahead. The public at large was told that the world was at the threshold of a major transformation: “In the years to come,” the Norwegian foreign minister said, “the High North will be one of the most important strategic areas in the world.”<sup>1</sup> Other countries would soon follow, although they viewed the Arctic as a foreign policy issue with varying degrees of urgency.

A further trigger of international attention to the Arctic was the planting of a small titanium Russian flag on the seabed of the North Pole in August

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1 J.G. Støre [Norway], “The High North”-Top of the World- Top of the Agenda, Center of the Strategic and International Studies, Washington DC, June 15, 2006, available online at [https://www.regjeringen.no/en/dokumenter/meld.-st.-7-20112012/id663433/?docId=STM201120120007000EN\\_EPIS&ch=1&q=Jonas%20Gahr%20Store%202006%20Washington%20DC&redir=true&ref=search&term=Jonas%20Gahr%20Store%202006%20Washington%20DC](https://www.regjeringen.no/en/dokumenter/meld.-st.-7-20112012/id663433/?docId=STM201120120007000EN_EPIS&ch=1&q=Jonas%20Gahr%20Store%202006%20Washington%20DC&redir=true&ref=search&term=Jonas%20Gahr%20Store%202006%20Washington%20DC).

2007.<sup>2</sup> This act by the Russian scientist Arthur Chilingarov became the key symbol in the perception of the Arctic as a disputed region. Predictions abounded of impending conflicts over boundaries and rights to resources. There were numerous references to “the race for the Arctic”, “the scramble for the Arctic”, and “the great game in a cold climate”.<sup>3</sup> This notion of conflict was nurtured by the emergence of a newly self-confident Russia under President Vladimir Putin – a Russia clearly moving in a more authoritarian, anti-liberal and anti-Western direction.

#### AIM OF THE THESIS

This Thesis will provide a comprehensive scholarly analysis of contemporary international law, geopolitics and international security in the North. It also traces historical lines, helping to make sense of where we stand today. Many recent publications hasten to conclude that the Arctic is experiencing a rush for resources and increased geopolitical rivalry.<sup>4</sup> The key aim of this Thesis is to identify the application and implementation of contemporary international law and its role in shaping the conditions for cooperation, stability and peace in the Arctic.

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2 Please find the relevant factual information at some of the world’s most accurate media: <https://www.theguardian.com/world/2007/aug/02/russia.arctic>; <https://www.cbc.ca/news/world/russia-plants-flag-staking-claim-to-arctic-region-1.679445>; <http://news.bbc.co.uk/2/hi/europe/6927395.stm>.

3 Charlie Duxbury, *The 5 most important races for the Arctic*, Politico Magazine, January 1<sup>st</sup> 2020, available at: <https://www.politico.eu/article/5-races-for-the-arctic-trade-resources-supremacy-tourism-salvation/>; Evagelos Meliopoulos, *Scramble for Arctic: The Potential for Conflict and Great Power Rivalry*, The Geopolitics, June 9 2018, available at: <https://thegeopolitics.com/scramble-for-arctic-the-potential-for-conflict-and-great-power-rivalry/>.

4 A. Anderson, *Can we keep up with Arctic Change?*, in *The Fast-Changing Arctic: Rethinking Arctic Security for a Warmer World* 17 (Barry Scott Zellen, Calgary, Alberta eds., 2013); M.M. Byers, J. Baker, *International law and the Arctic*, Cambridge University Press (2013); R. Howard, *The Arctic gold rush: the new race for tomorrow’s natural resources*, Continuum London Publishing Group (2009); C. Emmerson, *The future history of the Arctic*, Bodley Head (2010); Mathew Gross, *Geopolitical Competition in The Arctic Circle*, Harvard International Review, December 2 2020, available at: <https://hir.harvard.edu/the-arctic-circle/>; Christian Perez, *ARCTIC COMPETITION PART ONE: RESOURCE COMPETITION IN THE ARCTIC*, Foreign Policy, October 13 2020 available at: <https://foreignpolicy.com/2020/10/13/arctic-competition-resources-governance-critical-minerals-shipping-climate-change-power-map/>.

## RESEARCH QUESTIONS

- *how does contemporary international law respond to the massive changes that are underway in the Arctic?*
- *Is the existing legal framework effective and efficient in its response to the current complex and multilevel problems of the Arctic area?*
- *What is the geopolitical significance of the Arctic, regionally and globally?*
- *Which are the key stakeholders and how can their interests and policies impact on the development and implementation of international law?*
- *Is the Arctic Council as the primary forum for regional co-operation in the Arctic up to its task?*
- *What are the main characteristics of governance in the Arctic, and how can institutions and regimes promote stability and security in the region?*
- *What are the security challenges in the region?*

These are broad questions primarily of legal nature. I have found it appropriate to structure the analysis by assuming that conflict and instability in the North may erupt at two levels – the regional and the global. The first source of conflict relates to dynamics *within the Arctic*: what is the potential for regional conflict over issues concerning boundaries and access to resources? To what extent are the Arctic States militarizing the region? The second source of conflict relates to how *global developments* – or events in other parts of the world – impact interstate relations in the Arctic. To what extent should we expect security conflicts and tensions at the global level, or outside the North, to affect relations in the Arctic? At both levels, Russia plays a major role. Because of its size and stature, Russia is the biggest stakeholder in the North, but it is often perceived by the people in the West to be something of a “wild card” in Arctic affairs. Is it always in Russia’s interest to prioritize cooperation over confrontation? At both levels, the question arises whether the potential for conflict can be mitigated by shared interests and institutions? These political issues are the inseparable background of the effort to find the answers to the research questions as posed above.

## GEOGRAPHICAL

Where is the Arctic? What is the Arctic? In order to study the region, first a common understanding must be established as regards the characteristics, location and extent of the Arctic. Many debates about the Arctic become confused because multiple definitions are applied – or no definition at all. There are essentially three ways of defining the north: by geography, by function and by narrative.

One broad *geographical* approach is to say that the Arctic is an ocean surrounded by continents. This gives a core of five littoral or coastal nations –

the United States, Canada, Denmark/Greenland, Norway and Russia. Since the adoption of the Ilulissat Declaration of May 2008, they have been known collectively as the Arctic five.<sup>5</sup> Iceland wants to be recognized as a coastal State within the Arctic region, and would prefer “Arctic six” to be used as the collective noun.<sup>6</sup>

The most common and basic geographical definition of the Arctic is the area north of the Arctic Circle (66° 32'N). Eight countries have territory north of that circle: the Arctic five, Iceland, Sweden and Finland. They are the member States of the Arctic Council, the leading intergovernmental forum of the North. Other geographic definitions are the areas north of the 10°C isotherm for July, and areas beyond the tree line in northern countries. The various definitions of the region by Arctic Council working groups show clearly how they can vary according to themes of interest. The definition used by the Arctic Monitoring and Assessment Programme (AMAP), a working group of the Arctic Council, constitutes a compromise between various definitions:

“The “AMAP area” essentially includes the terrestrial and marine areas north of the Arctic Circle (66° 32'N), 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.”<sup>7</sup>

These are the areas that are deemed to be of interest to the AMAP, which centers on research and monitoring activities. Other working groups of the Arctic Council apply different definitions according to their focus areas.

## FUNCTIONAL

Functional definitions spring from usage of the region rather than specific boundaries. Areas located south of the Arctic Circle but with Arctic-like operating conditions are sometimes included in a functional definition of the region. For example, military planners often define the area according to operational requirements. From the 1970s, the missile range of Soviet strategic submarines enabled them to target the United States from the Arctic Ocean and Sea of Okhotsk. These strategic points were called “bastions” by the Soviets. In order to protect their “bastion” in the European part of the Arctic,

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5 The Declaration can be found online at: <https://www.jstor.org/stable/26995399>.

6 Iceland 2011: A parliamentary Resolution on Iceland’s Arctic Policy online available at: <https://www.government.is/media/utanrikisraduneyti-media/media/nordurlandaskrifstofa/A-Parliamentary-Resolution-on-ICE-Arctic-Policy-approved-by-Althingi.pdf>; K. Dodds, V. Ingimundarson, Territorial nationalism and Arctic Geopolitics: Iceland as an Arctic Coastal State, 2(1) *The Polar Journal* 21 (2012).

7 Available online at <http://www.amap.no/documents/doc/amap-assessment-report-arctic-pollution-issues/68>.

the Soviet Union established forward defence in the North Atlantic. Similarly, the United States Geological Survey, published in 2000,<sup>8</sup> included the East Siberian Basin in its estimates of Arctic undiscovered oil and gas resources, although the entire province lies south of the Arctic Circle. Because this area is covered by ice for large parts of the year, it made sense to include it in a functional definition of the Arctic. Moreover, the Arctic is crucial because it helps keep our world's climate in balance. Arctic sea ice acts as a huge white reflector at the top of the planet, bouncing some of the sun's rays back into space, helping to keep the Earth at a sustainable temperature. However, one of the most important impacts of climate change is visible in the Arctic: refers to the Arctic's its over-warmth during the past few decades is about twice as much as the global average. As the sea ice melts, there is less ice to reflect the rays, and more heat is absorbed by the ocean, magnifying the warming effect.

## NARRATIVE

The third method for defining the Arctic is to take cues from the key *narratives* of the North. Four narrative strains deserve particular mention: the Arctic as homeland to indigenous peoples; the European Arctic; the North American Arctic; and the Circumpolar Arctic. Indigenous peoples have inhabited the North for thousands of years. Their history, culture and economy are very diverse, and most of them have traditionally seen themselves as part of a local, rather than a wider northern or Arctic, community. The indigenous populations were largely disregarded when rim land powers began to explore, exploit and occupy the North. Recent years have seen the rise of indigenous cooperation in the North as well as growing recognition of their cultures and knowledge.<sup>9</sup>

In common usage, "the High Arctic", "the North", "the Far North" and "the High North"<sup>10</sup> refer to either the American or the European portions of the Arctic. The expressions suggest different physical, historical, national and political characteristics. The European Arctic has a long and rich history of polar expeditions, and its identity is embedded in Norwegian and Russian history and culture. Generally speaking, the European Arctic is seen as more accessible than the North American. It is rich in living marine resources,

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8 The maps and more specific details can be found on the website of the USGS available online at <http://water.usgs.gov/watuse/data/2000/>.

9 The increased recognition of the existence and rights of indigenous peoples is reflected in the United Nations Declaration on the Rights of Indigenous Peoples, adopted on 2 October 2007, A/RES/61/295 (UNDRIP) available online at [http://www.un.org/esa/socdev/unpfii/documents/DRIPS\\_en.pdf](http://www.un.org/esa/socdev/unpfii/documents/DRIPS_en.pdf).

10 Some reference to the common usage of various terms can be found in the following article: <https://www.adventurecanada.com/canadian-high-arctic-and-greenland/the-brave-and-shameful-history-of-high-arctic-sovereignty-in-canada>.

particularly in the Barents Sea, and was subject to great power rivalry during the Cold War. The Kola Peninsula is a militarized region, with a power asymmetry between Russia on the one hand and Norway on the other. For some years, the Norwegian government has used the term “High North” in international communications, intending it to be a synonym for the Norwegian term *nordområdene* (i.e. “the northern areas”), with reference to the European parts of the Arctic, including northern Russia.<sup>11</sup>

The North American Arctic also has a long and rich history of polar expeditions, but the area is less accessible, less well developed and less densely populated than the European North. While the Arctic is fundamental to Canada’s identity, the historical and political narratives of the United States focus little on the region. Awareness of the North in the United States is largely confined to Alaska and imaginative notions involving wilderness, the “gold rush” of the 1890s, and the “oil boom” from the late 1960s.<sup>12</sup> The United States and Canada have a close partnership that includes protecting North America from external threats, but the countries disagree over straits and boundaries.<sup>13</sup> Periodically, their disputes spark strong Canadian manifestations of nationalism and assertions of sovereignty in its Arctic territories. However, while promising to stand guard over the “True North, strong and free”, Canadian governments have often been reluctant to display extensive and practical political commitment to the North.<sup>14</sup>

The “Circumpolar Arctic” is more of a recent political concept; we can call it “the new Arctic”. It is closely associated with environmental challenges and climate change, notably the impact of the rapid melting of the ice. The Arctic Council, established in 1996, is today the main institution and most important symbol of this narrative. The use of the term “Arctic” in this Thesis, refers to the Circumpolar Arctic. The term “High North” denotes the European land and sea areas in the Far North. The Thesis focuses generally on the Arctic, while paying particular attention to the European High North. The reasons for focusing on the European Arctic are twofold. First, Russia deserves special attention due to its size and significance. Second, a greater increase in activity in the European North is foreseeable due to its accessibility, compared to the North American Arctic.

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11 O.G. Skagestaed, *The High North. An elastic concept in Norwegian Arctic Policy*, FNI Report, Oslo (2010).

12 M. Nuttal, *People, Environment, and the Arctic Energy Frontier*, 2010, p19, available at: [https://www.iwgia.org/images/publications/0451\\_Pipeline\\_dreams.pdf](https://www.iwgia.org/images/publications/0451_Pipeline_dreams.pdf).

13 *Ibid.* at p. 20.

14 K.S. Coates, P.W. Lackenbauer, W.R Morrison, G. Poelzer, *Arctic Front: Defending Canadian the Far North*, Toronto Thomas Allen (2008).

## GEOPOLITICS, SECURITY AND INSTITUTIONALISM

This Thesis is inspired by both international law and geopolitics in its broadest sense. Geopolitics concerns the connections between geographic space, power politics and of course international law. Since geographical parameters typically influence the dynamics of State interaction, geopolitics is often invoked to describe and analyse the pursuit and management of clashing national interests within a specific geographical context. Geographical analysis is closely associated with the realist strand in the study of international relations. According to realists, the highest-ranking national interest is State survival, a view that manifests itself in a principal preoccupation with security.<sup>15</sup> The primary tools for maintaining security in an anarchical international system are military capability and economic wealth. Since all States attempt to wield these tools to amass power, competition and rivalry are likely to ensue, sometimes escalating into conflict.<sup>16</sup>

In this respect, any analysis of geopolitics and conflict must include the question of security. The concept of security has been considerably broadened in recent decades. It is no longer reserved for State survival and State security, often labelled traditional or “hard security”. Scholars have broadened the concept to include topics such as economic security, social security and human security, commonly referred to as “soft security”.<sup>17</sup> In this Thesis, security is categorized as follows. State security traditionally refers to the protection of territorial integrity, but also comprises the protection of State authorities’ political sovereignty. State security may be challenged by political and military pressure and intimidation, from State and non-State actors and in the form of conventional military action or non-conventional forms such as concerted cyber or terrorist attacks (aimed at forcing the State into political submission). In situations where their security interests are at stake, States have traditionally legitimized the use of all their available resources in their defense, and been willing to bear considerable casualties and costs. Societal security concerns the protection of the population and infrastructure in a situation where the State’s security, sovereignty and territorial integrity are not at stake.<sup>18</sup> Threats against societal security can be man-made and intentional, such as (smaller-

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15 Kevin Bloor, *Theories of Global Politics*, May 15 2022, available at: <https://www.eir.info/2022/05/15/theories-of-global-politics/>.

16 Hence I would reiterate that while my understanding rests upon classical geopolitics, the concept is used very broadly. Today there is a wide array of perspectives on geopolitics among the so-called critical geopolitics, which focused on spatial construction of social identity, see G. Tuatkail, Dalby, P. Routledge, *The Geopolitics Reader*, Routledge (2<sup>nd</sup> ed., 2006). These various approaches and wider theoretical debates are refreshing, but far beyond the scope of this research.

17 *Supra* note 10.

18 Maria Mazzanti. *From state sovereignty to responsibility to protect*. Political science. Institut d’études politiques de Paris - Sciences Po, 2022.

scale) terrorist attacks, organized crime or human induced environmental degradation; but natural disasters, grave accidents and catastrophes can also threaten societal security. Human security relates to the protection and well-being of individuals and peoples and is also deeply entrenched in contemporary international law.

## INSTITUTIONALISM

One school of international relations, whose impact on the scholarly debate about the Arctic has been considerable, is institutionalism. This approach acknowledges that while geopolitics and security matter, institutional structures bring a degree of governance and stability to international society. This is through mechanisms such as norms and standard operating procedures that tame potential conflicts emerging from the clash of national interests. With his 1998 book *Creating Regimes: Arctic Agreements and International Governance*, Oran Young was among the first scholars to conduct theoretically oriented study into the role of international institutions in solving various problems, using the Arctic as a case study.<sup>19</sup> Young, and other institutionalists with an interest in the Arctic, are debating whether conflict or continued cooperation is likely to be the hallmark of Arctic relations in the years to come.

The main argument in support of cooperation is that institutions enhance stability and help to prevent disagreement from emerging or escalating. First, institutions and regimes are important meeting places and instruments that engage actors under a common cooperative structure. The longstanding cooperation on nuclear safety by a number of States and institutions illustrates this point. Secondly, institutions and regimes define the rules concerning the use of Arctic resources and sea lanes. Most importantly, the Arctic States have committed themselves to respecting the law of the sea, manifested in the Ilulissat Declaration of 2008. Thirdly, institutions and regimes tend to insulate specific issues from other issues on which the actors might disagree. The effective and sustainable fisheries management in the Barents Sea illustrates this point.

At this point, an initial reference to the Arctic Council has to be made.<sup>20</sup> The Arctic Council is an intergovernmental forum established in 1996 to promote cooperation, coordination and interaction among the Arctic States, with the involvement of Arctic indigenous communities and other Arctic inhabitants on issues of common importance. Originally focused primarily on environmental protection and sustainable development, it has evolved into

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19 O.R. Young, *Creating Regimes: Arctic Agreements and International Governance*, Ithaca NY, Cornell University Press (1998).

20 There is a more in-depth and analytical discussion on the role of the Arctic Council and its key role in Arctic Governance at the relevant chapter 4 of this thesis.

a forum which also addresses social, cultural and economic issues with both regional and global implications. This broadening of the Council's agenda coinciding with the rising geopolitical importance of the Arctic and the onset of climate change has resulted in the Council becoming a focus of increasing interest from both inside and beyond the Arctic.<sup>21</sup>

This has resulted in new demands placed on the Council, attracted an increasing number of participants and instigated a period of transformation as Arctic States work to find a way to balance conflicting demands for improving the effectiveness of the Council and taking care of national interests. The failure of the Foreign Ministers of the Arctic States for the first time in the history of the Council to agree upon a Declaration at the 2019 Arctic Council Ministerial underlines the challenges being faced.<sup>22</sup> For the purposes of this Thesis the Arctic Council is not considered as a competent international organization governed by the applicable principles and rules of international law, making the organization's functioning mandatory for its member States. The Arctic Council does not include mandatory processes for its member States and does not have competence by its mandate to the management of living and non-living natural resources of the Arctic Ocean. Its governing bodies mainly operate as a round table for discussion and exchange of views amongst the stakeholders rather than organs competent to make decisions binding for its member States. Chapter 4 of this Thesis analyzes the role of the Arctic Council within the broader scope of Arctic governance where the Council does have a crucial role to play.

## INTERNATIONAL LAW

Contemporary international law plays the central role in this Thesis. Before stating what is included, I must first explain what is not. There is a discussion among the international community as to whether the Arctic should be characterized as a self-contained regime<sup>23</sup> and whether the law of the sea, as codified in the 1982 United Nations Convention on the Law of the Sea

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21 Knecht, S., 2017. The politics of Arctic international cooperation: Introducing a dataset on stakeholder participation in Arctic Council meetings, 1998–2015. *Cooperation and Conflict* 52 (2), 203–223.

22 Koivurova, T 'Is this the end of the Arctic Council and Arctic governance as we know it? The Polar Connection', 2019, available at: <http://polarconnection.org/arctic-council-governance-timo-koivurova>.

23 D. French, K. Scott, International Legal Implications of climate Change for the Polar Regions: too much, too little, too late?, 10 *Melbourne Journal of International Law* 631 (2009), O. Ferrajolo, Protecting Polar Regions from Persistent Organic Pollutants: Some remarks in the Light of the 2001 Stockholm Declaration, in *The Antarctic Legal System-The protection of the Environment of The Polar Regions* 55 (G. Tamburreli, G. Editore eds., 2008), at 68-70.

(UNCLOS),<sup>24</sup> is the only means of addressing maritime disputes. This statement includes many problematic aspects that will be addressed in the first part of this Thesis. My contention is that the Arctic cannot be characterized as a self-contained regime. There are three important reasons for this. The first is that under international law<sup>25</sup> and in accordance with the jurisprudence of the International Court of Justice (ICJ),<sup>26</sup> self-contained regimes are legal systems, like the law of the World Trade Organization (WTO) or the law of the European Union, and not geographical areas.<sup>27</sup> Second, a holistic approach to Arctic management cannot take place with a “closed” legal system, which is limited to a specific region. This is the case with the Antarctic legal system, which practically prevents all activities except for scientific research.<sup>28</sup> On the contrary, effective governance regimes are built upon rules of law that are accepted and imposed generally without efforts to create “special circumstances” that are not always so special. Third, main points of disagreement on UNCLOS exist, including as regards the method for delineating the extended continental shelves in the Arctic, the non-participation status of the US to UNCLOS, and the mineral rights in the international seabed.

Reference must be made to recent developments in the field of international law. There has been a gradual build-up of Arctic-related issues which increasingly pose challenges to be addressed within the framework of international law. International law, both customary and conventional, applies to the Arctic.<sup>29</sup> The legal status of the Arctic Ocean is determined by the international law of the sea, which is embodied in UNCLOS.<sup>30</sup> In particular, UNCLOS provisions dealing with the territorial sea, continental shelf, exclusive economic zone, navigation, fisheries, and other high seas freedoms, are most pertinent to the Arctic as its ocean space becomes increasingly accessible. UNCLOS also contains a special article about ice-covered waters of the Exclusive Economic Zone (EEZ).<sup>31</sup> Furthermore, the dispute settlement provisions in the Convention also apply to the Arctic. Likewise, the Convention on Biological Diversity and

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24 1982 United Nations Convention on the Law of the Sea, 1833 UNTS 396, entered into force November 16, 1994. (hereinafter: UNCLOS).

25 B. Simma, D. Pulkowski, *Of Planets and the Universe: Self-contained Regimes in International Law*, 17(3) EJIL 483 (2006), at 484-485.

26 *S.S. Wimbledon*, 1923 PCIJ (Ser. A) No. 1, at 23; *United States Diplomatic and Consular Staff in Tehran Case*, 1981 ICJ Rep. 45.

27 The Antarctic Treaty, which is considered as a self-contained regime is a *per se* case and not the rule. On the concept of self-contained regimes in international law, see B. Simma, *Self-Contained Regimes*, XVI Netherlands Ybk (1985) 111.

28 M. Weber, *Power Politics in the Antarctic Legal System*, in *Polar Oceans Governance in an Era of Environmental Change* 86 (T. Stephens ed., 2014), at 90-93.

29 D. Rothwell, *The Polar Regions and the Development of International Law*, Cambridge University Press (1996).

30 *Supra* Note 18, UNCLOS.

31 UNCLOS Art. 233.

the UN Framework Convention on Climate Change<sup>32</sup> and the Paris Agreement on Climate<sup>33</sup> are applicable to the Arctic.

Melting of ice in the Arctic, linked to the impact of climate change, raises pertinent legal issues. Important Arctic legal issues include the claims of Arctic States to an outer continental shelf over the seabed of the Arctic Ocean, the exploration and exploitation of natural resources both in the seabed and in subsoil, new navigational routes that are now ice-covered, potential new fisheries areas, species and opportunities, and conservation of the Arctic and the major global ecological functions it performs.

## THE 2022 WAR IN UKRAINE

On 24 February 2022 President Putin proclaimed in an extensive public statement his decision to order the Russian military troops to invade Ukraine on various grounds that all seem to lack any kind of legitimacy.<sup>34</sup> The impact of his decision on the Arctic became soon clear since the Arctic Council paused all of its work and that of its subsidiary bodies until further notice, only a few days after the beginning of the illegal invasion in Ukraine.<sup>35</sup>

Despite the Arctic Council's previous efforts to prevent conflicts elsewhere from affecting its work, it suspended its activities shortly after Russia's invasion in 2022. Russia had only assumed its two-year chairmanship of the organisation in May 2021. It had planned an ambitious programme of activities focusing on four areas: Arctic inhabitants and indigenous peoples, environmental protection and climate change, socio-economic development, and strengthening the Arctic Council. Despite tensions between Russia and the West reaching new heights, in 2021 experts and diplomats expected that Arctic cooperation would prevail, and that the Russian chairmanship would be fruitful.

However, it was not to be. On 3 March 2022, the other seven Arctic states issued a statement condemning Russia's invasion of Ukraine.<sup>36</sup> They wanted to make a stand and, more pragmatically, they were no longer in a position to travel to Russia for meetings and decided to pause all Arctic Council cooperation until further notice. Russia considered this to be an irrational step and feigned surprise and incomprehension: after all, the Arctic was supposed to be the unique area where cooperation was possible regardless of what was

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32 1771 U.N.T.S. 107, 165; S. Treaty Doc No. 102-38 (1992).

33 U.N. Doc. FCCC/CP/2015/L.9/Rev/1 (Dec. 12, 2015).

34 The full text of his speech can be found at: <https://www.spectator.co.uk/article/full-text-putin-s-declaration-of-war-on-ukraine>.

35 The announcement of the Council can be found on the official web page of the Council at: <https://www.arctic-council.org/>.

36 Joint Statement on Arctic Council Cooperation following Russia's Invasion of Ukraine, March 3 2022, available at: <https://www.state.gov/joint-statement-on-arctic-council-cooperation-following-russias-invasion-of-ukraine/>.

happening elsewhere in the world. Moscow argued that the Arctic Council exists to foster environmental protection of this fragile region and socio-economic development and should therefore prevail despite confrontation elsewhere.

This notice has been given at the second half of 2023. The eight Arctic states – Norway, Canada, the US, Denmark, Iceland, Finland, Sweden, and Russia – agree on a critical first step forward for the Arctic Council: New guidelines allow the working groups and the expert group, where the council's main work takes place, to resume their activities.

The agreement has been reached in consultation with the six indigenous organizations that are permanent participants of the council. In more detail, the new guidelines say that the working groups can initiate decision-making processes and resume existing projects, as well as suggest new ones. This also includes that the groups may revitalize cooperation with observers and external parties that contribute to their project work. The resuming of activity of the Arctic Council does not apply to meetings at a political level or Senior Arctic Official meetings.

No-one can predict how this war is going to end but should someone look what happened in the Arctic in 2014 when Russia invaded Crimea, it would be more than obvious that despite the fact that this war is not about the Arctic, the Arctic will be highly affected. In 2014 – the same year that Russia annexed the Crimean Peninsula from Ukraine – the Northern Fleet became the main component in a strengthened military presence in the north. To international observers, Russia's military activities in the Arctic took on an increasingly aggressive stance, raising the stakes for other Arctic States. In the words of Katarina Zysk: “[t]he major thrust of NATO's interests in the Arctic came after the annexation of Crimea. Ukraine was a game changer, because even though Russia had been generally cooperative and predictable in the Arctic, NATO could not detach what Russia was doing in Ukraine from its military expansion in the Arctic.”<sup>37</sup>

This meant also increasing NATO's presence in the Arctic to ensure that if Article Five were triggered by a Russian attack in the region, the group could provide the required collective defence.<sup>38</sup> From 2016 onwards, it upped the frequency of its military exercises in the Arctic, even displaying an ability to project power beyond its Arctic waters and assert maritime control. The current war in Ukraine has raised the stakes once again. Sweden and Finland have decided to join NATO which would make all the Arctic States except Russia

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37 Katarina Zysk, Professor of International Relations and Contemporary History at the Norwegian Institute for Defense Studies, SciencePro, 15 March 2022, available at: <https://www.sciencespo.fr/ceri/en/content/russian-military-strategy-and-power-projection-arctic-war-ukraine-interview-katarzyna-zysk> at xx.

38 *Ibid.*; Please see also the NATO Summit 2021: The Arctic Can No Longer Be an Afterthought, available at: <https://www.heritage.org/defense/report/nato-summit-2021-the-arctic-can-no-longer-be-afterthought>.

part of the military alliance. NATO is conducting a strategic re-evaluation of how the Arctic sits within the alliance and NATO decisions will determine the future relationship.<sup>39</sup> Given the war threat from Russia about this NATO expansion, tensions could escalate in this respect.

Among Western allies, too, the war in Ukraine may prove to be a turning point for political relations in the Arctic, but not necessarily a rupture. The Arctic Council has paused its work temporarily, but hopefully it is not breaking apart due to the fact that the main reason of its establishment, the cooperation among Arctic States, has been seriously damaged. It is quite unclear whether the Arctic States would be willing to re-establish them in the post-war era and, if so, on which basis. More than anything, trust has been severely broken in relationships with Russia, so Arctic States are rethinking how they can move forward.

This Thesis acknowledges that the impact of the Ukraine war on the Arctic cannot be predictable on that new landscape that is going to be created on the post war era. Arctic cooperation has been on the spotlight for many years and has been constantly challenged especially in the aftermath of the invasion in Crimea and during the Donald Trump presidency as it will be further explained in the relevant Chapter of this Thesis. The future of Arctic cooperation is directly linked with the end of the War in Ukraine and the relationship that will be established between Russia/China and the West. It is very difficult to predict the immediate effects of any war, due to its very nature. Especially of a War that is held indirectly between the most powerful States of the planet and will definitely redefine the balance of power and influence among its parties. However, due the complexity and the depth of the overlapping interests and the absolute need for cooperation among the Arctic States, it will be crucial to find a *modus operandi* and a *modus vivendi* based on the desire to restore and maintain peace and respect the most fundamental rules and principles of the UN Charter. Therefore, despite the fact that some suggestions presented in this thesis may look slightly optimistic for the current state of play, I consider that the present war will act as a catalyst to rebuild the damaged relations on a more stable and cooperative basis in due course. The Arctic States seem to be very reluctant to extend the present conflict to the Arctic or to consider a new conflict in the Arctic as an option. Humanity cannot afford it.

## METHODOLOGY

This thesis follows primarily a public international law approach. This approach is largely prompted by the character of the subject-matter itself,

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39 *Ibid.*

involving questions of sovereignty, consent and authority. This thesis bases its analysis, firstly, on the traditional sources of international law as incorporated in Article 38(1) of the ICJ Statute.<sup>40</sup> This provision states that the ICJ, which is entrusted with the task of deciding disputes in accordance with international law, shall apply treaties, customary international law and general principles of law as its main sources. Moreover, the Court shall also draw on decisions of courts and tribunals and on the writings of the most prominent scholars in the field of international law as evidence of rules of law. These various sources interact closely and influence each other as international law is not a static system but rather a living system and in part also a decision-making process.

## TREATIES

Many of the general rules and standards examined in this thesis are incorporated in treaties, one of the primary sources of international law as listed in Article 38 of the ICJ Statute. One of the primary aims of this thesis is to determine the extent to which these existing rules of international law can effectively address problems connected to the complex and multilevel disputes arising in the Arctic. However, the existing rules are part of different subsystems, which to a large extent operate independently from each other. International law is widely known as a fragmented field of law. Furthermore, in order to address the problems connected with multilevel international governance in a comprehensive manner, it is necessary to bring these fields closer together. One of the principal methods used in this thesis to achieve this is through treaty interpretation. In this respect, reference must be made to the established rules on treaty interpretation as codified in Articles 31 and 32 of the 1969 Vienna Convention on the Law of Treaties.<sup>41</sup>

According to the basic rule for treaty interpretation formulated in Article 31(1) of the 1969 Vienna Convention:

“[a] treaty shall be interpreted in good faith in accordance with the ordinary meaning to be given to the terms of the treaty in their context and in the light of its object and purpose”.

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<sup>40</sup> Statute of the International Court of Justice, Art. 38(1), 33 UNTS 993, UKTS 67 (1946).

<sup>41</sup> 1969 United Nations Convention on the Law of the Treaties, 1155 UNTS 331, entered into force January 27, 1980. (hereinafter: VCLT); These rules are generally considered to represent customary international law. See, e.g. the judgment of the International Court of Justice in *Oil Platforms (Iran v. U.S.)*, 2003 ICJ Reports 16, at para 41, in which the Court refers to “the general rules of treaty interpretation, as reflected in the 1969 Vienna Convention on the Law of Treaties”. Also see the earlier judgment of the International Court of Justice in the *Libya v. Chad Case*, 1994 ICJ Rep. 64, at para 41.

This basic rule is developed using the rules formulated in the other subsections of Article 31.<sup>42</sup> Article 31 (3) of the Vienna Convention is particularly relevant in this respect. It lists the other elements to be taken into account together with the context of the treaty. These include subsequent agreements and practice as well as “any relevant rules of international law applicable in the relations between the parties” to the treaty.<sup>43</sup>

Both Article 31(1) and (3) of the Vienna Convention contain elements that permit an interpretation of the provisions of a treaty in the light of the broader system of international law. First, rules of international law that are not part of the framework of the treaty can be taken into account when determining the “ordinary meaning” of the terms of treaty provisions in their context and in the light of their object and purpose in accordance with Article 31(1) of the Vienna Convention, including rules from different subsets of international law. The WTO Appellate Body’s reference in the *Shrimp/Turtle* case to environmental treaties for the interpretation of the term “exhaustible natural resources” as used in the 1947 GATT is a well-known example.<sup>44</sup>

Secondly, rules from different subsets of international law as well as general international law can be considered to be “any relevant rules of international law applicable in the relations between the parties” for the interpretation of the substantive obligations. This is often referred to as the systemic method of interpretation. In the *Oil Platforms* case, for example, the International Court of Justice referred to this method in order to interpret the obligations of the parties to a bilateral treaty in the light of their obligations under general international law.<sup>45</sup>

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42 See the Commentary to the ILC draft Articles on the Law of Treaties, which indicates that “the process of interpretation is a unity and that the provisions of the article form a single, closely integrated rule”. Reports of the International Law Commission on the second part of its seventeenth session and on its eighteenth session, UN Doc A/6309/Rev.I, Yearbook of the International Law Commission 1966, Vol. II, p. 220.

43 VCLT, Art. 31 (3) states that “[t]here shall be taken into account, together with the context: (a) any subsequent agreement between the parties regarding the interpretation of the treaty or the application of its provisions; (b) any subsequent practice in the application of the treaty which establishes the agreement of the parties regarding its interpretation; (c) any relevant rules applicable in the relations between the parties”.

44 United States – Import Prohibition of Certain Shrimp and Shrimp Products, Report of the Appellate Body, WT/DS58/AB/R, 12 October 1998,.

45 *Oil Platforms (Iran v. U.S.)*, 2003 ICJ Reports 161, at para. 41. The Court stated in relevant part: “under the general rules of treaty interpretation, as reflected in the 1969 Vienna Convention on the Law of Treaties, interpretation must take into account “any relevant rules of international law applicable in the relations between the parties” (Art. 31, para. 3 (c)). The Court cannot accept that Article XX, paragraph 1 (d), of the 1955 Treaty was intended to operate wholly independently of the relevant rules of international law on the use of force...”.

a) *Customary international law*

Customary international law constitutes an important source for this study, first, because it is capable of binding all States, irrespective of their adherence to a particular treaty regime.<sup>46</sup> In view of the near absence of specific global and regional treaties on the Arctic customary international law is important since it reflects the *opinio juris* and the practice of the relevant States on the management of the Arctic. In this sense, customary international law obligations are therefore basic obligations that are binding on the large majority of states. Furthermore, customary international law obligations play an important role in the interpretation of treaty provisions, because by their very nature they constitute “relevant rules that are applicable in the relations between the parties” according to Article 31 of the Vienna Convention. Moreover, a major advantage of customary rules over treaty obligations is related to their operation in situations of legal uncertainty. In contrast, the continued applicability of treaty obligations is largely dependent upon the operation of the treaty of which they are part. Treaties can be suspended or their operation can be affected in other ways, which also affects the applicability of the individual obligations contained in the treaty, unless these treaty obligations represent customary international law as well.<sup>47</sup> Of course, obligations under customary international law do not operate in the same manner irrespective of the circumstances in which they apply. For example, the customary international law obligation to conduct an environmental impact assessment for economic projects that are likely to cause damage to the environment does not necessarily give rise to the same procedural obligations in situations of armed conflict as it does in situations of peace.<sup>48</sup> In order to determine the existence of a rule of customary international law, Article 38 (1) (b) of the ICJ Statute requires “evidence of a general practice accepted as law”. Therefore, it must be demonstrated that there is an established State practice (objective requirement) and that States are convinced that this behaviour is required under international law (subjective requirement). In an often-quoted paragraph of the ICJ judgment in the *North Sea Continental Shelf* cases, the Court explains the subjective requirement as follows:

“[n]ot only must the acts concerned amount to a settled practice, but they must also be such, or to be carried out in such a way, as to be evidence of a belief that this practice is rendered obligatory by the existence of a rule requiring it. The need

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46 As discussed in chapter II, it should be noted that the US is not a party to UNCLOS.

47 On the relationship between treaty law and customary international law, see *Military and Paramilitary Activities in and against Nicaragua (Nicaragua v. U.S.)*, 1986 ICJ Rep. 14, at paras 173-179. Also see Y. Dinstein, *The Interaction between Customary International Law and Treaties*, 322 *Recueil des Cours* 243 (2006).

48 This obligation is discussed in more detail in Chapter 4 of this study.

for such a belief, i.e., the existence of a subjective element, is implicit in the very notion of *opinio juris sive necessitates*”.<sup>49</sup>

Consequently, rules of customary international law can be considered to provide a general legal framework applicable to the exploitation of natural resources in line of what is provided in multilateral treaties or in the absence thereof. This legal framework applies to the large majority of States and it operates even when specific treaty obligations do not, or when States have not become parties to these treaties. For these reasons this thesis devotes considerable attention to establishing the customary legal status of rules and principles, even when they have been recognised in treaty law as well.

b) *Soft law*

‘Soft law’, in particular principles and standards formulated in non-binding documents, constitutes an important reference point for this thesis.<sup>50</sup> Although soft law comes in many different forms, most instruments referred to in this thesis can be classified in one of the two following categories. The first consists of non-binding instruments adopted by States, either directly or through their representation in an intergovernmental organization, while the second consists of non-binding instruments adopted by other actors with the purpose of influencing State behavior.

The work of the UN International Law Commission is relevant in this respect. This Commission was established by the UN General Assembly in 1947 as an independent expert body with the specific mandate to promote “the progressive development of international law and its codification”.<sup>51</sup> Furthermore, reference can be made to the work of the International Law Association

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49 *Continental Shelf Cases*, 1969 ICJ Rep. 3, at para 77.

50 The phenomenon of ‘soft law’ is broader and is also referred to in relation to soft norms in otherwise binding treaties. However, this book focuses on soft law in the sense of non-binding documents. For discussions on the notion of soft law, see, eg A. Boyle, C. Chinkin, *The Making of International Law*, Oxford University Press (2007); D. Shelton, *International Law and ‘Relative Normality’*, in *International Law 137* (M. Evans ed., 2014); H. Hillgenberg, *A Fresh Look at Soft Law*, 10 *EJIL* 499 (1999); J.J. Kirton, M.J. Trebilcock, *Hard Choices, Soft Law: Voluntary Standards in Global Trade, Environment and Social Governance*, Routledge (2004); J. Ellis, *Shades of Grey: Soft Law and the Validity of Public International Law*, 25 *Leiden J. Int’l L.* 313 (2012); M. Goldmann, *We Need to Cut Off the Head of the King: Past, Present, and Future Approaches to International Soft Law*, 25 *Leiden J. Int’l L.* 335 (2012). For a critical analysis of the notion of soft law, see J. Klabbers, *The Redundancy of Soft Law*, 65 *Nordic J. Int’l L.* 167 (1996); J. d’Aspremont, *Formalism and the Sources of International Law: A Theory of the Ascertainment of Legal Rules*, Oxford University Press (2011).

51 Statute of the International Law Commission, UN General Assembly Resolution 174 (II) of 21 November 1947, last amended by resolution 36/39 of 18 November 1981, Art. 1. Cf. also UN Charter Art. 13. Refer also to the recent book by the United Nations on Seventy years of the International Law Commission.

and especially to the New Delhi Declaration of Principles of International Law Relating to Sustainable Development.<sup>52</sup> The second category of soft law also contains instruments adopted by independent treaty bodies, such as the General Comments, recommendations and case law adopted by human rights treaty bodies.

The principal question that arises in relation to the concept of soft law is what value – if any – these instruments have for international law. The concept of soft law is subject to an intense debate in the academic literature between authors who attribute legal value to soft law documents and those who adhere to a strictly binary – or positivist – approach to international law.<sup>53</sup> This thesis does not regard soft law as a direct source of international legal rights or obligations. For an important distinction between soft law and law proper is that soft law does not have an immediate legal effect. It cannot be directly relied on in court or in inter-State relations in general, nor does the violation of soft law trigger the application of the secondary rules of international law, such as those relating to state responsibility. In other words, soft law does not create rights or obligations for States and it can be “set aside” without any legal consequences.

Nevertheless, soft law is important for international law in a number of ways. Specifically, for the purposes of this book, it performs two important functions. First, soft law is used in this book as a means to interpret and clarify obligations under international law. For example, it is used as a source of information to determine the ordinary meaning of vague or open-ended treaty terms, in accordance with Article 31(1) of the 1969 Vienna Convention on the Law of Treaties. Furthermore, soft law documents are also used in a more general way to give substance and meaning to obligations under international law. The General Comments and case law made by human rights treaty bodies, for example, are used to interpret the provisions of the relevant treaties and clarify the substantive obligations of parties to these treaties in a contemporary context.

In addition, soft law documents are relied upon in this thesis as a source of information to indicate the direction in which international law is developing (or one hopes it will be developed (*lex ferenda*)). This is especially true for soft law that falls into the first category, i.e., non-binding documents adopted by States. The declaration on the indigenous peoples of the Arctic adopted by the Arctic Council serves as an example. Although soft law documents cannot create *opinio juris* as such, soft law documents can be regarded as a form of recognition by States of the importance of certain principles and standards. These documents represent an initial agreement between States to take certain principles or standards as guidelines for their future behavior and as a basis for future legal development.

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52 UN Doc. A/57/329, 31 August 2002.

53 See *supra* for literature on the notion of soft law.

In many cases, the initial proclamation of principles or standards in non-binding documents has subsequently resulted in a formal endorsement of these principles or standards, either through their incorporation in a formal treaty or through their gradual acceptance as norms of customary international law. Soft law is used for these purposes in this Thesis.

## THE STRUCTURE OF THE THESIS

This research is divided into two parts; the first explores the contemporary international law of the sea applicable to the Arctic and consists of three chapters. The first chapter is referred to as Arctic territorial and resources claims that have been developed since 2012 in the light of the effects of climate change in the area. Special emphasis is given to the legal status of the commitment on behalf of the United States, and whether or not it is bound by UNCLOS in relation to the delimitation of maritime borders. Attention is paid to the outer limits of the continental shelf delineation pursuant to Article 76 of UNCLOS and its applicability in the relations of the Arctic States *vis-à-vis* United States.

The second and third chapters focus on the sea itself and the regimes regulating economic activity in the area. The second chapter discusses the new navigational routes that are already available or that will be very soon, with the potential to change the global navigational map. The details of the regimes already in force are to be analyzed, explaining potential gaps and legal vacuums. The third Chapter deals with fisheries management and protection. Fishing currently constitutes the largest economic activity in the Arctic Ocean. An understanding of its regulation is crucial to explain the importance of the sustainable management of living resources. Fishing regulation impacts not only the economic activity of States, but also the financial viability and physical existence of indigenous peoples. It is crucial for protecting the sustainability and the feasibility of the marine ecosystem itself.

This thesis does not directly deal with hydrocarbon exploration and exploitation as a special activity for two main reasons. First, at least for now, there is no prospect of exploration and exploitation of gas and oil in areas outside national jurisdiction. Second, even if such exploration and exploitation will be possible in the future, UNCLOS has already created a regime for the areas existing within the extended continental shelf and for the ones existing in the international seabed (the so-called Area) that is discussed in the relevant chapters.

The second part of the thesis deals with Governance issues. The first Chapter of this part (Chapter 4) examines and rejects the idea that the current framework for Arctic governance follows the “conventional wisdom”. It examines the function of the Arctic Council as the primary consultative forum on the exercise of governmental authority in the Arctic and aims to underline

its weaknesses and points for improvement either through transforming the current Council or by replacing it with a more effective regional organization. The second chapter of this part (Chapter 5) deals with the idea of the creation of a new Arctic Treaty as a substantive means of governance. The ideas presented reject the prospect of a regime similar to the Antarctica regime due to the lack of a major environmental agreement that would be binding and relevant for all Arctic States as well as the special interested States, whose number is growing rapidly. The third chapter of Part II (Chapter 6) discusses the issues of adaptation to the effects of climate change in the Arctic. Moreover, it tests the mitigation theories, analyses the relevance of the 2015 Paris Agreement on Climate Change and examines the status of indigenous peoples, using the Land Claims of First Nations in Canada as a model example of incorporation of indigenous interests within a State. The penultimate Chapter of this thesis (Chapter 7) examines issues of security in the Arctic Region in terms of diplomatic and military importance and in its energy dimensions, since the amounts of untapped hydrocarbons are amply sufficient to change the energy map of the world. The final Chapter contains concluding observations and provides answers to the research questions posed in this introductory Chapter.

PART I

The Arctic and the law of the sea



## 1.1 INTRODUCTION

When Russia planted in 2007 a flag at the Lomonosov Ridge<sup>1</sup> in a symbolic claim to an outer continental shelf, newspaper headlines predicted a “battle” or “gold rush” for Arctic oil and gas.<sup>2</sup> Furthermore, there is an impression that international law has a very limited role to play with respect to this issue.<sup>3</sup> Attention has focused on the fact that Arctic States are involved in the implementation of Article 76 of the United Nations Convention on the Law of the Sea concerning the delimitation and delineation of the outer limit of their continental shelves.<sup>4</sup> Climate change has also increased State interest in the continental shelf of the Arctic Ocean.<sup>5</sup> Arctic States expect that the decrease in the sea ice will make exploration and exploitation of oil and gas deposits more economically feasible.<sup>6</sup> Reports on the expected oil and gas available in the subsoil of the Arctic Ocean have led to the suggestion that the “race” for the Arctic was inspired by the willingness of the Arctic States to control these unexploited resources. The concept of the continental shelf was originally developed because of the possibility of offshore oil exploitation (beyond the territorial sea). This is exactly the point of contention in disputes arising over the Arctic Ocean.

Under Article 76 of UNCLOS, coastal States are entitled to a continental shelf of 200NM and *inter alia* have the right to explore and exploit natural resources within their continental shelf. Moreover, Article 76 provides that the continental

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1 For details about the exact location of the Lomonosov Ridge please check on table of maps, maps 4-5.

2 H. Roger, *The Arctic gold rush: the new race for tomorrow’s natural resources*, London and New York: Continuum (2009); I. Arnsdorf, *Diamonds to Oil Bring Gold Rush Dreams to Melting Arctic*, April 30, 2014 available online at <http://www.bloomberg.com/news/articles/2014-04-29/diamonds-to-oil-bring-gold-rush-dreams-to-melting-arctic>.

3 I. Arnsdorf, *supra*, observes: “Power, not international law, will settle the issue. Indeed, international law recognizes this fact by making title dependent on a nation’s ability to exert control over an area.”

4 United Nations Convention on the Law of the Sea concerning the delimitation and delineation of the outer limit of their continental shelves, adopted on December 1982, 1833 UNTS 396, entered into force November 16, 1994.

5 J. Masters, *The Thawing Arctic: Risks and Opportunities*, available online at <http://www.cfr.org/arctic/thawing-arctic-risks-opportunities/p32082>.

6 H. Roger, *supra*; I. Arnsdorf, *supra*.

shelf extends beyond 200NM if the outer edge of the continental margin, which in certain cases extends thousands of miles beyond the 200NM limit, lies in the area of transition from continental crust and sediments to oceanic crust. Natural resources such as oil and natural gas are located inside the continental margin, but not beyond. The coastal Arctic States have, mainly, based their territorial claims on the UNCLOS. However, the interpretation of this treaty and the formation of their claims indicate that they do not consider UNCLOS to be the only legal mechanism relevant to the resolution of their disputes. In the Illusitat Declaration,<sup>7</sup> the Arctic States emphasised that:

“Notably, the law of the sea provides for important rights and obligations concerning the delimitation and delineation of the outer limits of the continental shelf, the protection of the marine environment, including ice covered areas, freedom of navigation, marine scientific research and other uses of the sea. We remain committed to this legal framework and to the orderly settlement of any possible overlapping claims.”

The Illusitat Declaration refers generally to the delineation of the outer limits of the continental shelf according to the law of the sea, without providing any further evidence that this “law of the sea” is Article 76 of UNCLOS. At the same time, it is unclear whether all sub-articles of Article 76 constitutes part of customary international law.<sup>8</sup> In light of the above, this chapter will address the procedure of delimitation and delineation, defining which part of the Arctic Ocean is beyond national jurisdiction. This includes both the examination of the concepts of Common Heritage of Mankind and the Area as defined in UNCLOS and the impact of Article 76 in the Arctic based upon conventional obligations and State practice of the Arctic coastal States. The major Arctic States’ claims with respect to unexplored and unexploited natural resources will be analyzed with special reference to issues concerning submarine ridges, since the latter play a crucial role in the unstable situation in the Arctic Ocean from a legal point of view. Moreover, this chapter will explain the operation of Article 76 of UNCLOS. The right to an extended continental shelf is very important with respect to the Arctic. If Article 76 is not part of customary international law, then the United States is not bound by it and is therefore not required to follow the procedure of the Commission on the Limits of the Continental Shelf (CLCS).<sup>9</sup> Finally, throughout the examination of issues relating

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7 The text of the declaration is available online at [http://arctic-council.org/filearchive/illusion\\_declaration.pdf](http://arctic-council.org/filearchive/illusion_declaration.pdf).

8 A.G. Oude Elferink, *The continental Shelf in the Polar Regions, Cold War or Black-Letter law?*, *Netherlands Yearbook of Int'l L.*, volume XL, 121 (2009); L. Kullerud, Y.C. Beaudoin, J-N. Poussart, P. Prokosch, *The Arctic Ocean and UNCLOS Article 76: are There Any Commons?*, in *Environmental Security in the Arctic Ocean* 185 (P.A.Berkman, A.N. Vylegzhanin eds., 2012).

9 More detail discussion on the CLCS will take place later in this chapter.

to the delimitation process, the important role of the Commission on the Limits of the Continental Shelf (CLCS) will be underlined. The CLCS plays a crucial role in the delineation process, since States are obliged to follow its recommendations which are the basis for deciding upon the final and binding borderlines. At the end of this chapter, the scientific research policies of the Arctic States will be investigated as they form the foundation upon which State submissions to the CLCS are built.

## 1.2 THE INTERNATIONAL LEGAL REGIME OF THE CONTINENTAL SHELF

### 1.2.1 Article 76 of UNCLOS: Background and implementation

Within the Arctic region, all levels of law – international, European, and national systems – come into play, as the region falls under the sovereignty of eight Arctic States. Sovereignty issues have been resolved over all land held by the Arctic States. However, vast amounts of Arctic waters fall within these States' exclusive economic zones or continental shelves, which are the legal basis for claiming sovereign rights under the law of the sea. Therefore, an analytical elaboration of Article 76 of UNCLOS is a key factor for understanding the applicable law concerning maritime delimitation and delineation between States with conflicting interests.

UNCLOS is not the first multilateral convention to address the continental shelf and its legal regime. These two issues were a substantial part of the Convention on the Continental Shelf, adopted in Geneva in 1958. The regime of the continental shelf included in the latter Convention was later incorporated in UNCLOS without major amendments. However, one important addition was made: where the Geneva Convention does not regulate the outer limits of the continental shelf, Article 76 of UNCLOS establishes rules and mechanisms<sup>10</sup> that aim to guarantee stable continental shelf limits, which will not be subject to any further change.<sup>11</sup> Article 76 sets out a very complex process for the establishment of the outer limits of the continental shelf beyond 200 NM, requiring a coastal State to subject all its concerns to the procedure and to be willing to deal with every specific detail. To understand the reasons behind this complexity of this Article, this part of the first chapter sets out first the origins of Article 76, followed by an analysis of its application and interpretation.

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<sup>10</sup> Adopted on 29 April 1958, 499 UNTS 311.

<sup>11</sup> J.Crawford, *Brownlie's Principles of Public International Law*, Oxford University Press (9<sup>th</sup> ed., 2019), 207-208.

## 1.2.2 The origins of Article 76 of UNCLOS

The 1958 Convention on the Continental Shelf defines the continental shelf by reference to both the 200-metre isobaths and the exploitability criteria. The extreme position that the second criterion could have led to a division of the entire ocean floor has only found limited support in the literature.<sup>12</sup> As stated in Article 1 of the 1958 Convention, the criterion of exploitability of the natural resources beyond the 200-metre isobaths is applicable only to the seabed and subsoil of submarine areas adjacent to the coast but outside the area of the territorial sea.<sup>13</sup>

There is controversy over whether the definition of the legal continental shelf, as contained in Article 1, included the entire continental margin.<sup>14</sup> Hutchinson contends that by the beginning of the 1970s, Article 1 of the 1958 Convention had become part of customary international law.<sup>15</sup> He claims that, during the first half of the 1980s, no rule of customary law had developed that validated *erga omnes* claims over the continental margin beyond 200 nautical miles to the furthest edge of the continental rise.<sup>16</sup> Additionally, Oxman expresses doubt over whether the continental shelf covered all of the continental slope.<sup>17</sup> The continental slope lies landward of the continental rise, which extends to the outer edge of the continental margin. What distinguishes Article 76 of the UNCLOS from Article 1 of the Convention of 1958 is the exact reference to criteria applicable to the delimitation of the outer edge of the continental margin.

In 1973, the UN General Assembly convened the Third United Nations Conference on the Law of the Sea, which was charged to adopt a convention

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12 S. Oda, *International Control of Sea Resources*, A.W. Sythoff (1963), 166-168; I. Brownlie, *Recommendations on the Limits of the Continental Shelf and related matters: A commentary*, in *National Policy Recommendations; proceedings of the fourth annual Conference of the Law of the Sea Institute*, 133 (L.M. Alexander ed., 1969), at 138.

13 The exact wording of Article 1 is as such:

“For the purpose of these articles, the term “continental shelf” is used as referring (a) to the seabed and subsoil of the submarine areas adjacent to the coast but outside the area of the territorial sea, to a depth of 200 metres or, beyond that limit, to where the depth of the superjacent waters admits of the exploitation of the natural resources of the said areas; (b) to the seabed and subsoil of similar submarine areas adjacent to the coasts of islands.” U.N.T.S. No. 7302, vol. 499, pp. 312-321.

14 D.N. Hutchinson, *The Seaward Limit to Continental Shelf Jurisdiction in Customary International Law*, 56 *British Yearbook of Int'l L.* 111 (1985), at 130; B.H. Oxman, *The preparation of the Article 1 of the Convention on the Continental Shelf*, 3 *J. of Maritime Law and Commerce* 245 (1972), at 445-472, 683-723.

15 D.N. Hutchinson, *supra*, at 183, *Arbitration Between the United Kingdom of Great Britain and Northern Ireland and the French Republic on the Delimitation of the Continental Shelf*, Cmnd.7438, HMSO 1979, 54 *ILR*, at para 250.

16 D.N. Hutchinson, *supra*, 184.

17 B.H. Oxman, *supra*, at 719-720.

dealing with all issues relating to the law of the sea.<sup>18</sup> One of the most controversial issues was how to define the area of the sea-bed and the ocean floor as well as the subsoil thereof beyond the limits of national jurisdiction, known as the Area.<sup>19</sup> This specific definition became a matter of urgency at the end of the 1960s, due to the assumption that mining of mineral resources in the deep sea-bed would become commercially viable in the (near) future.<sup>20</sup> Under the legal regime existing at the time of negotiation, developed States would have been able to profit from this activity, while developing States would not.

At the Conference, developing States managed to successfully argue that the Area should be designated as the common heritage of mankind.<sup>21</sup> The need to define the limits of this area, apparent from the work of the Third Conference, was based on the precise determination of the limits of national jurisdiction.<sup>22</sup> As a result, UNCLOS defines the Area as “the sea-bed and ocean floor and subsoil thereof beyond the limits of national jurisdiction”.<sup>23</sup>

Despite the fact that the existing law at the time of the Conference did not define the exact limits of national jurisdiction, it did have an important impact on the work of the Third Conference. If the outer limit of the coastal State maritime zones at that time had been based on the distance from the coast, the Third Conference would have adopted that “distance criterion” to separate the area beyond national jurisdiction from areas under national jurisdiction. At the early stages of the Conference, there was support for the establishment of the limits between both areas at a distance of 200 NM.<sup>24</sup> Of course, the abovementioned was not the case.

The International Court of Justice discussed the legal basis for the continental shelf claims in the *North Sea Continental Shelf* cases of 1969.<sup>25</sup> The Court observed that the rights of the coastal State “in respect of the area of continental shelf that constitutes a natural prolongation of its land territory into and under the sea exist, *ipso facto* and *ab initio*, by virtue of its sovereignty over land.”<sup>26</sup> During the Third Conference on the Law of the Sea (1973-1982),

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18 General Assembly Resolution 3067(XXVIII), 28<sup>th</sup> Session, para 3.

19 Official Records of the General Assembly, 28<sup>th</sup> session, supplement No. 21 (A/8721), at para 21; and Official Records of the General Assembly, 26<sup>th</sup> Session, Supplement No 21 (A/8421), at para 22.

20 A. Kirchner, The outer Continental Shelf: Background and current developments, in *The Law of the Sea, environmental law and settlement of disputes*, Liber Amicorum Judge Thomas, 593 (A. Mensah, Tafsir Mallick Ndiay and Rudiger Wolfrum eds., 2007).

21 E.L. Miles, *Global Ocean Politics, The decision process at the Third Nations Conference on the Law of the Sea 1972-1982*, Martinus Nijhoff (1998).

22 *Ibid.*

23 UNCLOS, Art. 1 (1) (1).

24 A.G. Oude Elferink, Article 76 of the LOSC on the definition of the Continental Shelf: Questions concerning its interpretation from a legal perspective, 21 *Int'l Maritime and Coastal L* 269 (2006).

25 *Continental Shelf Cases*, 1969 ICJ Rep. 3, para 19.

26 *Ibid.*

this particular part of the Court's decision formed one of the bases for 13 so-called 'Margin States' to argue that they held sovereign rights over the outer edge of the continental margin.<sup>27</sup>

Their position was summarised in a statement made on 8 May 1975 by the Canadian Secretary of State for External Affairs who referred to three sources to support the existence of the right: a) The 1958 Convention on the Continental Shelf, to which Canada was a party, recognised coastal State rights; b) The decision of the ICJ in the *North Sea Continental Shelf* cases which repeatedly referred to continental shelf as the submerged prolongation of the land territory of coastal State; and c) Long-standing State practice, including the extensive issuance of oil and gas permits on the Canadian continental margin and similar action by other coastal States.<sup>28</sup>

This position of the Margin States, as reflected in this Canadian statement, is controversial in several respects. Firstly, the exploitability criterion is applicable to the sea-bed and the subsoil of the submarine areas adjacent to the coast but outside the area of territorial sea.<sup>29</sup> Second, the exploitability criterion does not give a State any right beyond this area. Finally, it is highly unlikely that submarine areas adjacent to the coast include the entire continental margin. Contrary to the Canadian claim, the ICJ's *North Sea Continental Shelf* judgment does not seem to support the Margin States' claims in the Third Conference. In the *North Sea Continental Shelf* cases, the Court only dealt in passing with the seaward limit of the natural prolongation of the land territory and its judgment seems to equate the geophysical continental shelf with the legal continental shelf.<sup>30</sup> Furthermore, the Court made two observations which suggest that it did not consider the notion of natural prolongation to result in the extension of coastal States' national jurisdiction.<sup>31</sup> First, the physical continental shelf is the most landward component of the continental margin, which also comprises the continental slope and rise. Second, the Court referred to the fact that continental shelf areas seaward of the Norwegian Trough could not, in a physical sense, be considered to be adjacent to, or a natural prolongation of, the Norwegian coast.<sup>32</sup>

It is not clear whether there is State practice in favor of the proposition that States have sovereign rights in areas beyond the legally defined outer limit of the continental shelf. The main problem is that such practice would breach both the principle of the freedom of the High Seas and the regime of the common heritage of mankind. Additionally, Article 2 of the 1958 Conven-

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27 M.H. Nordquist (general ed.), *United Nations Convention on the Law of the Sea, 1982: A Commentary* (in six volumes), Martinus Nijhoff Publishers (1982-2003), vol.1, 76

28 This Statement was delivered in the Third United Nations Conference on the Law of the Sea; *Official Records*, vol. XIII, at 102, para. 14.

29 A.G. Oude Elferink (2006), *supra*, at 273.

30 *Continental Shelf Cases*, 1969 ICJ Rep. 3, at paras. 41-43.

31 *Ibid.* para 41.

32 *Ibid.* para 45.

tion, which reflected customary international law on that point before the development of the common heritage principle, provides that: “no State may validly purport to subject any part of the High Seas to its sovereignty”.<sup>33</sup> In 1970, the General Assembly adopted the Declaration of Principles Governing the Sea-Bed and the Ocean floor and the Subsoil thereof, beyond the Limits of National Jurisdiction,<sup>34</sup> which included a provision similar to Article 2 of the 1958 Convention.<sup>35</sup> Consequently, this raises the question whether the limited State practice in respect of oil exploration until then had been sufficiently catalytic in the creation of rights detracting from these general principles.

At the beginning of the Third Conference, it was seen as doubtful whether the legal continental shelf extended to the outer edge of the continental margin; not least at the beginning of the negotiations of Article 76 of UNCLOS. This limit was introduced by other States in the Third Conference as the borderline between national jurisdiction and the international sea-bed area. For most of the Third Conference, the negotiations were devoted to finding a common solution for these different positions.<sup>36</sup> At the same time, this compromise should support State efforts to define the outer limits of their continental shelf unequivocally in relation to the international seabed area. One of the most significant outcomes of the negotiations of the Third Conference is the final agreement concerning Article 76 of UNCLOS, which largely reflects the position of the Margin States.

Another important contribution of the Margin States to the final formulation of the UNCLOS was Article 82 which refers to the payments and contributions that a State shall make to the international community in order to be able to engage in exploration and exploitation in the continental shelf beyond 200 NM.

The general definition of the continental shelf included in Article 76(1) refers to the natural prolongation of the land territory to the outer edge of the continental margin. However, the detailed provisions concerning the exact delineation of the continental shelf may in some cases result in an outer limit considerably more landward of the outer edge of the continental margin.<sup>37</sup> This procedure sets the establishment of the outer limits of the continental shelf apart from the procedure of the outer limits of other maritime zones. In the latter procedure, States can object only after the outer limits of the

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33 1958 Convention on the High Seas, adopted on 29 April 1958, entered into force on September 30, 1962, 450 UNTS 11, Art. 2.

34 General Assembly Resolution 2749(xxv).

35 *Ibid.* para 2.

36 M.W. Lodge, The International Seabed Authority-Its future Directions, in Legal and Scientific Aspects of Continental Shelf Limits, 403 (M. H. Nordquist, J. Norton Moore and T.H Heidar eds., 2004), at 403.

37 P. Leung, Arctic Continental Shelf Delineation and Delimitation: The significance of ratifying the United Nations Conventions Law of the Sea and the Sectors Theory, 2010 Ocean Yearbook, Martinus Nijhoff 475 (2010), at 479-481.

maritime zones have already been established by the coastal State.<sup>38</sup> The fact that the CLCS, through its strict procedures, has an important role to play in the delineation procedure ensures a number of checks and balances in the initial process of establishing the outer limits by the coastal State.

### 1.2.3 The substance of Article 76

Article 76 consists of ten paragraphs addressing a number of distinct but interrelated issues. The general definition of the continental shelf is included in the first paragraph. This definition offers two alternatives for the outer limits: the first one is the rule of 200 NM from the baselines and the second one is the rule of the outer edge of the continental margin where it extends beyond that distance. The “continental margin”, as defined in the third paragraph, consists of the geophysical shelf between the slope and the rise.

The second paragraph sets out qualifications to the definition of the legal continental shelf, indicating that the continental shelf shall not extend beyond the outer limits specified in paragraphs 4 to 6. This provision is relevant where a coastal State has not yet established the outer limit of its continental shelf according to Article 76(8). Paragraph 4 contains two specific formulae for the establishment of the outer edge of the continental margin where it extends beyond 200 NM, taking as the starting point the foot of the continental slope. From the foot of the slope, outer limit points can be defined by sediment thickness (known as the Irish Formula) or a distance of 60 nautical miles (known as the Hedberg formula). Paragraphs 5 and 6 provide two restraint criteria defined by distance from the baselines (350 NM) and from the 2,500-metre isobaths (100 NM): if points defined under paragraph 4 fall seaward of either restraint lines they cannot be employed. Where there are submarine ridges, the latter restraint cannot be applied. Paragraph 7 addresses delineation issues whereby fixed points selected through the application of paragraphs 4 to 6 cannot be more than 60 NM apart.

Paragraph 8 introduces the CLCS and its role in the delineation process of the outer limits of the continental shelf. The CLCS can provide scientific recommendations whose importance lies in the fact that States can establish the outer limits of their continental shelf on the basis of these recommendations, which are final and binding. The above-mentioned mechanism can be found in the procedure for establishing the outer limit of the continental shelf, setting this process apart from other UNCLOS provisions concerning the establishment of other maritime zones. Paragraph 9 requires the coastal State to provide relevant information on the outer limits of the continental shelf to the UN Secretary General. Finally, paragraph 10 deals with the relationship between the estab-

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38 R.R. Churchill, A.V. Lowe, *The Law of the Sea*, Manchester University Press (3<sup>rd</sup> ed., 1999), 147

lishment of outer limits of the continental shelf and its delimitation between neighboring States. In view of the overlapping continental shelf claims in the Arctic Ocean, this paragraph is the legal basis for the Arctic State submissions to the CLCS.

After this general introduction to Article 76, it is necessary to examine the following specific issues which impact its implementation within the Arctic. The first is the relationship between the entitlement to the continental shelf and the establishment of its outer limits. Bearing in mind that the process for establishing the outer limits of the continental shelf is a complex procedure requiring a considerable period of time, the question is: does the absence of such outer limits affect the entitlement to or the exercise of sovereign rights over continental shelf areas beyond the 200 NM limit?

The entitlement to the continental shelf, as well as to the other maritime zones, is based on the coastal State's title over land.<sup>39</sup> Under Article 76 of UNCLOS and the *Libya v Malta* case, the basis for this entitlement is the distance from the coast or natural prolongation of the land territory to the outer edge of the continental margin.<sup>40</sup> In the preliminary objections phase of that case, the ICJ distinguished between the definition of the continental shelf in Article 76(1)<sup>41</sup> and Article 76(2-9) "which deal with the details of the outer limits of the continental shelf."<sup>42</sup> This is further confirmed by Article 76(3) of UNCLOS which provides that the rights of the coastal State over the continental shelf do not depend on occupation or any express proclamation.

The fact that Article 76 contains both a general definition of the continental shelf and rules for delineating its outer limits confirms that the entitlement to the continental shelf is a separate issue from its establishment.<sup>43</sup> At the same time, the application of paragraphs 4 to 7 could potentially place a part of the continental margin beyond the outer limit of the continental shelf. This could happen if the continental margin extends beyond the restraint conditions of Article 76(5). There is no relationship of dependence between the procedures

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39 *Anglo-Norwegian Fisheries*, 1951 ICJ Rep. 116, at para 133; *Qatar v. Bahrain*, 2001 ICJ Rep. 40; *Nicaragua v. Honduras*, 2007 ICJ Rep. 659, at para 126; *Case concerning Land Reclamation by Singapore in and around the Straits of Johor*, ITLOS 2003 available online at [http://www.itlos.org/start2\\_en.html](http://www.itlos.org/start2_en.html), accessed on 1 February 2016; *Arbitration of Barbados v Trinidad and Tobago*, 11 April of 2006, available online at <http://www.pca-cpa.org/upload/files/Final%20Award.pdf>, at paras 284-288

40 *Libya v Malta*, 1985 ICJ Rep. 13, at paras 27, 34.

41 According to the ICJ Judgment in the dispute between concerning the Territorial Dispute and Maritime Delimitation (*Colombia v. Nicaragua*) article 76(1) consists partly of customary international law, *Territorial and Maritime Dispute (Nicaragua v. Colombia)*, 2012 ICJ Rep. 624.

42 *Libya v Malta*, 1985 ICJ Rep. 13, para 47.

43 T.L. McDorman, The entry into force of the LOS Convention and the article 76 outer Continental Regime, 10 IJMCL 165 (1995), at 167; Report of the Eleventh Meeting of States Parties, UN Doc. SPLOS/73, June 2001, para. 75.

of the continental shelf and the exact extent of the outer limit lines for the establishment of the continental shelf of the coastal State.<sup>44</sup>

This finding leads us to the next very important question: does the absence of established outer limits of the continental shelf under Article 76 give the coastal State the right to exercise rights over those parts of the continental margin that fall beyond potential outer limit lines under Article 76? It is submitted that this could not be the case. This follows from Article 76(2) of UNCLOS: the continental shelf shall not extend beyond the limit provided for in paragraphs 4 to 6. As such areas could possibly be part of the Area, there also rests an obligation upon States not to exercise any sovereign rights over them or their resources.<sup>45</sup> Additionally, the absence at the text of a reference to paragraphs 7 to 9 of Article 76 indicates that paragraph 76(2) is also operative and binding on a coastal State before the exact implementation of the procedures described in the paragraphs 7 to 9.<sup>46</sup> At the same time, Article 76(2) does not clarify the exact extent of the continental shelf. Paragraphs 4 to 6 of Article 76 are very difficult to interpret and implement as the coastal State has to establish, by its own means, the exact outer limit lines of its continental shelf in accordance with these provisions. In some cases, different outer limit lines will be applicable as a result of the implementation of paragraphs 4 to 6 as this choice belongs exclusively to the State. Finally, the absence of outer limit lines of the continental shelf beyond 200 nautical miles is bound to raise doubts over the exact extent of the continental shelf. This causes difficulties for coastal States seeking to exercise their sovereign rights over such areas of controversy.<sup>47</sup>

#### 1.2.4 The United States and Article 76

This section will elaborate on applicable law available with respect to the United States and the implementation of Article 76, with emphasis on the delineation procedures before the CLCS. The United States is the only coastal State and the only permanent member of the UN Security Council that is not a party to UNCLOS. Yet, it maintains its firm commitment to Article 76 and to the rights and obligations derived from its implementation.

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44 E.L. Miles, *supra*, 278.

45 UNCLOS Art. 137(1).

46 R.W. Smith, G. Taft, *Legal Aspects of the Continental Shelf*, in *Continental Shelf Limits: Scientific and Legal Interface 20* (P. J. Cook and C. M. Carleton eds., 2000).

47 Issues with respect to Article 4 of Annex II to the United Nations Convention on the Law of the Sea, UN Doc. SPLOS/64 of May 2001, p. 12 paras. 44-47.

In 1987, the Interagency Group on the Law of the Sea and Ocean policy of the USA<sup>48</sup> declared that, according to their understanding, Article 76 constitutes customary international law and that they would apply it to delimitation and delineation of the continental shelf.<sup>49</sup> However, even today, there are doubts about the customary character of Article 76, which probably makes the declaration of 1987 a convenient diplomatic act, rather than an act producing legally binding results. Under general international law, the creation of rules of customary international law does not depend on a declaration on behalf of a State but on the fulfilment of the legal prerequisites of State practice and *opinio juris*.<sup>50</sup> Furthermore, the ICJ found in the *Nuclear Tests* case that certain criteria must be met for a unilateral declaration of a State to produce legal effects.<sup>51</sup> In that case, the ICJ elucidated the criteria for public undertakings on behalf of a State to be considered legally binding. These criteria were that the State making the declaration must intend to be bound according to its terms and that the undertaking is given publicly.<sup>52</sup> In the situation of the United States and UNCLOS, these criteria have not been met since the declaration was made by an advisory committee, rather than the state authority.

A closer look at the relationship between the United States and UNCLOS is necessary to understand the US position with respect to Article 76. The paradox is that the United States, despite not being a signatory to UNCLOS, was a leading participant in its conclusion.<sup>53</sup> When UNCLOS was formally adopted in 1982, the Reagan administration decided not to ratify the agreement due to a provision regulating the exploitation of mineral resources in the deep seabed even though it accepted that other provisions were declaratory of customary international law.<sup>54</sup> After the United States completed its negotiations with a representative group of industrial States, a common ground was found in 1994,<sup>55</sup> which lead all industrial States (without the participation of the United States) to sign and ratify UNCLOS. After the conclusion of this agreement, President Clinton announced that the administration would sign

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48 The Interagency Group on the Law of the Sea and Ocean policy of USA is an advisory legal body under the auspices of the White House and its recommendations are very frequently followed by the president of the US. For more information: <http://www.lawofrenewableenergy.com/tags/interagency-ocean-policy-task>.

49 J. A. Roach, R. W. Smith, *United States Responses to Excessive Maritime Claims*, Martinus Nijhoff (2<sup>nd</sup> ed., 1996), 201-202.

50 H. Lauterpacht, *The Development of International Law by the International Court*, Cambridge University Press (1958), 368-293; *supra* note 51.

51 *Nuclear Tests* Case, 1974 ICJ Reports 253, paras. 43-50.

52 *Ibid.* paras 47-49.

53 C. Antrim, *Mineral resources of stateless space: lessons from the deep seabed*, 59 (1) *J. of International Affairs* 55 (2005).

54 B. Carter, *International Law*, Kluwer (2003), 880.

55 1994 Agreement Relating to the Implementation of Part XI of the United Nations Convention on the Law of the Sea of 10 December 1982, adopted on 28 July 1994, entered into force July 28, 1996, 33 ILM 1309 (1994).

it and send UNCLOS to the Senate for advice and ratification. However, a group of senators have managed repeatedly to block the ratification of UNCLOS claiming that it will impinge upon State sovereignty.<sup>56</sup> This obstruction has remained despite the support of President G.W. Bush and remains in force despite the declaration by President Obama that UNCLOS would be immediately ratified when he took office, which did not materialize.<sup>57</sup>

The fundamental question arising from the non-ratification of UNCLOS by the United States is which law of the sea the US consents to, pursuant to the Illusitat Declaration This was the first time that reference to the Law of the Sea has been made as the means for peaceful settlement of any overlapping claims in the Arctic. The Illusitat Declaration does not specify whether it refers to conventional or customary law. Even if the US decides to follow Article 76 to delimit and delineate the outer limits of its extended continental shelf, it will not have to lodge a submission to the CLCS since it is not a contracting party to UNCLOS. Therefore, the United States will be in an advantageous position compared to the other Arctic States, which are obliged to follow the CLCS procedure and, as a result, the assertion of the outer limit of the US continental shelf will not be subject to CLCS scrutiny.<sup>58</sup>

Because the United States is not a contracting State to UNCLOS and Article 76 can hardly be viewed as reflecting customary law, some academics in the Russian Federation argue that, since the United States is a party to the 1958 Geneva Convention on the Continental Shelf, both states may proceed to define the outer limit of their Continental Shelf in the Arctic guided solely by that Convention.<sup>59</sup> According to the 1958 Geneva Convention, the continental shelf is defined by means of a vague formula as extending up to a depth of 200 meters or beyond that limit where the depth of the superjacent waters allows for the exploitation of natural resources. The supporters of this view claim that other Arctic States cannot be bound by the limitations of Article 76 either *vis-à-vis* the United States as a non-contracting party to UNCLOS. Instead, Article 83 would apply to the delimitation of the continental shelf between States with opposite or adjacent waters,<sup>60</sup> because this Article reflects customary international law, as confirmed by the ICJ.<sup>61</sup> However, this interpretation was earlier rejected in the Third Conference for the Law of the Sea as the appropriate

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56 J.N. Moore, Testimony of John Norton Moore: United States Adherence to the Law of the Sea Convention: A Compelling National Interest, Testimony before the House Committee on International Relations, May 12, 2004, at 10-11.

57 K. Kaplan, In another debate, candidates weigh in on science, L.A. Times, September 27, 2008, available online at <http://articles.latimes.com/2008/sep/27/science/sci-sciencedebate27>.

58 V. Golitsyn, Continental Shelf Claims in the Arctic: A commentary, 24 The Int'l J. of Maritime and Coastal L. 401 (2009), at 405.

59 1958 Convention on the Continental Shelf, *supra*.

60 V. Golitsyn (2006), *supra*.

61 *Libya v. Malta*, 1985 ICJ Rep. 13; *Tunisia v. Libya* Case, 1985 ICJ Rep. 190.

means of establishing the outer limits of the continental shelf. Therefore, it is quite unlikely that it could be set forth as an acceptable solution for both the United States and Russia.

To sum up, although the United States is not a party to UNCLOS, its actions conform to the Convention in many ways. The United States is not at risk of losing its continental shelf rights but it must accede to UNCLOS in order to delineate the outer limits of its continental shelf beyond 200 NM and to have that delimitation confirmed by the CLCS. This confirmation is essential before financial institutions will fund investments in the areas beyond the 200 NM EEZ. Undoubtedly, the Arctic Ocean has become a focus for the governments of the United States, Canada, Denmark (Greenland), Norway and Russia as well as Iceland, Sweden and Finland.

### 1.2.5 Preliminary concluding remarks

Despite its operational difficulties, Article 76 is very useful for coastal States, although its implementation demonstrates that the interpretation of its provisions and their application to specific cases may raise controversies. This is particularly evident in the implementation of this Article in the Arctic Ocean. The question is whether such a controversy may threaten the continuation of the existence of Article 76 and the effectiveness of its implementation. The following observations can be made in this respect. The fact that the Arctic Ocean is a difficult area for implementing Article 76 does not change the fact that this is only an exceptional case and not the rule. Secondly, UNCLOS contains several mechanisms to address difficulties that may arise in the implementation of Article 76. If these conditions are met, the dispute settlement mechanisms contained in Part XV of UNCLOS are available to State parties to deal with disputes concerning the interpretation or application of Article 76. Finally, Article 76 does not exist as a separate regime or as part of a convention dealing specifically with continental shelf issues. It is a part of a convention dealing with all major law of the sea issues, characterised as "The Constitution of the Seas".<sup>62</sup> The broader interests of States within the UNCLOS system may impact the way in which issues concerning the continental shelf are dealt with. In any case, there is no available alternative to Article 76. Any formula that would seek to simplify the rules concerning the outer limits of the continental shelf (for instance a distance applicable to all States) would entail a large overall shift in the limit between areas under national jurisdiction and the Area to the further detriment of the latter.<sup>63</sup>

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62 See *i.a.* World Ocean Review, A constitution for the seas, available online at <http://worldoceanreview.com/en/law-of-the-sea/a-constitution-for-the-seas/>.

63 S.V. Suarez, *The Outer Limits of the Continental Shelf: Legal Aspects of Their Establishment*, Springer (2008), 54.

### 1.3 HIGH SEAS FREEDOMS, THE 200NM RULE AND EXTENSIONS BEYOND AND THE COMMON HERITAGE OF MANKIND

#### 1.3.1 Introduction

The term 'high seas' is not explicitly defined in UNCLOS. Instead, the scope of application of Part VII of UNCLOS is described negatively in Article 86:

*"The provisions of this Part apply to all parts of the sea that are not included in the EEZ, in the territorial sea or in the internal waters of a State, or in the archipelagic waters of an archipelagic State."*<sup>64</sup>

Part VII therefore applies to the airspace and water column beyond the outer limit of the EEZ (or the outer limit of the territorial sea where a coastal State has not established an EEZ) and the seabed and subsoil. In other words, the scope of application extends to three areas for which UNCLOS provides a specific legal regime: the Area and the part of the continental shelf that does not overlap with the EEZ as well as the high seas. Two questions are relevant when considering the consequences of the existence of these parallel legal regimes: does Part VII contain any rules that limit the existence or exercise of high seas freedoms in the Area? And does the regime set out in Part XI limit the exercise of high seas freedoms?

Article 87 of UNCLOS sets out the basic rules for the regime of the high seas and provides a non-exhaustive list of high seas freedoms. Whether listed or not, these freedoms are to be "exercised under the conditions laid down by this Convention and by other international rules". Part VII places a number of restrictions on the exercise of high seas freedoms. For instance, Article 87(1)(c) provides that the freedom to lay submarine cables and pipelines shall be exercised subject to Part VI defining the regime of the continental shelf. Although the conditions specified in Article 87 already qualify the exercise of specific high seas freedoms, the reference to the entire Convention and other rules of international law may have even more far-reaching implications as this gives high seas freedoms a residual character. With respect to the Area, Article 87 implies that Part XI forms part of the framework that defines the freedom of the high seas.

This means that activities in the Area – i.e. all activities related to exploration for and exploitation of the mineral resources of the Area<sup>65</sup> – are not included in the high seas freedoms but are governed by the special Part XI

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64 UNCLOS, Art. 86.

65 UNCLOS, Art. 1(1)(3). This Article refers to 'resources', not 'mineral resources'. From Art. 133(a), which defines the term 'resources' for the purposes of Part XI, it is apparent that the term covers all mineral resources.

regime.<sup>66</sup> In other instances, a use of the sea could be a high seas freedom but the modalities of its exercise may depend on specific UNCLOS provisions or other rules of international law. For example, dumping is comprised in the high seas freedoms, but it has to be conducted pursuant to the conditions set out, *inter alia*, in Article 210 UNCLOS. This example demonstrates that the conditions under which a high seas freedom may be exercised can result in significant limitations on its actual exercise in practice.<sup>67</sup> The term 'conditions' contained in Article 87 is not further defined in the Convention. The term is sufficiently broad to include any provision according to contemporary international law with implications for specific uses of the oceans, which is the case for most of the principles governing the Area set out in section 2 of Part XI of UNCLOS. Part VII also contains rules that are directly relevant to its relationship with Part XI, particularly one explicit reference: "[t]he freedoms of the high seas shall be exercised with due regard for the rights with respect to activities in the Area."<sup>68</sup> This requirement does not limit the exercise of the freedoms of the high seas as such, but rather recognizes that the exercise of those freedoms may interfere with the exploration and exploitation of the Area's mineral resources. Such a 'due regard' provision is also applicable where the exercise of different high seas freedoms is concerned.<sup>69</sup>

The high seas freedoms enumerated in Article 87 raise questions concerning the relationship between the regimes included in Part VII and Part XI of the Convention. A number of those freedoms, *i.e.*, the freedom to lay submarine cables and pipelines, the freedom to construct artificial islands and other installations, the freedom of fishing and the freedom of scientific research, (may) have the seabed or its subsoil as their primary focus. To establish whether those freedoms can be exercised under the same conditions in the Area and in the superjacent waters requires an analysis of the provisions that are relevant for each specific use. For instance, Article 112 of UNCLOS explicitly establishes that all States have the right to lay submarine cables and pipelines on the bed of the high seas beyond the continental shelf. The regime for marine scientific research in the Area differs from the regime for marine scientific research in the superjacent water column. Article 87(1)(f) provides that the freedom of scientific research is subject to Part XIII on marine scientific research, which draws a distinction between marine scientific research in the Area (Article 256) and marine scientific research in the water column beyond the EEZ (Article 257). Under Article 257, all States and competent international organizations have the right to conduct marine scientific research in the water

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66 On the other hand, the exploration for and exploitation of all resources of the water column beyond the outer limit of the EEZ is a freedom of the high seas.

67 Lucchini and Voelckel even conclude that, in the case of dumping, the rules in other treaty instruments do not seem to leave room for the existence of a freedom of the high seas (L. Lucchini, M. Voelckel, *Droit de la Mer*, Tome I, A. Pedone, Paris (1990), 278).

68 UNCLOS, Art. 87(2).

69 *Ibid.*

column seaward of the EEZ. In the Area, that same right exists, but research has to be conducted in conformity with the provisions of Part XI.<sup>70</sup>

The freedom of fishing mentioned in Article 87(1) (e) has to be exercised subject to section 2 of Part VII on the conservation and management of the living resources of the high seas. That section does not draw a distinction between the Area and superjacent waters, but the absence of this distinction does not imply that section 2 is equally applicable to both areas so an analysis of Part XI is required to determine the applicability of section 2. Article 87 refers to the “freedom of fishing”, but UNCLOS does not define the term ‘fishing’. The language of section 2 of Part VII addressing the conservation and management of the living resources of the high seas, in certain instances, suggests a focus on marine capture fisheries. Some provisions, such as Article 117, have a broader application.<sup>71</sup> Arguably section 2 of Part VII also provides a regulatory framework for the taking of samples of organisms to gather their genetic material.<sup>72</sup> It can, however, also be argued that section 2 does not provide an appropriate regulatory framework for the use of the genetic resources of the Area, because of, *inter alia*, the differences with marine capture fisheries.<sup>73</sup>

The freedom to construct artificial islands and other installations in the Area is subject to the requirements set out in Article 147(2) of Part XI of the Convention. That provision imposes conditions on installations used for carrying out activities in the Area. Whether any other conditions apply to this freedom of the high seas in relation to the Area depends on an assessment of the provisions of Part XI which will be discussed in the forthcoming sections.

### 1.3.2 The definition of the Area

Article 1 of UNCLOS states that the ‘Area’ means the seabed and ocean floor and subsoil thereof, beyond the limits of national jurisdiction.<sup>74</sup> The terms ‘seabed’, ‘ocean floor’ and ‘subsoil’ are not defined in the Convention. The

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70 The principal provision on marine scientific research in UNCLOS, Part XI, Art. 143.

71 C.H. Allen, Protecting the Oceanic Gardens of Eden: International Law Issues in Deep-Sea Vent Resource Conservation and Management, 13 Georgetown Int’l Environmental L. Rev. 563 (2001), at 629-630.

72 M.F. Hayes, Charismatic Microfauna: Marine Genetic Resources and the Law of the Sea, in Law, Science & Ocean Management 683 (Myron Nordquist, Ronán Long, Tomas Heidar and John Norton Moore eds., 2007).

73 Glowka, The Deepest of Ironies: Genetic Resources, Marine Scientific Research, and the Area, 12 Ocean Yearbook 154 (1996), at 168-169; E E. Salamanca Aguado, La Zona Internacional de los Fondos Marinos; Patrimonio Comun de la Humanidad, Dykinson (2003), 275.

74 The limits of national jurisdiction are to be established by the coastal State in accordance with the relevant provisions of the Convention (Art. 76 and 134).

meaning of the term 'seabed' is particularly relevant to define the spatial extent of the Area in relation to the superjacent waters. Does the seabed only refer to solid materials that make up the bottom of the sea, or does it also include solids, water or other liquids or gasses in contact with those materials? For instance, is the water flowing from a hydrothermal vent, and the materials it contains, part of the Area or the superjacent waters?<sup>75</sup> Another example is presented by so-called 'brine pools', which are small lakes on the seafloor with a distinct surface and shoreline. They exist in the ocean because their very salty water is denser than the surrounding water.<sup>76</sup>

A number of Articles in the Convention seem to suggest a distinction between the seabed on the one hand, and all the waters and materials floating therein located above the seabed, on the other. Article 135 of the Convention provides that Part XI does not affect the legal status of the waters superjacent to the Area. Articles 256 and 257 distinguish between marine scientific research conducted in the Area as opposed to research conducted in the water column seaward of the EEZ. However, the Articles do not define the Area and the superjacent waters, but only indicate that different rules apply to each of these. These Articles also do not establish any precedence of the water column over the seabed (or *vice-versa*) in connection to defining the exact boundary between the two. Two criteria are relevant when determining whether certain features are part of the seabed or the superjacent waters.<sup>77</sup> One is their location in relation to the seabed, and the other is whether they can be clearly distinguished from the surrounding waters. For instance, if water flowing from a hydrothermal vent that forms an integral part of that hydrothermal vent system can be clearly distinguished from the surrounding waters because of its chemical and physical characteristics, then this water is located in the Area and, as such, would not form part of the waters superjacent to the Area.<sup>78</sup> A brine pool in the seabed would also be considered to be part of the Area. The waters of the pool are different in composition from the overlying waters

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75 S. Arico, C. Salpin, *Bioprospecting of Genetic Resources in the Deep Seabed: Scientific, Legal and Policy Aspects*, United Nations University and Institute of Advanced Studies (2005), 9-13.

76 Carney, *Lakes within Oceans*, available online at <http://oceanexplorer.noaa.gov/explorations/02mexico/background/brinepool/brinepool.html>.

77 The following conclusions may also be relevant to determining the extent of the continental shelf in relation to the superjacent waters.

78 W. Burke, *State Practice, New Ocean Uses, and Ocean Governance under UNCLOS*, in *Oceans Governance: Strategies and Approaches for the 21<sup>st</sup> Century* 219 (T.A. Mensah ed., 1996), at 231, where it is noted that the minerals that are in the hot water that is responsible for the term "smoker" (hydrothermal vent) are subject to Part XI of the Convention. Burke then points out that the living matter which also emerges from the hydrothermal vent does not fall within the definition of resources in Part XI and concludes: "[t]hus, the *deep seabed resource* of present value is not subject to the treaty" (*ibid.*).

and the pool's shape is the result of the morphology of the surrounding seabed.<sup>79</sup>

Article 133 of UNCLOS would seem to support the view that the definition of the upper limit of the Area should not be based on a restrictive interpretation of the term 'seabed'. Article 133 refers to *all* solid, liquid or gaseous mineral resources "in the Area *at* or beneath the seabed".<sup>80</sup> This definition indicates that the Area is not limited to the seabed *strictu sensu*, but that it even includes certain areas above the actual seabed. Article 133 indicates that such areas at least include those in which the mineral resources "at the seabed" are located. Article 133 thus also leads to the conclusion that features such as hydrothermal vents and brine pools are part of the Area. They contain resources that are located on the seabed.<sup>81</sup>

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79 Certain negotiating texts at the Third United Nations Conference on the Law of the Sea contained a more detailed definition of the term 'mineral resources' than the one found in Article 133 of the Convention. The ISNT (UN Doc. A/CONF.62iWP.8 of 7 May 1975 (reproduced in Third United Nations Conference on the Law of the Sea; Official Records, Vol. IV, p. 137, at p. 138)), the RSNT (UN Doc. A/CONF.62/WP.8/Rev.1 of 6 May 1976 (reproduced in *ibid.*, Vol. V, p. 125 at p. 128)) and the ICNT (UN Doc. A/CONF.62/WP.10 (reproduced in *ibid.*, Vol. VIII, p. 1 at pp. 22-23)) listed liquid or gaseous substances, including water, steam and hot water, ore-bearing silt, and brine as mineral resources. The ICNT/Rev.2 (UN Doc. A/Conf.62/ WP. I O/Rev.2 of 11 April 1980 (reproduced in R. Platzdter, Third United Nations Conference on the Law of the Sea: Documents, Vol. II (Oceana Publications, Dobbs Ferry, 1982), at 64) did not include water, steam and hot water in the list of liquid or gaseous substances at or beneath the sea level found in Art. 133(b)(i). However, this list is not exhaustive. A report by the coordinators of the working group of 21 to the First Committee of the Third Conference observes that the description of the resources of the Area contained in subparagraph b of Article 133 contained in the ICNT/Rev.1 had been changed following the advice of experts on this matter. (UN Doc. A/CONF.62./C.I/L.27 of 27 March 1980 (reproduced in Third United Nations Conference on the Law of the Sea; Official Records, Vol. XIII, at p. 114)). The report does not offer any other explanation for the change in wording.

80 The French and Russian language texts of Article 133 also refer to resources at the seabed as being located in the Area. The Spanish language text differs in this respect as it uses a term ('en los fondos') that has the meaning of 'at' and 'in'. Several of the negotiating texts at the Third Conference contained a more detailed definition of the term "mineral resources" than the one found in Article 133 of the Convention. The last of those more detailed definitions, set out in the ICNT/Rev.2, note 19 at p. 64, refers to "[I]iquid or gaseous substances at or beneath the surface [...]"; "solid substances occurring on the surface [...]"; and "[m]etal-bearing brine at or beneath the surface."

81 The water of a hydrothermal vent would also seem to fall under the term 'mineral resource' as employed in Article 133 of the Convention. Under certain scientific definitions water is not considered to be a mineral because it is not a solid, but naturally occurring ice is classified as a mineral. Article 133 of the Convention refers to "solid, liquid or gaseous mineral resources".

### 1.3.3 The scope of application of Part XI of UNCLOS

Part XI sets up a detailed regime for the exploration and exploitation of mineral resources in the Area. There can be no doubt that the common heritage regime as elaborated in Part XI of the Convention implies that this use of the Area falls completely outside the scope of application of Part VII of the Convention. The consequences of Part XI for other ocean uses are not always that clear. Certain uses, such as marine scientific research, the laying of cables and pipelines, and uses related to archaeological and historical objects, are specifically regulated in Part XI or other Parts of the Convention. However, the Convention does not establish specific rules for all potential uses of the Area. With regard to the unregulated uses, the consequences of the principles governing the Area must be established by the relevant parties. Those principles may result in excluding a specific use of the Area altogether from the regime of freedom of the high seas or in attaching certain conditions to the exercise of a freedom of the high seas. Article 136 of the Convention establishes that the Area and its resources are part of the common heritage of mankind. The consequences of that status are elaborated in the subsequent Articles of section 2 of Part XI. One of the most important implications of the applicability of the common heritage principle to the Area is elaborated in Article 137(1), which provides that: "No State shall claim or exercise sovereignty or sovereign rights over any part of the Area or its resources, nor shall any State or natural or juridical person appropriate any part thereof. No such claim or exercise of sovereignty or sovereign rights nor such appropriation shall be recognized." Like Article 136, this provision applies to the Area.

The prohibition on claiming or exercising sovereign rights over any part of the Area prevents any part of the Area from being brought under the exclusive control of any State.<sup>82</sup> That prohibition does not exclude extractive uses of the Area. However, the prohibition on appropriating any part of the Area,<sup>83</sup> which is applicable to States and to natural and legal persons, also restricts uses of the Area that do not amount to a claim or exercise of sovereignty or sovereign rights. The prohibition on appropriating any part of the Area, in principle, excludes any use of the Area that brings part of it under the exclusive control or ownership of a State or a natural or legal person.<sup>84</sup>

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82 The parallel provision in Part VII, Art. 89, only refers to the invalidity of claims of sovereignty. The absence of a reference to sovereign rights is explained by the fact that States have sovereign rights over the continental shelf. Certain high seas freedoms, such as fishing, involve appropriation.

83 Art. 137 refers to the appropriation of "any part thereof." The word 'thereof' refers back to "the Area or its resources" in the preceding part of the sentence. This meaning of Art. 137(1) (*i.e.*, that 'thereof' also refers back to the Area itself) is expressed more clearly in the French and Spanish texts of Art. 137(1), which refer to, respectively, "une partie quelconque de la Zone ou de ses ressources" and "parte alguna de la Zona o sus recursos."

84 E. Salamanca Aguado, *supra*, at pp. 302-304.

This prohibition would, for instance, imply that production of energy at the Area, which has been argued to be a high seas freedom,<sup>85</sup> has to be considered to be an appropriation of a part of the Area. The prohibition on appropriation is not absolute, and does not exclude activities that are explicitly permitted under the Convention. States have the right to conduct marine scientific research in the Area. That research may involve taking samples at a site for further analysis. The taking of such samples does raise a question about the scope of application of the non-appropriation principle. Samples of organisms that have been gathered in connection with marine scientific research may be of commercial interest because of their genetic material. Does the principle of non-appropriation place any limitation on acquiring exclusive rights to that genetic material? It has been suggested that this may be the case.<sup>86</sup>

Article 138 of Part XI provides a guideline for the general conduct of States in relation to the Area. The *Virginia Commentary*, which is the most prominent Commentary on the Law of the Sea Convention, observes that Article 138 confirms the self-evident proposition that States are to conduct themselves in the Area in accordance with Part XI and other rules of international law.<sup>87</sup> Another general obligation is contained in Article 141, which provides that the Area shall be open to use exclusively for peaceful purposes by all States without discrimination and without prejudice to the other provisions of Part XI. The *Virginia Commentary on the Law of the Sea Convention* suggests that the language of Article 141 on peaceful purposes has different implications than the language of Article 88 of the Convention reserving the high seas for peaceful purposes.<sup>88</sup> One difference between Article 141 and Article 88 is the statement "without prejudice to the other provisions of this Part" in Article 141, which is absent in Article 88. This statement implies that uses that are peaceful and permitted in the water column overlying the Area still may be subject to limitations in the Area, because they lead to derogation from other provisions of Part XI.<sup>89</sup> The parallel existence of Articles 88 and 141 indicates

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85 R.R. Churchill, A.V. Lowe, *The Law of the Sea*, Manchester University Press (3<sup>rd</sup> ed., 1999), at 239, fn. 49.

86 Study of the relationship between the Convention on Biological Diversity and the United Nations Convention on the Law of the Sea with regard to the conservation and sustainable use of genetic resources on the deep seabed (Decision 11/10 of the Conference of the Parties to the Convention on Biological Diversity); Note by the Executive Secretariat (reproduced in UNEP/CBD/SBSTTA/8/INF/3/Rev.I of February 2003), para. 117. States differ over whether the regime for marine scientific research in the Area limits the rights to exploit the findings of such research commercially.

87 *Virginia Commentary*, *supra*, Vol. VI, at 113.

88 *Ibid.*, at 149. It is not clear from the *Virginia Commentary* what implications that difference actually has.

89 The *Virginia Commentary* observes that the "purpose of the phrase 'and without prejudice to the other provisions of this Part' is unclear since activities authorized under Part XI are for peaceful purposes" (*supra*, at 150).

that for all uses of the Area, Article 141 provides the frame of reference, even if it concerns uses that are freedoms of the high seas falling under Part VII of Convention. Article 141 is part of the conditions applicable to the exercise of freedom of the high seas under Article 87 of the Convention.

Section 2 of Part XI makes a number of references to the "benefit of mankind as a whole." This principle is one of the means to give effect to the principle that the Area is the common heritage of mankind. The "benefit of mankind" principle does not apply to the Area as such, but is related to specific uses of the Area. A detailed elaboration of the implications of this principle in relation to activities in the Area is provided in Article 140 of the Convention. This principle is also contained in Article 143 on marine scientific research and in Article 149 on archaeological and historical objects. All these uses share the common characteristic that they actually generate certain benefits, material or immaterial, that can be shared.<sup>90</sup> That the 'benefit of mankind' principle may have a more general application with regard to uses that are not mentioned specifically in UNCLOS and that this could result in such benefits, is suggested by the Preamble. This indicates that the States Parties desire to develop the principles embodied in General Assembly Resolution 2749 (XXV),<sup>91</sup> and then states that the Resolution provides that:

"...the area of the seabed and ocean floor and the subsoil thereof, beyond the limits of national jurisdiction, as well as its resources, are the common heritage of mankind, the exploration and exploitation of which shall be carried out for the benefit of mankind as a whole, irrespective of the geographical location of States."<sup>92</sup>

Uses of the Area that are explicitly addressed under UNCLOS have been regulated with varying degrees of specificity. For instance, the regime for cables and pipelines is elaborated in considerable detail in Articles 112 to 115 of Part VII of the Convention. Moreover, only one Article in Part XI (Article 149) is devoted to archaeological and historical objects found in the Area.<sup>93</sup> That Article sets out general principles, which leave considerable room for developing the details of a specific regime in this respect.

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90 Scovazzi, *supra*, at 392.

91 Resolution 2749 (XXV) contains the Declaration of Principles governing the Sea-Bed and the Ocean Floor, and the Subsoil thereof, beyond the Limits of National Jurisdiction. The Resolution was adopted in 1970 with 108 votes to zero, with 14 abstentions. The principles contained in the Resolution formed the basis for the negotiations on the principles that were later included in Part XI of UNCLOS.

92 UNCLOS, 6th preambular paragraph. That "of which" also refers back to the Area itself is expressed more clearly in the French text of the paragraph, which reads in relevant part "que l'exploration et l'exploitation de la zone se feront l'intérêt de l'humanité toute entière".

93 In addition, UNCLOS Art. 303, with the exception of paragraph 2, is also applicable to archaeological and historical objects found in the Area. For a discussion of Article 149 see A. Strati, *The Protection of the Underwater Cultural Heritage: An Emerging Objective of the Contemporary Law of the Sea*, Martinus Nijhoff Publishers (1995), 296-314.

Article 143 of UNCLOS establishes rules for marine scientific research in the Area. This provision is of interest to the current debate<sup>94</sup> on the use and conservation of genetic resources of the Area. Samples of genetic material that may later prove to be of commercial interest are also collected in the framework for marine scientific research. States differ over the implications of Article 143 and whether taking samples of genetic material in this context should be regarded as marine scientific research.

Article 143(1) provides that marine scientific research in the Area shall be carried out for the benefit of mankind as a whole, in accordance with Part XII of the Convention. Part XIII refers to marine scientific research in the Area in Article 256, and accords the right to conduct marine scientific research in the Area to all States and competent international organisations, in accordance with the provisions of Part XI. Article 257 applies to the water column beyond the EEZ, which includes the waters superjacent to the Area.

Articles 256 and 257 therefore confirm that all marine scientific research in the Area has to be carried out in accordance with Part XI. Part XIII of the Convention sets out the general regime of marine scientific research, which is also relevant to such research in the Area. Some additional conditions apply to marine scientific research in the Area under Article 143. As was noted above, Article 143(1) provides that this research has to be carried out for the benefit of mankind as a whole.<sup>95</sup> Paragraphs 2 and 3 of Article 143 give effect to that principle, by imposing certain rights and obligations with regard to marine scientific research on the Authority and on States Parties, respectively. These provisions go beyond obligations on cooperation with regard to marine scientific research contained in section 2 of Part XIII.<sup>96</sup>

The implementation of Article 143(3), in the context of specific areas of research, could contribute significantly to the effective implementation of the 'benefit of mankind' principle in Article 143(1). The growing interest in the genetic resources of organisms from the Area seems to have reinforced the interest of States in the 'benefit of mankind' principle in Article 143(1). It has been suggested that this principle should inform the use of genetic resources of the Area.<sup>97</sup> At the same time, the risk of a too burdensome regulatory regime is a real danger in light of the complex issues that might have to be

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94 For more details on the current discussion on that, see CAFF, Co-operative Strategy for the Conservation of Biological Diversity in the Arctic Region (1997), available online at [https://oaarchive.arctic-council.org/bitstream/handle/11374/180/Cooperative\\_Strategy\\_Conservation\\_BioDiv\\_Arctic\\_Region\\_CAFF\\_Program\\_1997.pdf?sequence=1&isAllowed=y](https://oaarchive.arctic-council.org/bitstream/handle/11374/180/Cooperative_Strategy_Conservation_BioDiv_Arctic_Region_CAFF_Program_1997.pdf?sequence=1&isAllowed=y), accessed on 20 May 2017.

95 Scovazzi, *supra*, at 398.

96 E. Salamanca Aguado observes that Article 143(3) is a specific application to the Area of the obligations to cooperate set out in Articles 243 and 244 of the Convention (E. Salamanca Aguado, *supra*, 216).

97 Glowka, *supra*, at 173-175; Scovazzi, *supra*, at 401-403.

addressed.<sup>98</sup> The rules concerning specific uses of the Area indicate that their regulatory regimes can vary widely, depending on the use involved. In certain cases, such as, for instance, the laying of submarine cables and pipelines, individual States have the right to use the Area and there is no specific requirement to establish further international rules.<sup>99</sup> Article 210(4) of the Convention provides that States may endeavor to establish global and regional rules, standards and recommended practices and procedures to prevent, reduce and control pollution by dumping. For dumping, the relevant global framework is the London Convention.<sup>100</sup> This example shows that cooperation with regard to the Area need not necessarily be effected through the Authority or another body specifically established for that purpose. The regulation of uses of the Area may require the development of an agreement implementing the provisions of section 2 of Part XI of UNCLOS.

In that context, Article 311 of the Convention is relevant.<sup>101</sup> Under Article 311(6), States Parties to the Convention agree that "there shall be no amendments to the basic principle relating to the common heritage of mankind set forth in Article 136 and that they shall not be party to any agreement in derogation thereof." When considering the effect of Article 311(6), it is relevant that the 'common heritage' principle is further elaborated in other provisions of section 2 of Part XI. It would seem that sections other than section 2 of Part XI have to be considered under Article 311(3). That Article allows State Parties to conclude agreements modifying or suspending the operation of provisions of the Convention as applicable solely to relations between themselves. Article 311(3) subjects such agreements to a number of conditions, namely: a) such agreements shall not relate to a provision from which a derogation is incompatible with the effective execution of the object and purpose of the Convention; b) such agreements shall not affect the application of the basic principles embodied in the Convention; and c) the provisions of such agreements do not affect the enjoyment by other State Parties of their rights or the performance

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98 Glowka, *supra*, at 173; Hayes, *supra*; see also Report of the Secretary-General of the International Seabed Authority under Article 166, paragraph 4, of the United Nations Convention on the Law of the Sea (UN Doc. ISBA/8/A/5 of 7 June 2002), at para 39.

99 The exact wording of the Article is: "Article 143 Marine scientific research 1. Marine scientific research in the Area shall be carried out exclusively for peaceful purposes and for the benefit of mankind as a whole, in accordance with Part XIII."

100 Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter of 29 December 1972, 1046 UNTS 120. The London Convention refers to the high seas (Art. VII(3)). The 1996 Protocol to the London Convention (Protocol to the 1972 Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter of 7 November 1996 (1997) ILM 36, refers to areas beyond the jurisdiction of any State, Art. 10(3).

101 D. Freestone, A.G. Oude Elferink, Flexibility and Innovation in the Law of the Sea-Will UNCLOS Amendment Procedures Ever Be Used?, in Stability and Change in the Law of the Sea: The Role of UNCLOS 169 (A.G. Oude Elferink ed., 2005), at 175, 182-183.

of their obligations under the Convention.<sup>102</sup> Article 311(3) entails, *inter alia*, that any agreement concerning uses of the Area that includes UNCLOS State Parties will have to be in accordance with the principles formulated in section 2 of Part XI. These are the basic principles under Article 311(3), such as the 'benefit of mankind' principle.

#### 1.4 STATE CLAIMS OVER NATURAL RESOURCES WITHIN NATIONAL JURISDICTION

It is only a matter of time before the natural resources in the Arctic Ocean become the subject of exploration and exploitation. Indeed, given that there is a lower density of people living in the Arctic – otherwise many might oppose natural resource development along the lines of “not in my back yard” (NIMBY) – these areas are tempting sites for exploitation. Only the inaccessibility of the region has prevented the vast resources from being tapped yet. As soon as technology is developed that can capture the resources, companies and States will enter most likely the region. However, awareness has grown that climate change will hit the Arctic hardest; a realization brought home most compellingly by the Arctic Council, which sponsored the Arctic Climate Impact Assessment.<sup>103</sup> Since ice and snow react swiftly to global warming, it has been estimated that climate change has already impacted the Arctic and that the change in the region will be twice as intense as anywhere else on the planet. Indeed, climate change has caused the opening up of the previously inaccessible region to resource development, including hydrocarbons in the Arctic Ocean seabed which are most often the resource of interest. The International Energy Agency (IEA) has estimated that, despite efforts to steer energy use toward renewable sources, energy development scenarios indicate that dependence on fossil fuels will grow at least until 2030.<sup>104</sup> The Arctic hydrocarbon resources seem tempting from two other perspectives – they appear to be plentiful and safe. According to an oil companies' assessment the reserves of hydrocarbons in the Arctic (not just the Arctic Ocean) account for 25%–50% of those yet to be tapped in the world.<sup>105</sup>

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102 Art.311(4) requires States Parties intending to conclude an agreement referred to in Art. 311(3) to notify the other States Parties of their intention to conclude the agreement and of the modification or suspension of the provision(s) of the Convention for which it provides. Such a notification shall be made through the Secretary-General of the United Nations.

103 Arctic Climate Impact Assessment (ACIA), *Impacts of a Warming Arctic*, Arctic Climate Impact Assessment, Overview Report, Cambridge University Press (2004); Arctic Climate Impact Assessment (ACIA), *Arctic Climate Impact Assessment: Final Scientific Report*, Cambridge University Press (2005).

104 IEA's World Energy Outlook, available online at [www.worldenergyoutlook.org/](http://www.worldenergyoutlook.org/).

105 Arctic Oil Tempts Norway to Seek Drilling at 'Gates of Hell', September 25, 2009, Bloomberg, available online at [www.bloomberg.com/apps/news?pid=newsarchive&sid=ajnhJCcmv8pU](http://www.bloomberg.com/apps/news?pid=newsarchive&sid=ajnhJCcmv8pU). The United States Geological Survey had earlier estimated that the reserves are plentiful.

The combined effect of climate change and interest in exploiting hydrocarbons has prompted recent efforts by States to stake claims to seabed areas in the region. This recent activity with respect to the continental shelf beyond 200 nautical miles began in the Arctic with a vast claim by Russia in 2001 covering almost one-half of the Arctic Ocean seabed.<sup>106</sup> All other Arctic coastal States have opposed to that action; Especially the United States criticized many aspects of the claim, particularly Russia's attempt to appropriate the Lomonosov Ridge that runs through the central Arctic Ocean Basin as part of its continental shelf. The Russians planted their flag in August 2007 underneath the North Pole on the Lomonosov Ridge,<sup>107</sup> provoking vigorous protests from the other Arctic coastal States. According to the United States' view at the time, the Lomonosov Ridge "is an oceanic part of the Arctic Ocean basin and not a natural component of the continental margins of either Russia or of any State."<sup>108</sup> In the following subchapters the practice of three Arctic States will be discussed; Russia, United States and Denmark have been chosen at this point since they do have overlapping claims without always clarity on the applicable law and their situations seems more complex than the situation of the other two Arctic Coastal States.

#### 1.4.1 Arctic states' practice with respect to rights over natural resources in the Arctic Ocean

##### 1.4.1.1 Russia

Russia was the first State to exert its right to an extended continental shelf in the Arctic Ocean. The submission of the Russian Federation, made on 20 December 2001, concerned four different areas: the Arctic Ocean, the Barents Sea, the Bering Sea and the Sea of Okhotsk.<sup>109</sup> As far as can be ascertained from the information communicated by the UN Secretary-General, the Russian Federation did not inform the CLCS of the existence of any dispute in the sense of Annex I to the Rules of Procedure.<sup>110</sup> However, this information did indi-

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U.S. Geological Survey, *Circum-Arctic Resource Appraisal: Estimates of Undiscovered Oil and Gas North of the Arctic Circle*, 2008, available online at [pubs.usgs.gov/fs/2008/3049/](http://pubs.usgs.gov/fs/2008/3049/).

106 Russian Federation, Executive Summary – Submission to the Commission on the Outer Limits of the Continental Shelf, December 20, 2001, available online at [www.un.org/Depts/los/clcs\\_new/clcs\\_home.htm](http://www.un.org/Depts/los/clcs_new/clcs_home.htm).

107 C.J. Rivers, *Russians Plant Flag on The Arctic Seabed*, *New York Times*, August 3, 2007, available online at <http://www.nytimes.com/2007/08/03/world/europe/03arctic.html>.

108 United States, "Note," 18 March 2002, *ibid*.

109 Russian Submission in the CLCS, *supra*. See also Map xxxx.

110 This information was circulated in the document CLCS.01.2001.LOS (Continental Shelf Notification) of 20 December 2001, containing the executive summary of the Russian submission. Annex I to the Rules of Procedure requires the coastal State, if there is a dispute in the sense of the Annex, to inform the Commission of such disputes (para. 2(a)). Paragraph

cate that in a number of areas (the Barents Sea and part of the Arctic Ocean), the limit of the Russian continental shelf was formed by a provisional boundary with neighboring States, subject to a more precise definition in negotiations.<sup>111</sup> The executive summary of the Russian submission and map 2 attached to it suggest that the Russian Federation considered that these provisional boundaries formed part of the outer limit of its continental shelf under Article 76 of UNCLOS.<sup>112</sup> At the same time, the recognition that this concerned provisional boundaries indicates that the Russian Federation took into account that these parts of the outer limits of its continental shelf would not be final and binding *vis-a-vis* the neighboring States upon their establishment following a recommendation by the CLCS. Still, the approach suggested by the submission may not be without complications. For instance, it might later transpire that there is no overlap with the continental shelf of neighboring States. Would the proposed provisional outer limit in such a case become final and binding, if it were to be endorsed by the Commission? Or would the State concerned be entitled to make a new or revised submission to establish a different outer limit in the area concerned?<sup>113</sup> For the Bering Sea, the executive summary of the Russian submission did not indicate that the outer limit line would be provisional, although in this case it also borders the continental shelf of a neighboring State. The difference between the Arctic Ocean and the Barents Sea is the existence of a maritime boundary agreement with the United States.<sup>114</sup>

Five States reacted to the executive summary of the Russian submission to Canada, Denmark, Japan, Norway and the United States. The *Notes Verbales*

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9.1.4(d) of the Scientific and Technical Guidelines of the Commission (Scientific and Technical Guidelines of the Commission on the Limits of the Continental Shelf (CLCS/II of 13 May 1999; CLCS/II/Add.1 of 3 September 1999; CLCS/II/Corr.I of 24 February 2000)) provides that the executive summary of a submission shall contain information on any disputes as referred to in Rule 45 (at present Rule 46) of and Annex I to the Rules of Procedure.

111 See para. 1.2 of the executive summary of the Russian submission and the legend to Map 2 attached to the executive summary (reproduced in the document CLCS.01.2001.LOS, *ibid*).

112 The heading of Table I contained in the executive summary reads: 'Geographic coordinates of the points that define the lines of the outer limit of the continental shelf of the Russian Federation in the Arctic Ocean'. It is indicated that the lines connecting points 1 to 6 and 30 and 32 included in the table are "the boundary to be agreed upon with neighboring states".

113 The answer to this question depends on the content of the recommendations of the CLCS and the further actions undertaken by the coastal State. The recommendations of the CLCS in respect of the submission of the Russian Federation concerning the Barents Sea and the Bering Sea suggest that the CLCS in general will refrain from recommending specific outer limit lines where they define the extent of the continental shelf *vis-a-vis* a neighboring State, but will indicate whether or not a continental shelf entitlement exists. If a coastal State were to submit information on outer limit lines for such an area under Art. 76(9), it would in principle be barred from making a new or revised submission to the CLCS.

114 Agreement between the United States of America and the Union of Soviet Socialist Republics on the Maritime Boundary of 1 June 1990, 29 ILM 941.

of Canada and Denmark both referred to the lack of specific data that would allow a qualified assessment of the Russian Federation's submission and indicate that the absence of comments does not imply agreement to or acquiescence in the submission.<sup>115</sup> The *Notes* indicated that it was considered that any recommendations by the CLCS are without prejudice to the delimitation of the continental shelf of the Russian Federation with, respectively, Canada and Denmark.<sup>116</sup> The United States believed that the submission had major flaws as it related to the continental shelf in the Arctic Ocean.<sup>117</sup> The US comments *inter alia* discussed the characteristics of two ridges included in the outer limit lines as defined in the Russian submission, suggesting that these do not form a natural prolongation in the sense of Article 76(1) of UNCLOS. It was also noted that while the Commission has no competence over questions of baselines, it should not be perceived as endorsing particular baselines.<sup>118</sup>

The United States concluded that the recommendations of the Commission had to be based on a high degree of confidence: "If the Commission is unsure, it should not make a recommendation but should announce that it needs further data, analysis and debate."<sup>119</sup>

Norway's reaction to the submission of the Russian Federation concerned the limit of the continental shelf in the Barents Sea and the Arctic Ocean to the north of it. In this area both States have been negotiating the delimitation of a continental shelf boundary since 1969<sup>120</sup> and they concluded a bilateral agreement entered in force in 2010.<sup>121</sup> Norway subscribed to the view that the region of the Barents Sea beyond 200 nautical miles from the baselines formed part of the legal continental shelf. The Russian Federation had defined

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115 Note Verbale No. 119.N.8 of the Permanent Mission of Denmark to the United Nations to the Secretary-General of the United Nations of 4 February 2002 (reproduced as an attachment to the document CLCS.01.2001.LOS/DNK of 26 February 2002); Note Verbale No. 0145 of the Permanent Mission of Canada to the United Nations to the Secretary-General of the United Nations of 18 January 2002 (reproduced as an attachment to the document CLCS.01.2001.LOS/CAN of 26 February 2002). Canada and Denmark (in respect of Greenland) have a continental shelf in the Arctic Ocean that may overlap with the continental shelf of the Russian Federation.

116 A.G. Oude Elferink, *Submissions of Coastal States to the CLCS in Cases of Unresolved Land or Maritime Disputes*, in *Legal and Scientific Aspects of Continental Shelf Limits 263* (M.H. Nordquist, J. N. Moore, T.H. Heidar eds., 2004).

117 Letter of the Permanent Representative of the United States to the Under-Secretary for Legal Affairs, United Nations, 28 February 2002 (reproduced in CLCS.01.2001.LOSIUSA of 18 March 2002).

118 Attachment to the Letter of the Permanent Representative of the United States to the Under-Secretary for Legal Affairs, United Nations, 28 February 2002.

119 *Ibid.*

120 For further background information on this issue see, e.g., R.R. Churchill, *G. Ulfstein Marine Management in Disputed Areas; The Case of the Barents Sea*, Routledge/London, (1992); A.G. Oude Elferink, *The Law and Politics of the Maritime Boundary Delimitations of the Russian Federation: Part 2*, 12 *Int'l J. of Marine and Coastal L.* 5 (1997), at 5-16.

121 T. Neumann, *Norway and Russia Agree on Maritime Boundary in the Barents Sea and the Arctic Ocean*, 14 (34) *ASIL Insights* (2010).

the limit of its continental shelf in this area in its submission by a number of parallels and meridians, which reflect its position in the negotiations with Norway that the boundary has to be a sector line. Norway's reaction indicates its different position in those negotiations, namely that the continental shelf boundary has to be a median line, and that the unresolved delimitation issue in the Barents Sea has to be considered a "maritime dispute" for the purposes of paragraph 5(a) of Annex I to the Rules of Procedure of the Commission. In accordance with these rules, the actions of the Commission are without prejudice to matters relating to the delimitation of the continental shelf between both States. Norway indicated its consent to an examination by the Commission of the Russian submission with regard to the area under dispute.<sup>122</sup> In a statement during the presentation of the Russian submission to the CLCS, the Russian representative observed that it considered the reactions of other States not to constitute an obstacle to the consideration of the submission by the Commission.<sup>123</sup>

The establishment of the outer limit of the continental shelf did not have any effect on the negotiations with Norway over the delimitation of maritime zones in the Barents Sea.<sup>124</sup> According to the Russian Federation, the *Notes* from Canada and Denmark did not prove the existence of disputes concerning the delimitation of maritime zones or territorial disputes.<sup>125</sup> Similarly, the *Note* from the United States did not indicate a dispute concerning the delimitation of maritime zones with the Russian Federation.<sup>126</sup> Nevertheless, the Commission rejected the Russian Federation's submission, advising them to make a revised submission based on the findings contained in its recommendations.<sup>127</sup> The absence of any reference to other States in the summary of this part of the CLCS recommendations suggests that the recommendation to make a revised submission was not directly linked to the existence of a territorial or maritime dispute under Annex I to the Rules of Procedure.

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122 Note Verbale of 20 March 2002 of the Permanent Mission of Norway to the United Nations to the Secretary-General of the United Nations (reproduced in CLCS.01.2001.LOS/NOR of 2 April 2002).

123 See Oceans and Law of the Sea; Report of the Secretary-General; Addendum, UN Doc A/57/57/ Add. 1 of 8 October 2002, para 29.

124 Statement made by the Deputy Minister for Natural Resources of the Russian Federation during the presentation of the submission made by the Russian Federation to the Commission, made on 28 March 2002, UN Doc. CLCS/ 31 of 5 April 2002, at 6.

125 *Ibid.*

126 *Ibid.* As was noted above, the Russian submission employed the maritime boundary agreed upon with the United States as the eastern limit of its continental shelf in the Bering Sea, the Chukchi Sea and the Arctic Ocean. The United States noted this and indicated this to be in conformity with Art. 9 of Annex II to UNCLOS.

127 Oceans and Law of the Sea: Report of the Secretary-General: addendum, UN Doc A/57/57/ Add.1 (2002), at para 46.

The CLCS' rejection of Russia's submission has strongly influenced the further development of Russian Arctic policy.<sup>128</sup> Soviet Russia had been regularly collecting polar data since the early 1950s and sponsored numerous polar expeditions.<sup>129</sup> In 2005, Russia began to explore the Mendeleev and Lomonosov Ridges. Two additional expeditions were made in 2005 and 2007. Therefore, Russia probably has the most precise and long-term polar data unlimited to littoral areas and it will definitely continue its attempts to gather the greatest amount of scientific data possible to present to the Commission in its possible future submission.

Since its first submission in 2001, Russia has organized several expeditions to the High North. However, the Russian expedition "Arctic 2007" generated a very nervous reaction from other Arctic States,<sup>130</sup> sparking other polar players to activate their own northern ambitions: Denmark conducted an expedition to collect data for the CLCS, Canadian high officials visited its Arctic provinces, and the United States started more actively patrolling the Arctic air space and found a new mission for the CGC *Healy*.<sup>131</sup> Are all Arctic countries concerned with protecting the Arctic environment? Probably not. Natural resources and new technical and economic reasons for its exploitation are the key points behind their Arctic strategy. After the Arctic 2007 expedition, Mr. Chelingarov, its leader, member of the Russian Duma and special representative of the Russian president for international cooperation in the Arctic and Antarctic, formulated the key points of Russian policy. The Russian government adopted a new Arctic strategy (RAS) in September 2008, published on the Russian Security Council's website at the end of March 2009.<sup>132</sup> The RAS emphasises the region's importance to Russia's economy as a major source of revenue, due to energy production and profitable maritime transport. The main goal is to transform the Arctic into Russia's top strategic base for natural resources by 2030 and preserve the country's role as a leading Arctic power.<sup>133</sup>

Based on a brief analysis of the RAS, one may conclude that Russia considers the region to be crucially important for Russia's further wealth, social

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128 M. Benitah, *Russia's Claim in the Arctic and the Vexing Issue of Ridges in UNCLOS*, 11 (27) ASIL (2007).

129 Data collected by the National Centers for Environmental Information, available online at <https://www.nodc.noaa.gov/worlddatacenter/digitaldata.html>.

130 K. Dodds, *Geopolitics of Ice*, online available at <https://globalgeopolitics.wordpress.com/tag/arctic-basin/>.

131 Data Collected by US Coast Guard, Icebreakers Science Operations, available online at <http://icefloe.net/uscg-healy-track-map>.

132 The document, entitled "The fundamentals of state policy of the Russian Federation in the Arctic in the period up to 2020 and beyond" (*Osnovy gosudarstvennoi politiki Rossiiskoi Federatsii v Arktike na period do 2020 goda i dalneishuiu perspektivu*).

133 A. Skaridov, *Russian Policy on the Arctic Continental Shelf*, in *Changes in The Arctic Environment and the Law of the Sea 487* (H. Nordquist, John Norton Moore, and Tomas H. Heidar eds., 2009).

and economic development and competitiveness on global markets. Moreover, Russia will continue its efforts to define the limits of the country's continental shelf, which is listed as a top priority. Russia's strategic plan is included the development of the Northern Sea Route as a national, wholly integrated transportation system and a central element in maritime connections between Europe and Asia. Finally, to protect and enforce the country's national interests in various military and political situations. The main purpose of these military preparations is to combat terrorism at sea, smuggling and illegal migration, as well as to protect aquatic biological resources. The Federal Security Service intends to play a central role in protecting national interests in the region;

In 2010 Russia released a new national security strategy, which strongly hinted that future conflicts may arise over rights to Arctic oil<sup>134</sup> by acknowledging the possibility of war due to the struggle for control over Arctic gas and oil. The strategy examined potential threats to Russia's security over the next decade: "[w]ith the ongoing competition for resources, attempts to use military force to solve emerging problems cannot be excluded – and this might destroy the balance of forces on Russia's and its allies' borders." The document also states that,

"[t]he presence and potential escalation of armed conflicts near Russia's national borders, pending border agreements between Russia and several neighboring nations, are the major threats to Russia's interests and border security."

A key provision of Russia's Arctic strategy is that the protection of Arctic resources will become critical in the world military balance. Before adopting a new international agreement to coordinate the use of Arctic spaces, Russia declares it will follow UNCLOS in all enforcement measures, drawing guidance from Russian domestic legislation. In this case, Russia understands that it has to have some kind of forces and that those forces must follow Russian law in Arctic spaces. On the other hand, Russian officials announced that cooperation is the only way for further exploitation of resources. The Northern Sea Routes that are currently only open for very limited periods of the year, or only useable with expensive ice-breaker ships, could become accessible for longer periods and without recourse to special vessels. With increased human activity, the potential for accidents requiring search and rescue missions will also expand. With increasing energy supplies being shipped rather than piped, an increased risk of ecological disasters will require emergency operations.<sup>135</sup>

However just a few months ago, a new development came up to change the landscape in that respect. On February 6, 2023, the CLCS issued recom-

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134 Centre for High North Logistics, Russian Federation Policy for the Arctic to 2020, available in English, available online at <http://www.arctis-search.com/Russian+Federation+Policy+for+the+Arctic+to+2020>.

135 *Ibid.*

mendations with regard to the Russian submission in respect of the Arctic Ocean.<sup>136</sup> Russia subsequently accepted the Commission's recommendations, bringing its two-decade bid to extend its continental shelf close to an end. This development sends an important positive signal in times of unprecedented political disturbance in the Arctic region.

The new recommendations are mostly favorable to Russia: the CLCS agreed with Russia's arguments that the Mendeleev-Alpha Rise, the Podvodnikov Basin, and the Lomonosov Ridge are natural extensions of its continental shelf, and recommended using the points proposed in Russia's Submission to establish the outer limits of the continental shelf in these submarine areas. However, the Commission rejected evidence submitted by Russia as insufficient to prove the continental nature of the Gakkel Ridge, and therefore advised Russia to make a partial revised submission in respect of its continental shelf in the southern part of Amundsen Basin.<sup>137</sup> Russia, determined to solve this issue quickly, filed a revised submission on February 14, accepting the Commission's conclusions.<sup>138</sup>

The Summary of Recommendations of the CLCS regarding Russia's claims to the Arctic area will be read with great interest by different actors. Among the very interesting elements therein, there are in particular three aspects that have obvious legal implications that deserve particular attention.

Firstly, the CLCS accepted that the Lomonosov Ridge is a submarine elevation that is a natural component of the continental margin (submarine elevation).<sup>139</sup> It is therefore eligible to generate an outer limit line that goes far beyond 350 M from the baselines. This arises as the constraints in article 76(5) of the UNCLOS i.e. the 350 M distance constraint line and the 2,500 metres depth constraint line may be used alternatively on submarine elevations only, whereas 'submarine ridges' within the meaning of Article 76(6) cannot generate outer limits of the continental shelf that go beyond the 350 M distance constraint only. The Lomonosov Ridge is a ridge-shaped feature, but notwithstanding this morphological characteristic, it is now recognized to be a submarine elevation. This is a central consideration not only for Russia, but also for the other Arctic coastal States that have sought to rely on the Lomonosov Ridge as a submarine elevation, which acts as a spine for extending their entitlements to the continental shelf, as there are 2,500 metres depth points throughout the Lomonosov Ridge.

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136 Please see the relevant UN CLCS announcements available at: <https://press.un.org/en/2023/sea2176.doc.htm> ; [https://www.un.org/depts/los/clcs\\_new/submissions\\_files/submission\\_rus\\_rev1.htm](https://www.un.org/depts/los/clcs_new/submissions_files/submission_rus_rev1.htm).

137 Paras 73 and 120 from Russias submission available at: [https://www.un.org/depts/los/clcs\\_new/submissions\\_files/rus01\\_rev15/2023RusRev1RecSum.pdf](https://www.un.org/depts/los/clcs_new/submissions_files/rus01_rev15/2023RusRev1RecSum.pdf).

138 The revised submission can be found at: [https://www.un.org/depts/los/clcs\\_new/submissions\\_files/rus01\\_rev15/2023RusRev1RecSum.pdf](https://www.un.org/depts/los/clcs_new/submissions_files/rus01_rev15/2023RusRev1RecSum.pdf).

139 *Ibid.*

Secondly, in its initial recommendations to Russia in 2002, the CLCS was of the view that the Alpha-Mendeleev Ridge Complex cannot as such, allegedly due to its origin from which there was only esteemed a tenuous geological affinity with the land mass, constitute a submarine elevation. Yet, the conclusion must be made that the considerations on this particular question within the CLCS have changed. This arises as the CLCS now has approved the view of Russia consistent with which the Alpha-Mendeleev Ridge Complex constitutes a submarine elevation. Accordingly, the Alpha-Mendeleev Ridge Complex may generate entitlement that goes far beyond the 350 M distance line.

Thirdly, the Gakkel Ridge is an active oceanic spreading ridge whereas the land mass of the Russian Federation is composed of continental crust. Russia had sought to classify the Gakkel Ridge as a 'submarine ridge' within the meaning of Article 76(6), rather than a submarine elevation due to the fundamental geological discontinuity between the Gakkel Ridge and the land mass of Russia. However, the CLCS did not approve that the Gakkel Ridge is a submarine ridge. The proposition could be made that such an active oceanic spreading ridge cannot under any imaginable standard constitute the submerged prolongation of the land mass of a State composed of continental crust. Rather, it could be expected, an active oceanic spreading ridge necessarily constitutes part of 'the deep ocean floor with its oceanic ridges' under Article 76(3) of UNCLOS, at least where the relevant coastal State is of continental origin. However, the practice of the CLCS demonstrates overwhelmingly an inclination to rely on bathymetry and morphology only, in order to determine whether a seafloor high is an integral part of the continental margin, or, failing such a finding, part of the deep ocean floor with its oceanic ridges.

Finally, Consistent with Article 76(10) of UNCLOS, the recommendations of the CLCS are without prejudice to questions of delimitation of the continental shelf between States with opposite or adjacent coasts.

#### 1.4.1.2 United States

The major opponent of the Russian Federation in the race for the exploration and the exploitation of the natural resources is the United States. By far the largest and most interesting area of Extended Continental Shelf (ECS) is in the Arctic of the US. The United States portion, extending more than 600 miles north of the Alaskan coast, is a triangle-shaped area bounded to the west by the US-Russia provisional maritime boundary; to the east, by a disputed US-Canada boundary. The US juridical continental shelf begins at the Barrow margin and extends northward across the Chukchi Borderland, possibly as far as the Alpha-Mendeleev Ridge system.

Since 2003, the US Coast Guard icebreaker *Healy* has conducted several successful expeditions dedicated to defining the ECS in the Arctic Ocean. Part of the 2014 cruise was a joint operation between the US Task Force and the Geological Survey of Canada (deploying the Canadian icebreaker *Louis S. St.*

*Laurent*). The *Healy*<sup>140</sup> collected bathymetric soundings and created a straight and open path through the ice, while *Louis* followed, collecting seismic data using equipment towed off the stern of the ship. Where the ice was very thick, making seismic data collection difficult, *Louis* took the lead so that *Healy* could collect better bathymetric data.<sup>141</sup>

This joint mission successfully collected more than 2,700 kilometers of seismic profiles and more than 3,200 kilometers of bathymetric data. Both countries have an interest in defining the Arctic continental shelf, so it made sense, and saved millions of dollars, to collaborate on data collection. Russia planned a similar cooperative effort in the summer of 2009, and they have cooperated in another cruise in 2010. The Chukchi Borderland is an area of lineated, rough, and elevated sea floor that extends northwards approximately 850 kilometers from Barrow, Alaska, the northernmost point in the United States. The generally high-standing, north-south trending elevations encompass two segmented topographic highs: Northwind Ridge and Chukchi Plateau. The plateau-like crusts of the Chukchi Borderland rise as much as 3,400 meters above their surroundings. They are relatively shallow with depths between approximately 250 to 1,000 meters. The ridges have steep flanks that in some places exhibit remarkable linearity over hundreds of kilometers, especially along the east side of the Northwind Ridge.

North of the Chukchi Borderland, the Alpha-Mendeleev Ridge System is a region of elevated sea floor that separates the American Basin from the Eurasian Basin. This ridge system forms a topographic high that is one of the three major ridges crossing the Arctic Ocean.<sup>142</sup> Recently collected bathymetric data show that there may be morphologic continuity between the Chukchi Borderland and the Alpha-Mendeleev Ridge system, but this needs to be investigated further. The sea floor north of Alaska, known as the Canada Abyssal Plain or Canada Basin, is essentially flat, at a depth of 3,800-3,900 meters, and is surrounded by the Beaufort margin, Chukchi Borderland, Alpha-Mendeleev Ridge, and the Canadian continental margin. Based on existing multi-beam bathymetric and high-resolution sub-bottom data, a distinct morphological and geological break occurs at a depth of about 3,820 meters around the basin. This is the depth at which flat-lying abyssal plain sediments of the Canada Basin lap onto the surrounding elevated regions. This distinct and consistent morphologic transition is likely to be the foot of the slope. North of Northwind Ridge, the bathymetric formula is expected to be the more cost-effective choice, although the sediment thickness formula applies equally well

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140 *Supra*.

141 More information about the US Geological Surveys on the Arctic can be found on the website of the US Coast Guard, online available at <http://www.uscg.mil/hq/CG9/icebreaker/>.

142 The other major ridges are the Gakkel Ridge (a mid-ocean spreading center) and the Lomonosov Ridge (a continental fragment from EurAsia stranded when the Gakkel Ridge began spreading).

here. The 350 nautical mile constraint line appears to be more advantageous north of the Barrow margin. The 2,500-meter isobath plus 100 nautical mile constraint line is likely to be applied north of the latitude where the two constraint lines intersect (at about 77°10' N, 153°51' W). The Chukchi Borderland is considered a submarine elevation,<sup>143</sup> so the 350-nautical mile constraint line for submarine ridges, imposed in paragraph 6 of Article 76, does not apply to the continental shelf pertaining to the Chukchi Borderland.

#### 1.4.1.3 Denmark

The third State with a critically important role in the Arctic Ocean is Denmark, which consists of three entities: Denmark, Greenland and the Faroe Islands. Of these, only Greenland is geographically placed in the Arctic so. Danish interests in the Arctic can never be separated from those of Greenland. In order to understand the Danish Arctic policy, one has to have a grasp of the constitutional relationship between Greenland and Denmark. Before 1953, Greenland was a colony, both constitutionally and under international law.<sup>144</sup> With the adoption of the 1953 Constitution of the Kingdom of Denmark, the status of Greenland and the relationship between the two entities changed which subsequently led to an increase in Greenland's autonomy. This has culminated in the adoption by the Parliaments of both Denmark and Greenland of a new Law on Self Rule, which was presented to the people of Greenland by H.M. the Queen of Denmark on 21 June 2009. Under this Law, a large portion of governmental authority with regard to Greenland was transferred from the Danish federal Government to Greenland.<sup>145</sup>

An exception to this autonomy exists in matters relating to foreign affairs and security relating to Greenland, which remain the competence of the Kingdom of Denmark and are therefore handled by the Danish Ministry of Foreign Affairs in Copenhagen. A consequence of this constitutional construction is that Denmark is the only subject under international law and therefore the only State party to UNCLOS. As a result of the relationship between

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143 "[I]t is important to recall the U.S. statement made to this effect on April 3, 1980 during a Plenary session of the Third United Nations Conference on the Law of the Sea, which has never given rise to any contrary interpretation. In the statement, the United States representative expressed support for the provision now set forth in article (76(6) on the understanding that it is recognized that features such as the Chukchi plateau situated to the north of Alaska and its component elevations cannot be considered a ridge and are covered by the last sentence of paragraph 6." Message of the President of the United States transmitting the United Nations Convention on the Law of the Sea, Senate Treaty Doc. 103-39, p. 56 (1994).

144 I. Bjornsson, *Why is Greenland a part of the Danish Kingdom?*, *The Arctic Journal*, June 29, 2016, available online at <http://arcticjournal.com/culture/2377/why-greenland-part-danish-kingdom>.

145 T. Winkler, *Danish interests in the Arctic*, online available at <http://www.virginia.edu/colp/pdf/Winkler-Danish-interests.pdf>, at 478.

the entities of the Kingdom, decisions on foreign policy matters, including issues of adhering to treaties and other binding international instruments, are taken in close cooperation between the authorities in Copenhagen and Nuuk, the capital of Greenland.<sup>146</sup> The fact that Greenland is not a member of the European Union is a remarkable – and also in regard to the Arctic – important exception to the common foreign policy of Denmark. To many in both Greenland and Denmark, this is one of the most urgent challenges today. Security policy issues should of course also be on this list of interests. The atmosphere of cooperation characterizing the current climate between the States in the region will also have a positive impact on security policy issues.

#### 1.4.2 The importance of ridges in the Arctic Ocean<sup>147</sup>

In light of central Arctic ridge geology, concern is warranted over the potential overlap of entitlements that may occur if Canada, Denmark and the Russian Federation maximise their ECS area along these ridges, issues relating to the application of UNCLOS Article 76 must be considered.<sup>148</sup> As mentioned, two formulae are used to establish the outer limit lines beyond 200 nm. Article 76(5) sets maximum constraint lines. Article 76(6) clarifies the situations in which the outer limit may extend beyond 350 nm, providing the exception for submarine features that connect to the margin. It reads:

“Notwithstanding the provisions of paragraph 5, on submarine ridges, the outer limit of the continental shelf shall not exceed 350 nautical miles from the baseline from which the breadth of the territorial sea is measured. This paragraph does not apply to submarine elevations that are natural components of the continental margin such as its plateaux, rises, caps, banks and spurs.”

Accordingly, the outer limit shall not exceed the 350-nm constraint line along submarine ridges.<sup>149</sup> Where a submarine feature is a natural prolongation of the continental margin, such as a plateau, bank, spur or cap, the outer limit line does not have to be constrained to 350 nm from the territorial baseline.<sup>150</sup> Ridges that are features of the deep seabed, and therefore oceanic, may not be used to extend a continental shelf.<sup>151</sup> How these provisions tie together

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146 Itilleq Declaration of 14 May 2003 on cooperation in foreign and security policy.

147 For exact locations of the Ridges mentioned under this subchapter please check table of maps, map 4-5.

148 For the history of the negotiations and commentary S. N. Nandan, S. Rosenne, N. R. Grandy, United Nations Convention on the Law of the Sea 1982: A Commentary, Volume II Martinus Nijhoff Publishers, Dordrecht (1995), 837–890.

149 UNCLOS Art. 76(6).

150 UNCLOS Arts. 76(5), 76(6).

151 UNCLOS Art. 76(3) states that the continental margin ‘does not include the deep ocean floor with its oceanic ridges and subsoil thereof.’

is not entirely clear. Uncertainty arises in cases where a ridge-like feature demonstrates appurtenance to the continental margin.

In such cases, the issue is whether the constraint line has to be 350 nm because it is ridge-like, or whether it can extend to 100 nm from the 2500-m isobath on the basis that it is a natural prolongation of the continental margin. It is not clear which criteria a state should use to establish that the feature is a natural prolongation of the continental margin. If a submarine ridge is a natural prolongation of the land territory but not a natural component of the continental margin, UNCLOS Articles 76(5) and 76(6) together suggest that the maximum extent of the claim is 350 nm. If a ridge is derived from an oceanic process but has become attached to land territory by plate movement and geomorphological processes, the outer limit along such a ridge would be 350 nm. For submarine ridges that are not oceanic ridges, Article 76(6) may also suggest that a maximum of 350 nm also applies. In this interpretation, all ridges are constrained by 350 nm, a position which can be surmised from the negotiations of UNCLOS in 1980. During negotiations of Article 76, Iceland confirmed that the “provision regarding submarine ridges meant that the 350-mile criterion would apply to ridges which were a prolongation of the landmass”.<sup>152</sup> The US confirmed that the Chukchi Plateau (CP) and its component elevations “could not be considered a ridge and were covered by the last sentence of the proposed paragraph” [76(6)].<sup>153</sup> Denmark interpreted submarine elevations to mean those that “belong fundamentally to the same geological structure as the land territory”.<sup>154</sup> Oceanic ridges (in the sense of ridges geologically linked to the deep ocean floor with no connection to a continental margin) of the subsoil of the deep ocean floor cannot be included in the continental margin. These ridges accordingly cannot be used to extend the continental shelf beyond 350 nm.<sup>155</sup> Submarine ridges that are ‘natural components of the continental margin’ can, however, also meet the criteria applied to submarine elevations through the second sentence of Article 76(6), inasmuch as the morphological ridge like features are included in the definition of submarine elevations according to common and accepted formal definitions of the submarine seafloor.<sup>156</sup> Difficulty may arise in distinguishing between a ridge, rise, and a spur when, for example, spurs and rises are defined as

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152 P.A. Symonds, H. Brekke, A Scientific Overview of Ridges Related to Article 76 of the UN Convention on the Law of the Sea, in *Legal and Scientific Aspects of Continental Shelf Limits 141* (Myron H. Nordquist, John Norton Moore, Tomas H. Heidar eds., 2004), at 147; H. Brekke, P. A. Symonds, The Ridge Provisions of Article 76 of the UN Convention on the Law of the Sea, in *Legal and Scientific Aspects of Continental Shelf Limits 169* (Myron H. Nordquist, John Norton Moore, Tomas H. Heidar eds., 2004), at 179.

153 P.A. Symonds, H. Brekke, *supra*, at 145 and Table 2, at 146–148.

154 *Ibid.*

155 International L Association (ILA), Committee on the Legal Issues of the Outer Continental Shelf (2006) Toronto Conference (Second Report) 1–20, Conclusion 3, at p. 5.

156 H. Brekke, P. A. Symonds, *supra*, at 189.

ridges in the International Hydrographic Organization's 'Standardization of Undersea Feature Names'.<sup>157</sup> Along these 'ridges' that are natural components of the continental margin and not geologically tied to the deep ocean floor, the outer limit could extend to 100 nm from the 2500-m isobath. Apparently, either constraint line may apply to submarine ridges depending on the accepted interpretation of the provisions of UNCLOS Article 76. In 1993, The Division of Oceans Affairs and the Law of the Sea (DOALOS) compiled a pamphlet on the definition of the continental shelf to assist with the interpretation and application of these provisions.<sup>158</sup> The Commission also released the *Scientific and Technical Guidelines*<sup>159</sup> in 1999 that devote a section entirely to ridges. A number of commentators, including Symonds and Brekke (2000 and 2004),<sup>160</sup> Prescott and Schofield (2005),<sup>161</sup> MacNab (2008),<sup>162</sup> and the Outer Continental Shelf Committee of the International Law Association (2006)<sup>163</sup> have attempted to clarify the 'ridge issue' and the basis from which to establish natural prolongation. States must present evidence to support the outer limits of the continental shelf, including evidence that supports 'natural prolongation'. To determine how far the shelf can go along submarine features, States also have to determine whether such a feature is a 'natural component of the continental margin'. The basis of this appurtenance is the similarity of geological structure and the understanding of the geological and tectonic history that would connect the feature to the continental margin.<sup>164</sup>

Appurtenance can be determined irrespective of crust type. The *Scientific and Technical Guidelines* confirm that "geological crust types cannot be the sole qualifier in the classification of ridges and elevations."<sup>165</sup> Therefore, both geology and geomorphology play a role in determining the entitlement of an extended continental shelf and the extent to which it may be claimed.<sup>166</sup> For instance, if a feature comprised of oceanic crust is a natural prolongation of a continental margin (which therefore is also oceanic in nature), then this feature can be considered to be part of an ECS. In this manner, Iceland, which is an island State on the Mid-Atlantic spreading ridge, is still entitled to a continental shelf in areas beyond 200 nm. Similarly, Australia is entitled to

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157 International Hydrographic Organization, Standardization of Undersea Feature Names' (2001) Bathymetric Publication No. 6, at 2–25 and 2–28. Also discussed in V. Prescott, C.H. Schofield, *The Marine Political Boundaries of the World*, Martinus Nijhoff (2<sup>nd</sup> ed., 2005).

158 *Supra* note 189.

159 Section 7 of the Scientific and Technical Guidelines of the CLCS.

160 C.M. Carleton, *Delimitation Issues*, in *Continental Shelf Limits: The Scientific and Legal Interface* 312 (Peter J. Cook and Chris M. Carleton eds., 2000).

161 V. Prescott, C.H. Schofield, *supra*, Chapter 9, at pp. 194–200.

162 *Ibid.*

163 ILA, Conclusion 2, *supra*, at 3 on 'natural prolongation' and Conclusion 3, at 4 for 'ridges'.

164 P.A. Symonds, H. Brekke, *supra*, at 152–158.

165 Paragraph 7.2.9 of the Scientific and Technical Guidelines of the CLCS.

166 In section 7 of the Scientific and Technical Guidelines of the CLCS. See also P.A. Symonds, H. Brekke, *supra* at 152–153.

an ECS claim off Macquarie Ridge.<sup>167</sup> In contrast, a feature produced through mechanisms of the deep ocean floor that is not connected to a land territory will be excluded from an ECS submission as required by Article 76(3) UNCLOS. The Outer Continental Shelf Committee of the International Law Association interpreted the term 'submarine ridge' in Article 76(6) UNCLOS as "applicable to ridges that are (predominantly) oceanic in origin and that are the natural prolongation of the land territory of a coastal state".<sup>168</sup> This interpretation enables ridges that are natural components of the continental margin to be considered as potential submarine elevations rather than ridges. Extending the legal continental shelf along ridge-like features and submarine elevations depends on criteria that categorise the feature as not only a natural prolongation of the land territory in the geomorphological sense, but perhaps also as a natural component of the continental margin, connecting it geologically to the landmass. Criteria must also define whether its geological connection with the continental margin exists along the entire length of the ridge or whether it undergoes a transition to crustal features of the deep ocean. If a feature demonstrates a connection at the landward end but is transitional along its length, or on the seaward end, the outer edge of the continental shelf could extend far out into the oceans unless constraints are set. In this situation, "the 350-nm constraint... will prevent sweeping consequences arising for jurisdictional rights".<sup>169</sup>

In light of the morphological and geological criteria required to establish a feature as a ridge or submarine elevation (such as a rise), in terms of geological continuity, as well as the ambiguous wording of UNCLOS Article 76, the CLCS has been hesitant to establish an over-arching procedure for examining ridges and has decided to consider ridges on a case-by-case basis.<sup>170</sup> While the UNCLOS *travaux préparatoires* may provide additional support to the text of UNCLOS,<sup>171</sup> assessment of the validity of claims ultimately depends on State practice, other States' reactions and the attitude of the Commission.<sup>172</sup> For the Arctic, consensus has yet to be reached over the geological history and structure of all of its physiographic features. Views have been expressed that ridge issues will be an important aspect of the process of delimiting continental shelf limits for Arctic States.<sup>173</sup> If the CLCS accepts that the ability to maximise

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167 Commonwealth of Australia, Continental Shelf Submission of Australia, Executive Summary (2004), available online at [http://www.un.org/Depts/los/clcs\\_new/submissions\\_file/submissions\\_austr.htm](http://www.un.org/Depts/los/clcs_new/submissions_file/submissions_austr.htm), at 25.

168 ILA, Conclusion 3, *supra*, at 4–5.

169 Symonds, Brekke, *supra*, at 187.

170 Paragraph 7.2.11 of the Scientific and Technical Guidelines of the CLCS.

171 VCLT Art. 32.

172 Symonds *et al.*, *supra*, 303.

173 R. MacNab, O. Loken, A. Anand, The Law of the Sea and Marine Scientific Research in the Arctic, (Fall/Winter) Canadian Polar Commission, Meridian 1 (2007); and A.G. Oude Elferink, The Outer Continental Shelf in the Arctic: The Application of Article 76 of UNCLOS

continental shelf area along the ridges is consistent with UNCLOS, an overlap of jurisdiction in the central Arctic basin will occur that will need to be resolved by the Arctic States.

### 1.5 BOUNDARY DELIMITATIONS AND CONTINENTAL MARGINS<sup>174</sup>

Because the Arctic Ocean is semi-enclosed, the coastal States are either adjacent to and/or opposite one another. For the most part, maritime boundaries between these States, including those related to the continental shelf, have not been finalized. Prescott and Schofield (2005) identify nine delimited maritime boundaries in the Arctic region.<sup>175</sup> Most of these do not, however, provide for the delimitation of continental shelf boundaries beyond 200 nm. For example, the boundary between Canada and Greenland was settled in 1973, but does not extend beyond 82°13' N.<sup>176</sup> The exception is the 1990 United States-Russia Boundary Agreement<sup>177</sup> negotiated between the United States and the former Soviet Union. This Agreement is yet to enter into force; nevertheless, both States apply its terms. The agreed boundary runs along the 168°49'30 West Longitude meridian, with no fixed northern limit. Article 1(1) of the Agreement refers instead to the ability to extend the boundary as far as permitted by international law. Article 1(2) states that "each party shall respect the maritime boundary as limiting the extent of its coastal State jurisdiction otherwise permitted by international law". Thus, the Boundary Agreement provides for coastal State jurisdiction over the continental shelf beyond 200 nm. The agreed boundary is derived from the 1867 Boundary Treaty (regarding the sale of Alaska to the United States),<sup>178</sup> in which the meridian line was used as a cartographic device to describe the lands concerned in the matter, not as an agreed State boundary. In 1926, the then-Soviet Union issued a decree using the sector principle along this same meridian to enclose territorial lands and islands.<sup>179</sup> Since then, the former Soviet Union (now the Russian Federation) has been consistent in its claims over lands and islands

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in a Regional Context, in *The Law of the Sea and Polar Maritime Delimitation and Jurisdiction* 139 (A.G. Oude Elferink, D.R. Rothwell eds., 2001).

174 For exact locations that are mentioned in subchapter 5, please check table of maps, maps 1, 4,5.

175 V. Prescott, C.H. Schofield, *The Marine Political Boundaries of the World*, Martinus Nijhoff (2<sup>nd</sup> ed., 2005), 522–523.

176 *Ibid.*, at 522.

177 Agreement between the United States of America and the Union of Soviet Socialist Republics on the maritime boundary, done at Washington 01 June 1990, 29 ILM 1990, 942.

178 Convention ceding Alaska between Russia and the United States, 30 March 1867, 134 CTS 331, 15 Stat 539. Treaty Series No. 301.

179 L. Timtchenko, *The Russian Arctic Sectoral Concept: Past and Present*, 50(1) *Arctic* 29 (1997), at 30 for reproduction of the Soviet Decree. Reproduced from Sobraine Zakonov SSSR (1926) No. 32(203).

within the sector but has never claimed waters beyond national jurisdiction.<sup>180</sup> In negotiations between Norway and the former Soviet Union concerning the continental shelf and economic zones in the Barents Sea (ongoing since 1974), the former Soviet Union has always insisted on recognition of the sector concept as constituting special circumstances for the region.<sup>181</sup> A similar position was taken in negotiations concerning the Chukchi Sea from 1989, which resulted in the 1990 Boundary. In the CLCS submission, the Russian Federation argued the boundary between Canada and Denmark (opposite States) derived from the same meridian boundary line used in the 1990 Boundary Agreement drawn up to the geographical North Pole. The use of the sector concept to link this line to the North Pole was a consistent State practice of the former Soviet Union, and is now used by the Russian Federation, as a method for enclosing land and island territories.<sup>182</sup> The sector concept was used to enclose sea expanses, but has not been used to lay claim to waters beyond national jurisdiction within the sector.<sup>183</sup> Accordingly, this provides Russia with a provisional outer limit of the continental shelf<sup>184</sup> and will not necessarily represent the boundary between opposite States, such as with Canada and Denmark. In the Barents Sea, Russia also applies the sector principle, maintaining consistency of its negotiating position with Norway. However, these are Russian positions which do not necessarily reflect agreed boundaries between States.

### 1.5.1 Donut holes

Mapping of the constraint lines available through UNCLOS Article 76, in the absence of political boundaries, demonstrates that all but two areas of deep ocean floor could potentially be allocated to the respective Arctic States under UNCLOS.<sup>185</sup> The first of the two 'donut holes' excluded from the ECS claims relates to the elongated and meandering area of the Gakkel Ridge (GR), circumscribed by a combination of 200-nm, 350-nm and 100-nm segments from the 2500-m isobath lines stretching from the outer limits of Denmark, Norway and Russia.<sup>186</sup> The second is a roughly trapezoidal zone in the Mendeleev

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180 *Ibid.*, at p. 34.

181 *Ibid.*, at 32.

182 *Ibid.*, at 34.

183 *Ibid.*, at 32.

184 Statement made by the Deputy Minister for Natural Resources of the Russian Federation during presentation of the Submission made by the Russian Federation to the Commission, made on 28 March 2002, UN Doc CLCS/31 of 03 April 2002.

185 A. Strati, *supra*, at 92.

186 R. MacNab, P. Neto, R. van de Poll, Cooperative Preparations for Determining the Outer Limit of the Juridical Continental Shelf in the Arctic Ocean: A Model for Regional Collaboration in Other Parts of the World?, (Spring) IBRU Boundary and Security Bulletin 86 (2001).

Abyssal Plain in the Canada Basin that is circumscribed by both the 350-nm limits and the 2500-m isobath projected seaward by 100 nm, combining the outer limits of Canada, Russia, and the US.<sup>187</sup> The GR area has been recognised as an oceanic ridge, formed through seafloor spreading in the North Atlantic,<sup>188</sup> while abyssal plains are also not capable of contributing to an ECF.<sup>189</sup> The Russian submission was enclosed along the meridian line in the Amerasian basin, rather than extending to the edge of the Mendeleev trapezoidal donut hole. The meridian line favours Russia within 200 nm of the coast, compared to equidistance.<sup>190</sup>

### 1.5.2 Overlap

Further towards the North Pole there is a discrepancy between the Russian drawn boundary and where equidistance lines would potentially meet between Canada, Denmark (Greenland) and Russia. The junction of these equidistance lines is in the vicinity of 88°20' N, 155°E on the Russian side of the North Pole, whereas Russia draws its boundary all the way to the Pole. If Canada and Denmark are entitled to a part of the seabed in this area along the Lomonosov Ridge and proceed to the junction of the equidistance lines, rather than just to the North Pole, an overlap of jurisdiction for approximately 22,000 nm<sup>2</sup> may result.<sup>191</sup> 520 nautical miles of ridge beyond the 350-nm constraint lines would not be included in the legal continental shelves of the States and would qualify as seabed beyond national jurisdiction. The continental shelf limits would not meet each other or overlap and boundary negotiations would not be necessary. The seabed of the Lomonosov Ridge (LR) beyond national jurisdiction would be considered part of the 'Area'.

Specific uses of the Area, including exploitation of the resources of the deep seabed and subsoil,<sup>192</sup> are regulated through Part XI of UNCLOS and by the

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187 *Ibid.*

188 A. Grantz, Treatment of Ridges and Borderlands under Article 76 of the United Nations Convention on the Law of the Sea: the Example of the Arctic Ocean, in Legal and Scientific Aspects of Continental Shelf Limits 201 (M. H. Nordquist, J. N. Moore, T. H. Heidar eds., 2004), at 206–207. The Note Verbale also makes a comparison of this ridge to the Iceland-Faroe ridge system in the North Atlantic.

189 UNCLOS Art. 76(3).

190 Prescott and Schofield, *supra*, at 523, 527. Depending on the geological structure of the continental margins and the Chukchi Plateau (CP) located in the area east of the sector boundary drawn by Russia, the United States or Canada may be able to include this feature in their extended continental shelf claims.

191 *Ibid.*

192 The 'Area' is defined in UNCLOS as the ocean floor, seabed and subsoil thereof beyond national jurisdiction (Article 1) and is considered to be the common heritage of mankind (Article 136). Part XI of UNCLOS, and its subsequent Implementing Agreement (1994), established regime for exploiting this area and assign the International Seabed Authority to implement the terms of the regime. Agreement relating to the Implementation of Part

International Seabed Authority. According to the DOALOS, ridges formed by slivers of continental crust, can be considered to be submarine ridges forming a natural component of the continental margin.<sup>193</sup> Because the LR can also be defined by a continuous 2500-misobath, there is a possibility that the entire ridge may be encapsulated inside the limits of the continental shelves of Canada, Denmark and the Russian Federation.<sup>194</sup> The LR's geological composition could qualify as elements related to natural components of the continental margin. These gestures might demonstrate the Russian position of being disinclined to agree to a shift towards equidistance-based boundaries. It is unlikely that formal discussions on this topic will be initiated while the structure of the seabed in the central Arctic is still being investigated.

### 1.5.3 Submission rights and possibilities

Both Canada and Denmark have referred to their inability to agree or disagree with the Russian Federation's Arctic continental shelf submission.<sup>195</sup> By also indicating that an absence of comment does not imply agreement or acquiescence, Canada and Denmark leave open the possibility of overlap occurring.<sup>196</sup> Until there is certainty concerning the overlap, States are not obliged to report a dispute to the Commission in accordance with Annex I of the Rules of Procedures of the CLCS.<sup>197</sup> However, neither Canada nor Denmark was in a position to deny consideration of the area on the basis of an existing dispute. The consideration of any submission is independent of others. Therefore, Russia's submission does not depend on Canada's or Denmark's. However, there are problems related to leaving a boundary between opposite States open-ended. States may wish to communicate to the CLCS and the UN Secretary-General how these issues are being considered. Tonga, New Zealand

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XI of the United Nations Convention on the Law of the Sea of 10 December 1982 of 28 July 1994, 33 International Legal Materials 1309, entered into force 28 July 1996.

193 ILA, Committee on the Legal Issues of the Outer Continental Shelf (2006) Toronto Conference (Second Report) 1–20, Conclusion 3, at 5.

194 *supra* n. 104 where the authors explain that only two sections of the Arctic seabed appear to be exempt from projected jurisdiction: the GR and the Mendeleev Abyssal Plain.

195 Permanent Mission of Canada to the United Nations, Canada: Notification Regarding the Submission made by the Russian Federation to the Commission on the Limits of the Continental Shelf (2002), available online at: [http://www.un.org/Depts/los/clcs\\_new/submissions\\_files/rus01/CLCS\\_01\\_2001\\_LOS\\_CANtext.pdf](http://www.un.org/Depts/los/clcs_new/submissions_files/rus01/CLCS_01_2001_LOS_CANtext.pdf), accessed on 16 June 2016; Permanent Mission of Denmark to the United Nations, Denmark: Notification Regarding the Submission made by the Russian Federation to the Commission on the Limits of the Continental Shelf (2002), available online at [http://www.un.org/Depts/los/clcs\\_new/submissions\\_files/rus01/CLCS\\_01\\_2001\\_LOS\\_DNKtext.pdf](http://www.un.org/Depts/los/clcs_new/submissions_files/rus01/CLCS_01_2001_LOS_DNKtext.pdf).

196 *Ibid.*

197 Paragraph 2 of Annex I of the Rules and Procedures of the CLCS states that, in the case of a dispute, the Commission shall be informed of such a dispute and assured that the submission will not prejudice matters relating to delimitation of boundaries between States.

and Fiji, for example, have dealt with an overlapping area identified in the 2006 New Zealand submission. The area of overlap concerned the ECS between Tonga and New Zealand<sup>198</sup> and consultations were undertaken in the spirit of understanding and cooperation to establish provisional arrangements, pending final agreement.<sup>199</sup> The States agreed that, notwithstanding the Recommendations made by the CLCS and the outer limit determined by the Government of New Zealand based on those recommendations, the delimitation of the EEZ and the continental shelf had to be undertaken by agreement on the basis of international law.<sup>200</sup> The Republic of Fiji commented in a *Note Verbale* that negotiations on the delimitation of the boundary between itself and New Zealand were ongoing and that any recommendations “ought to be without prejudice of future submissions by the Republic of Fiji and of the boundary delimitations.”<sup>201</sup> New Zealand assured the CLCS of these initiatives in follow-up correspondence to the United Nations Secretary-General and the CLCS.<sup>202</sup> Any recommendations from the examination of New Zealand’s submission will not override the negotiations between the States.<sup>203</sup>

Boundary negotiations in the central Arctic will be initiated after Russia makes a revised submission and possibly after Canada and Denmark are due to submit.<sup>204</sup> For the Russian submission, the Commission has no role in recommending that Russia, Canada and Denmark engage in provisional, transitional arrangements. Pending final agreement, however, the States are free to consider this option. The Boundary Agreement between the United States and Russia might be a useful foundation for such arrangements. For example, the boundary line agreed between Canada and Denmark currently

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198 Government of New Zealand, New Zealand Submission to the Commission on the Limits of the Continental Shelf pursuant to article 76(8) of the United Nations Convention on the Law of the Sea, Executive Summary (2006), available online at [http://www.un.org/Depts/los/clcs\\_new/submissions\\_files/nzl06/nzl\\_exec\\_sum.pdf](http://www.un.org/Depts/los/clcs_new/submissions_files/nzl06/nzl_exec_sum.pdf).

199 In accordance with UNCLOS, Art. 83.

200 Permanent Mission of the Kingdom of Tonga to the United Nations, Diplomatic Note (08 April 2008), available online at [http://www.un.org/Depts/los/clcs\\_new/submissions\\_files/nzl06/tonga\\_e.pdf](http://www.un.org/Depts/los/clcs_new/submissions_files/nzl06/tonga_e.pdf).

201 Permanent Representative of the Republic of the Fiji Islands to the United Nations, Diplomatic Note, (23 June 2006), available online at [http://www.un.org/Depts/los/clcs\\_new/submissions\\_files/nzl06/fi\\_ji\\_e.pdf](http://www.un.org/Depts/los/clcs_new/submissions_files/nzl06/fi_ji_e.pdf).

202 Permanent Mission of New Zealand to the United Nations, Diplomatic Note (31 July 2008), available online at [http://www.un.org/Depts/los/clcs\\_new/submissions\\_files/nzl06/nzl\\_2008\\_e.pdf](http://www.un.org/Depts/los/clcs_new/submissions_files/nzl06/nzl_2008_e.pdf), accessed on 16 June 2016.

203 Recommendations have since been made by the CLCS. A summary of the recommendations is available from the DOALOS website, available online at [http://www.un.org/Depts/los/clcs\\_newsubmissions\\_files/nzl06/nzl\\_summary\\_of\\_recommendations.pdf](http://www.un.org/Depts/los/clcs_newsubmissions_files/nzl06/nzl_summary_of_recommendations.pdf).

204 The due date was the end of 2013 for Canada and the end of 2014 for Denmark. Officially, these negotiations were frozen due to the Ukrainian Crisis. However, many voices -including president Grimmson of Iceland- argue that what happens in another place of the world shall not affect Arctic Negotiations.

ends at 82°13' N.<sup>205</sup> By extending this limit “into the Arctic Ocean as far as permitted under international law”, similar to what is stipulated in the *Boundary Agreement*, the continental shelf between Canada and Denmark would be delimited to a point where the continental shelf areas overlap with those described by Russia. The final delimitation would still be pending until the outcome of the CLCS and final boundary agreements. However, unidirectional extension of an existing boundary is not a necessary solution or the only option available to the States in order to achieve an equitable solution. Provisional arrangements with Russia could also employ the wording of the *Boundary Agreement* (consistent with international law) and be based on equidistance lines or the sector theory through special circumstances.<sup>206</sup> Boundary arrangements or final agreements which apply to continental shelf boundaries that occur further than 350 nm from the States’ coastline would require geological evidence to prove each State had equal entitlement to extend the shelf beyond 350 nm. Any prior resolution of boundaries related to ECS claims may still be provisional, pending CLCS consideration. If the scientific data do not support entitlement to ECS for each of the involved States, the provisionally agreed boundary would need to be altered accordingly. In these cases, the States may prefer to enter into boundary negotiations following the receipt of recommendations from the CLCS, rather than before, even if those arrangements do not prejudice the final agreement.

There is also a possibility of a joint submission of Canada, Denmark and Russia.<sup>207</sup> A joint submission would only be possible once all of the data had been acquired and *prima facie* entitlement for all three States along the ridge established. For a number of reasons, this did not happen. Russia had a much earlier timeframe for its submission and has already made a unilateral submission. Canada and Denmark are in the early stages of data acquisition and it would be very difficult to consolidate the existing Russian submission into a joint submission, which would require compatible data sets and interpretation. Language differences may be problematic, as are political differences.<sup>208</sup> Given the fact that the request for Russia to make a revised submission was brought in 2002 and the case load of the CLCS is increasing, Russia is likely to present its revised submission well before Canada and Denmark

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205 International Hydrographic Organization, Standardization of Undersea Feature Names, (2001) Bathymetric Publication No. 6, at 2–25 and 2–28. Also discussed in V. Prescott, C.H. Schofield, *The Marine Political Boundaries of the World*, Martinus Nijhoff (2<sup>nd</sup> ed., 2005), 198–199.

206 P.A. Symonds *et al.*, *Ridge Issues*, in *Continental Shelf Limits: The Scientific and Legal Interface* 285 (Peter J. Cook and Chris M. Carleton eds., 2000), at 290.

207 In accordance with Paragraph 4 of Annex I to the Rules and Procedures of the CLCS.

208 A joint submission that includes a region already given some consideration in a single submission could increase the CLCS workload.

have prepared theirs.<sup>209</sup> Alternatively, States affected by the potential overlap may mutually agree to exclude this area from examination. A State may make a submission for a portion of its continental shelf in order not to prejudice questions relating to the delimitation of boundaries between States in any other portion of the continental shelf for which a submission may be made later.<sup>210</sup> This would delay the examination for the excluded portion of the continental shelf. Russia has the ability to do this in its revised submission, as do Canada and Denmark within their pending submissions. There have, however, been no indications that this will occur so there is minimal likelihood of partial submissions by the individual States. Omitting the area of potential overlap would again only delay the verification of the entitlement and prevent finalising boundary delimitations. Any preliminary data submitted in accordance with the SPLOS/183 decision are unable to be examined pending a full submission.<sup>211</sup> The Russian Federation has been working steadily towards a resubmission for the Arctic<sup>212</sup> and since the Russian submission is not dependent on Canada and Denmark, delaying on the basis of a possible overlap is neither worthwhile nor necessary.

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209 The Russian submission is a revision rather than an initial submission, and according to UNCLOS, Annex II, Art. 8 any resubmission must follow within a 'reasonable' timeframe. Although not definite in its description, waiting 11 years to meet the Canadian deadline of 2013, might be considered beyond 'reasonable'. The consequences of a 'late' submission have yet to be determined.

210 Paragraph 3, Annex I of the Rules and Procedures of the CLCS.

211 UNCLOS, Annex II, Art. 4 reads: 'a coastal state... shall submit particulars of such limits to the Commission along with supporting scientific and technical data as soon as possible but in any case within 10 years of the entry into force of this Convention for that State.' A decision by the States Parties in 1999 has effectively extended the timeframe for States that signed UNCLOS prior to 1999 to 2009, ten years following the 13 May 1999 decision. See Decision Regarding the Date of Commencement of the Ten-Year Period for Making Submissions to the Commission on the Limits of the Continental Shelf set out in Article 4 of Annex II to the United Nations Convention on the Law of the Sea, SPLOS/72 of 29 May 2001, available online at <http://daccessdds.un.org/doc/UNDOC/GEN/N01/387/64/PDF/N0138764.pdf?OpenElement>. A further decision in 2008 states that a coastal state may satisfy the ten-year deadline by submitting preliminary information indicative of the outer limits accompanied by an indication of the status of the preparation, and intended date, for a full submission. See Decision regarding the workload of the Commission on the Limits of the Continental Shelf and the ability of States, particularly developing states, to fulfil the requirements of article 4 of Annex II to the Convention, as well as decision contained in SPLOS/72, paragraph (a). Advance, unedited text (English only), SPLOS/183 of 24 June 2008, available online at [http://www.un.org/Depts/los/meeting\\_states\\_parties/documents/splos\\_183e\\_advance.pdf](http://www.un.org/Depts/los/meeting_states_parties/documents/splos_183e_advance.pdf).

212 V. Poselov *et al.*, A Combined Geological and Geophysical Model of the Earth's Crust within the Mendeleev Ridge and its Transition to Adjacent Shelves of the East-Siberian and Chukchi Seas, Based on Results of the "Arctic 2005" Expedition, The 33<sup>rd</sup> International Geological Congress, Oslo, August (2008).

#### 1.5.4 Collaborative Arctic research on continental shelves

A key element of developing submissions to the CLCS regarding ECS areas is the need for States to establish appurtenance of submerged features to the continental margin and identify whether the features are also natural components of the continental margin. In light of the difficulty and cost of undertaking scientific research in the Arctic,<sup>213</sup> States have engaged in collaborative scientific research expeditions. Canada and Denmark began appurtenance testing of the LR agreement through both independent and joint seismic and bathymetric mapping. The area has also been the focus of two collaborative projects, the LORITA and the LOMROG. In March–April 2006, the Lomonosov Ridge Test of Appurtenance (LORITA) project began. On-ice bathymetric work was conducted again in April 2007 from the Canadian Forces Station Alert and Canadian scientists joined an International Polar Year (IPY) joint Swedish-Danish expedition to try to fill gaps in the data collection that often occur due to Arctic climatic variables such as ice, fog and sea ice conditions.<sup>214</sup> Joint interpretation and scientific publication of the results of the LORITA. A workshop attended by scientists from Canada, Denmark and Russia was held in the second half of 2007, and in August 2008, scientists presented results at the International Geological Congress in Norway. Although limited by weather conditions, the scientific results indicate that there is a continuation of sedimentary basins from onshore geology under the bathymetric trough out to the LR and that volcanic structures are responsible for the broadening of the foot of slope.<sup>215</sup>

A follow-up workshop on remaining key scientific questions occurred in November 2008, however no meeting material was produced.<sup>216</sup> The Lomonosov Ridge off Greenland (LOMROG) 2007 project was a Danish/Swedish collaboration using the Swedish Icebreaker *Oden* and the Russian icebreaker *50 Let Pobedy* collecting, *inter alia*, seismic reflection profiles, sediment cores, and gravity measurements from the LR. In addition to Danish/Swedish participants, scientists from Canada, Finland and the United States also took part in the voyage. The 2001 Russian submission was supported by the findings of seismic and bathymetric investigations carried out by Russian expeditions

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213 L. Mayer, M. Jakobsson, J. Hall, Challenges of Collecting Law of the Sea Data in the Arctic, in *International Energy Policy, the Arctic and the Law of the Sea* 125 (M. H. Nordquist, J. N. Moore, A. S. Skaridov eds., 2005).

214 J. MacDougall, J. Richard, W. Sanford, J. Verhoef, Ice and No Ice: The Canadian UNCLOS Bathymetric Mapping Program, Paper presented at the Canadian Hydrographic Conference and National Surveyors Conference, Victoria, British Columbia, May (2008), at 2 and 9.

215 T. Dahl-Jensen *et al.*, Crustal Structure from the Lincoln Sea to the Lomonosov Ridge, Arctic Ocean, The 33<sup>rd</sup> International Geological Congress, Oslo, August (2008).

216 Christian Marcussen, Senior Advisor, Geophysicist Geological Survey of Denmark and Greenland, Personal Communication, 20 March 2009.

during the period of 1960 to 1990.<sup>217</sup> In response to the CLCS recommendations, Russia launched an international conference in St. Petersburg, featuring an array of geoscientific topics relevant to the application of UNCLOS Article 76.<sup>218</sup> Russia also launched several scientific expeditions, including the Arctic-2004, 2005 and 2007 projects, to confirm the existence of a geological link between the Siberian margin and both the Lomonosov Ridge (LR) and Alpha Mendeleev Ridge (AM).<sup>219</sup> In 2007, Russia approached Canada and Denmark for scientific collaboration. Since Canada and Denmark had only just initiated data acquisition, these States had little in the way of new scientific information to provide. However, the above-mentioned workshops were convened.

Russian Arctic research projects examined the geological and tectonic linkages between the Mendeleev Ridge and the Siberian continental margin, as well as the history and composition of the LR and AM. The results of two of the Russian Federation expeditions refute any concern over the appurtenance of the LR and AM, confirming the existence of geological links between the ridges and the Siberian shelf.<sup>220</sup> Preliminary results from the Russian Arctic-2005 expedition indicate that a morphological and structural continuity exists between the Mendeleev Rise and the Siberian shelf.<sup>221</sup>

Preliminary desktop studies identify the potential for appurtenance of the Alpha Ridge to the Canadian continental margin. Further field studies are required to confirm or reject this assessment. The Alpha Ridge Test of Appurtenance (ARTA) project for the Canadian Continental Shelf Project began on an ice camp offshore in Nansen Sound during March-April 2008. A study conducted from the *USCGC Healy* early in 2005 sought to identify the origin and stratigraphy of the Mendeleev Ridge using seismic reflection and bathymetric data. Results have not been finalised and future studies aim to develop a structural map of the Ridge.<sup>222</sup> Continued scientific collaboration

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217 Statement made by the Deputy Minister for Natural Resources of the Russian Federation during presentation of the Submission made by the Russian Federation to the Commission, made on 28 March 2002, UN Doc CLCS/31 (2002).

218 R. MacNab, L. Parson, *Continental Shelf Submissions: The Record to Date*, 21(3) *Int'l J. of Marine and Coastal L.* 309 (2006), at 311.

219 R. MacNab, *Submarine Elevations and Ridges: Wild Cards in the Poker Game of UNCLOS Article 76*, 39(2) *Ocean Development & Int'l L.* 223 (2008), at 226.

220 *Ibid.*, with reference to both V.D. Kaminsky *et al.*, *Geophysical and Geological Study of the Transition Zone between the Mendeleev Rise and the Adjacent Siberian Shelf: Preliminary Results* (2005), abstract available online at <http://www.agu.org/cgi-bin/SFgate/SFgate> and V. Poselov, V. Butsenko, V. Glebovsky, *Preliminary Results of Geophysical and Geological Investigations in the Transition Zone Between the Mendeleev Rise and Adjacent Siberian Shelf*, 87 (52) *Eos Trans AGU*, Fall meeting Suppl. (2006), abstract.

221 Kaminsky *et al*, *supra*.

222 D. Dove, B. Coakley and J. Hopper, *Stratigraphy, Structure and Origin; A Geophysical Survey of the Mendeleev Ridge* (2005), online available (abstract, posted on the website of the American Geophysical Union) at <http://www.agu.org/cgi-bin/SFgate/SFgate?&listen v=table&multiple=1&range=1&directget=1&application=fm06&database=%2Fdata%2Ffeubs%2Fwais%2Findexes%2Ffm06%2Ffm06&maxhits=200&=OS53B>.

has contributed to several useful tools, including the recently updated International Bathymetric Chart of the Arctic Ocean (IBCAO) and the Mapping of Arctic Sediment Thickness (MAST) project. MAST was initiated following an international workshop held in 1999 in Znamenkag, Russia.<sup>223</sup> During the course of discussions, it was agreed that creating a database of available marine sediment thickness in the Arctic would be useful for the development of a common understanding of this key factor in the implementation of UNCLOS Article 76. MAST involved scientists from Canada, Denmark, Norway, Russia and the United States.<sup>224</sup> Known information from all Russian and non-Russian data sets were consolidated. However, by 2005 the project was suspended because new data were not yet available from the Western countries and further Russian data were subsequently unable to be released.<sup>225</sup> It was agreed that MAST activity should be maintained so that new data sets anticipated from the ongoing research can be assimilated into the regional map.<sup>226</sup>

Although progress is being made, even today the understanding of the Arctic basins and ridges is still far from comprehensive. Nonetheless, scientific collaboration can occur between States with potentially competing continental shelf claims in parallel with the submission process without derogating from the rights of States. The collaborative research with respect to the LR may be discussed in joint fora, such as those taking place between the scientific communities. Collaborative research may also be published jointly. In this manner, one interpretation can be strengthened by the support of two or more States, represented by their government institutions. States may choose to use joint interpretations as further support to a particular issue addressed in their submission, such as appurtenance of a ridge to a continental margin. While collaboration could be achieved between the States, the responsibility for interpreting the scientific information ultimately rests with the State preparing the submission. Any disagreement amongst States on the interpretation of the scientific information, as well as its legal application, still does not derogate from a State's right to have a submission considered. Nor does it derogate from a State's ability to inform the Commission of concerns. This was effectively demonstrated by the process undertaken by the Commission with respect to the US comments regarding mainly the Russian submission. Given that submissions are examined on an individual basis and any recommendations of the Commission are without prejudice to the question of the delimitation

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223 S. Bigras *et al.*, MAST: Map of Arctic Sediment Thickness, Meeting of the Working Group (2005), at 1. Report provided by R. MacNab, member of MAST Project Working Group, Personal Communication, July 24 (2008); see also R. MacNab, P. Neto, R. van de Poll, Cooperative Preparations for Determining the Outer Limit of the Juridical Continental Shelf in the Arctic Ocean: A Model for Regional Collaboration in Other Parts of the World?, (Spring) IBRU Boundary and Security Bulletin 86 (2001), at 90.

224 *Ibid.*

225 *Ibid.*, at 2.

226 *Ibid.*, at 4.

of boundaries,<sup>227</sup> it is at the discretion of the coastal States to engage in boundary delimitation negotiations and agreements. For the central Arctic, a series of scientific discussions have occurred.<sup>228</sup> However, as of 2010 after the conclusion of the bilateral agreement between Norway and Russia,<sup>229</sup> there has been no formal discussion on delimitation of boundaries between States.

## 1.6 CONCLUSIONS

As a preliminary point, it is notable that the Ilulissat Declaration makes no direct reference to UNCLOS to which all of the five Arctic littoral States other than the United States are parties. Avoiding such a direct reference was presumably done in order to accommodate the United States. It does, however, raise an on-going debate as to how much of UNCLOS reflects customary international law. Two of the Convention's provisions and their standing as customary international law have particular relevance: Article 76 and the capacity of coastal States to proclaim a continental shelf beyond the limits of 200 nautical miles, and Article 234 and the capacity of coastal States to proclaim particular laws and regulations in ice-covered areas within the limits of the EEZ. Another general point is that UNCLOS creates both rights and obligations for States. Accordingly, while the five Arctic littoral States have readily identifiable rights under UNCLOS, they also have obligations towards other States, including the other Arctic States who have significant maritime interests in the region, and to all other States who seek to exercise their own legitimate rights in the Arctic.

More specifically, UNCLOS provides rights and obligations with regard to the outer limits of the continental shelf. Processes under Article 76 of UNCLOS have continued to be followed by the Arctic littoral States. Russia and Norway have made submissions to the CLCS, while submissions from Canada and Denmark have been submitted in 2013 and 2014. There is no evidence of any unilateral claims being made to the Arctic Ocean seabed, notwithstanding the 2007 Russian flag-planting incident on the seabed at the North Pole. Article 234 provides an important basis for the protection and preservation of the ice-covered EEZ areas of the Arctic Ocean, and both Canada and Russia have been able to take advantage of its scope through a range of national laws and regulations for a number of decades. Likewise, Part XII provides a framework for littoral States to take marine environmental protection measures in conjunction with other legal instruments such as MARPOL. To that end, the on-

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227 UNCLOS, Art. 76(10); UNCLOS, Annex II Art. 9.

228 Oceans and Law of the Sea: Report of the Secretary-General: addendum, *supra*, 11.

229 See respectively available online at <https://www.asil.org/insights/volume/14/issue/34/norway-and-russia-agree-maritime-boundary-barents-sea-and-arctic-ocean>.

going negotiations for the finalization of a Polar Code for shipping are an important complementary initiative through the auspices of the IMO. With respect to freedom of navigation, the UNCLOS has extensive and well-developed provisions with respect to navigation through the territorial sea, EEZ, and the high seas. Marine scientific research is also well developed throughout the Arctic. Not only does it find a foundation in UNCLOS, but also through the tradition of cooperation between polar researchers that has developed over many decades. UNCLOS moreover provides a framework for the resolution of overlapping claims, as has been highlighted by the 2010 Norwegian Russia Barents Sea Agreement. In addition, the Arctic Council in 2011 was the conduit for negotiation of an Arctic Agreement on Aeronautical and Maritime Research and Rescue, which entered into force in 2013,<sup>230</sup> while the May 2013 Arctic Council meeting has endorsed a new Arctic Marine Oil Prevention, Preparedness and Response Agreement.<sup>231</sup>

These strengths of the UNCLOS framework need to be balanced against several weaknesses. The Article 76 processes for continental shelf delineation through the CLCS are slow due to the unexpectedly large number of submissions that have been received. This means that late-comers to the process, such as Canada, Denmark, and possibly in future the United States, may be forced to wait a decade or more for their claims to be assessed, resulting in on-going uncertainty as to the ultimate extent of continental shelf claims in the Arctic Ocean. Article 234 provisions will only provide for enhanced marine environmental protection measures for Arctic coastal States for as long as Arctic Ocean EEZ waters are ice-covered for half a year plus one day. After that point, the on-going application of pre-existing measures would be legally dubious, meaning that Canada and Russia may need to reassess some of their Arctic marine environmental protection laws. As the Arctic Ocean becomes more accessible to international shipping, freedom of navigation for the ships of all States will need to be recognized through those areas that are incontrovertibly EEZ or high seas. This phenomenon – known as “trans-Arctic shipping” – may in turn lead to new strategic rivalries between Arctic and non-Arctic States over the freedom of navigation in the Arctic. UNCLOS has very limited capacity to provide for the management and protection of Arctic wildlife, especially threatened species. For example, Articles 65 and 120 create a very broad overarching framework for marine mammal management, which arguably defers to the IWC and the Polar Bears Convention.<sup>232</sup> Finally, and of particular significance in the Arctic, UNCLOS gives little recognition to the rights of

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230 The text of the Agreement can be found at the Arctic Council’s website at: <https://oaarchive.arctic-council.org/handle/11374/531>.

231 *Ibid.* available at: <https://oaarchive.arctic-council.org/handle/11374/529>.

232 The 1973 Agreement on the Conservation of Polar Bears, 1973, available at: <https://polarbearagreement.org/about-us/1973-agreement>

indigenous peoples. In conclusion, it can be observed that the Ilulissat Declaration is clearly stated to be an instrument that applies to the Arctic Ocean. By implication it does not apply to those waterways not within the bounds of the Arctic Ocean, which would encompass internal waters, including waters on the landward side of straight baselines, such as the waters of the Northwest Passage. However, perhaps the most obvious weakness of UNCLOS as an Arctic legal framework is that it only applies to the marine Arctic. It lacks a terrestrial application and thus is not capable of ultimately providing a legal framework for Arctic governance as a whole.

Discussion of the legal framework covering the Arctic – under whatever definition – that would consider a holistic approach and that would build on the current UNCLOS framework is pertinent. CLCS plays a significant role in the delimitation and delineation of extended continental shelves in the area. However, an effort on behalf the United States to forgo this step and unilaterally extend its continental shelf cannot be ruled out. The changing environment will change the rules of the game and, maximization of the potential wealth will increase the need for a legal framework that is accurate, efficient, relative and effective. A legal framework that will balance the conflicting interests among States and at the same time will safeguard the rights of the many different individual tribes living around the Arctic Ocean is a necessary first step to the development of a new governance regime. International Law has a crucial law to play and UNCLOS should be the basis for managing the smallest, but by far the most important, ocean of our planet.



## 2.1 INTRODUCTION

This chapter focuses on navigational and shipping issues in the Arctic Ocean. The starting point is the operating environment itself and, in particular, the prospect of an ice-free Arctic summer, a season covering the period between July and October, as predicted since 2010. In September 2012, scientists revised these predictions to project that an ice-free summer, at least free from multi-year ice, is likely in four years.<sup>2</sup> This prediction has been conformed and since 2015 vast areas of the Central Arctic Ocean are ice-free during the summer. This means shipping forecasts must be revised as commercial navigation is expected to occur during the summer, although some Arctic States have a year-round navigation capability, in particular for high-class ice-breakers.

The ice-free image often conveyed by the media masks the reality of navigation in the Arctic environment: an ice-free summer will not make Arctic navigation comparable to its equivalent in non-polar regions.<sup>3</sup> Navigation can be expected to remain hazardous during the relevant months, while impossible during the rest of the year except for high polar class vessels. The term 'ice-free' is misleading; a better term would be 'open water' (emphasising the navigable space). Ice is still likely to be present in that 'open water', albeit in limited amounts, and its movement may be unpredictable, raising safety

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1 For main Arctic routes that are mentioned in this chapter, please check on table of maps, map 2.

2 Scientists predict seasonal ice-free Arctic by 2020, <http://www.washingtonpost.com/blogs/ezra-klein/wp/2012/09/20/when-will-the-arctic-be-ice-free-maybe-four-years-or-40/>; Senate (Canada), Standing Senate Committee on Fisheries and Oceans, 'The Coast Guard in Canadas Arctic: Interim Report, Fourth Report,' June 2008, 5, available online at: <http://www.parl.gc.ca/39/2/parlbus/commbus/senate/com-e/fish-e/rep-erepO4jun08-e.pdf>. Earlier, the Inter-governmental Panel on Climate Change (IPCC) has indicated that "In some projections, arctic late-summer sea ice disappears almost entirely by the latter part of the 21st century. The decline for ice extent is larger for summer than for winter.", Summary for Policy-Makers, IPCC Fourth Assessment Report, available online at <http://www.ipcc.ch/ipccreports/ar4-wgl.htm>.

3 However, one view is that "... conditions will become similar to those in the St. Lawrence Seaway in winter." Comment ascribed to L. Fortier, Scientific Director, Arctic Net, in Senate (Canada), *supra*, at 6.

concerns.<sup>4</sup> More realistic is the expectation that a ship navigating in the Arctic can encounter a mixture of open water and different ice regimes. The US Coast Guard ice-breaker *'Healy'* encountered 118 different ice regimes sailing between East Newfoundland and the Davis Strait alone.<sup>5</sup>

Ships will need to navigate pursuant to an ice regime system that defines the requirements for operating vessels in an environment where ice conditions can change very significantly within a short period of time.<sup>6</sup> Ships will operate in extreme cold. Many areas are uncharted or the charts are not up-to-date.<sup>7</sup> There are difficult choke-points to manoeuvre and some narrow channels are draught-restricted. Along the likely new navigation routes, fog, variable light and other conditions will reduce visibility.<sup>8</sup> The reality is that the "challenges faced by navigators while transiting arctic ice regimes" can be expected to be "beyond the scope of present or even future expectations of average mariner training and experience."<sup>9</sup>

The routes through the region do not enjoy the services normally available to shipping on major trade routes. Although shipping safety control zones are designated (e.g. in the Canadian or Russian Arctic), the likely routes are mostly located in remote areas where relatively few navigation aids are avail-

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- 4 Office of Naval Research, Naval Ice Center, Oceanographer of the Navy and the Arctic Research Commission, Naval Operations in an Ice-Free Arctic, Symposium, 17-18 April 2001, Final Report, US Office for Naval Research, Arlington, VA, 2001. In Canada "Open Water" is defined as: "A large area of freely navigable water in which ice is present in concentrations of less than 1/10. No ice of land origin is present." Transport Canada, Arctic Ice Regime System Standards, Transport Canada, Ottawa, 1998.
  - 5 The *'Healy'* was intentionally navigated into different ice conditions. In some areas, it encountered hard and thick ice (including multi-year ice) where considerable backing and ramming was needed, considerably slowing down navigation speed. M. Johnston, R. Gorman, G. Timco, Ice Regimes Encountered during the USCGC Healy Ice Trials, presented at Port and Ocean Engineering under Arctic Conditions, Ottawa, August, 12-17 (2001), available online at <ftp://ftp2.chc.nrc.ca/CRTreports/TC/POAC I -Healy- Regimes.pdf>.
  - 6 G.W. Timco, R.M.W. Frederking, V.M. Santos-Pedro, A Methodology for Developing a Scientific Basis for the Ice Regime System, Proceedings of the 17th International Offshore and Polar Engineering Conference (2007), Honolulu, Vol. 2, available online at <http://www.isopec.org/publications/proceedings/ISOPE/ISOPE%202007/toc.htm>.
  - 7 For example, the Canadian Hydrographic Service estimates that only about 10% of their Arctic charts meet modern standards. Apparently many passage charts were prepared on a large grid that may omit shallow-draft features such as seamounts. The updating of Arctic charts is recognized as a priority. See C. Wright, Arctic Navigation: The Canadian Experience, POAC (2001) online available at <https://trid.trb.org/view.aspx?id=1395862>.
  - 8 D.L.V. Zwaag, A. Chircop et al., Governance of Arctic Marine Shipping, a report to the Arctic Marine Shipping Assessment (AMSA), October 11 (2008), available online at <http://arcticportal.org/uploads/vZ/6u/vZ6uVo9aTTQv45iw93oFw/AMSA-Shipping-Governance-Final-Report-Revised-November-2008.pdf>.
  - 9 D. Snider, Ice Navigation in the Northwest Passage, paper presented at Ocean Innovation 2005, Rimouski, Quebec, 23 October 2005, available online at <http://www.martechpolar.com/Publications/Ice%20Nav%20in%20the%20NWPPdf>.

able.<sup>10</sup> Navigation areas within the World-Wide Navigational Service in the Arctic were proposed for revision and initiatives to strengthen ice and meteorological forecasting already exist. Navigation incidents resulting in damage to navigating ships are likely,<sup>11</sup> very few ports and harbours exist where ships can re-supply and undertake repairs for ice damage. The remoteness of the region also poses special challenges for search and rescue operations. For example, in 2007, bad weather delayed the rescue of a hunter stranded on an ice floe off Cape Perry in the Canadian Arctic.<sup>12</sup> Because of its low temperature and circulation patterns, a low dissipation rate prevails in the Arctic for pollutants such as oil. Theoretically, even a few ships could threaten the fragile Arctic environment, because even a small discharge of a pollutant such as fuel oil can cause significant damage,<sup>13</sup> but currently there is very little salvage and pollution response capacity.

Safe and environmentally sound commercial navigation in the Arctic requires the development of rules, standards and 'best practices' that are more demanding than those in place in marine regions considered less hazardous to navigate and possessing the appropriate infrastructure. Clearly a high safety of navigation standard is appropriate for Arctic navigation, but the question is: at what level should it be formulated and adopted?

## 2.2 THE EXISTING LEGAL FRAMEWORK OF THE INTERNATIONAL STRAITS

The legal concepts underpinning Part III of UNCLOS and the regime of straits used for international navigation can be traced back to the 1949 *Corfu Channel Case*.<sup>14</sup> In the absence of a multilateral convention on the law of the sea or a specific treaty regulating the Corfu Channel, the International Court of Justice was required to determine its status before assessing the legal regime that applied within its waters. The Court sought to develop a legal test to classify a particular body of water that had the characteristics of a strait and was also used for international shipping. The Court noted:

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10 At present the Canadian Coast Guard places and maintains over 1,500 visual and aural aids in the Mackenzie River from Great Slave Lake to Tuktoyaktuk. However, there are only 300 aids across the Arctic Ocean. There are also 30 aids in Hudson Bay and James Bay. Senate (Canada), *supra*, at 3. Aids in the Passage are insufficient for safe navigation.

11 For instance see Wright, *supra*, at 4.

12 Two of the rescuers were compelled to spend the night on the ice floe in a temperature of -30° C. Hunter rescued from Arctic ice floe, CBC News, 18 February 2007, available online at <http://www.cbc.ca/canada/story/2007/02/18/arctic-rescue.html>.

13 Arctic Council, Arctic Oil and Gas Assessment, Arctic Monitoring and Assessment Programme, Oslo, 2007.

14 *Corfu Channel Case (United Kingdom v Albania)*, Judgment, [1949] I.C.J. Rep. 4, at 28.

“... in the opinion of the Court the decisive criteria is rather its geographical situation as connecting two parts of the high seas and the fact of its being used for international navigation.”<sup>15</sup>

The Court went on to observe that it was not “decisive” that the Corfu Channel was not a necessary route between two parts of the high seas, but only an alternative route of passage between the Aegean and Adriatic Seas. It noted that the Corfu Channel had nevertheless “been a useful route for international maritime traffic.”<sup>16</sup>

The *Corfu Channel Case* proved to be influential when the ILC came to consider the regime of the territorial sea in the 1950s. The ILC recommended in its Draft Articles that there should be no suspension of innocent passage through straits “normally used for international navigation between two parts of the high seas.”<sup>17</sup> The insertion of the word “normally” was stated to be in conformity with the decision of the International Court of Justice.<sup>18</sup> This wording found its way into Article 16 (4) of the 1958 Convention on the Territorial Sea and Contiguous Zone dealing with international straits.

At the time of the Third United Nations Conference on the Law of the Sea (UNCLOS III), a pivotal issue for consideration in the regime of straits was whether special navigational privileges akin to the territorial sea would apply within all straits, or whether there could be different categories of straits. As momentum was building for the recognition of a 12-nautical-mile territorial sea, with the effect that many more bodies of water within a strait would fall under the territorial sea regime, this was an issue, not only of legal, but also of strategic significance. Part III of UNCLOS, titled “Straits Used for International Navigation,” addresses how a strait used for international navigation is to be classified. The title suggests both a geographical and functional element. The geographical element relates to a strait being a body of water that lies between two areas of land, either continental landmasses,<sup>19</sup> a continent and an island,<sup>20</sup> or two islands.<sup>21</sup> Yet there is no guidance as to how proximate the bodies of land must be to one another, or at which point the width of the body of water that separates the two areas of land is no longer considered

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15 *Ibid.*, at 28.

16 *Ibid.*

17 International Law Commission, Articles Concerning the Law of the Sea with Commentaries, [1956] 2 Y.B. Int'l L. Comm'n 273, where Draft Article 17(4) provided: “There must be no suspension of the innocent passage of foreign ships through straits normally used for international navigation between two parts of the high seas.”

18 *Ibid.*

19 An example is the Bering Strait separating continental Asia and North America.

20 The Dover Strait lies between the continent of Europe and an island of the United Kingdom.

21 The Cook Strait separates the North and South Islands of New Zealand.

a strait but rather a sea or an ocean.<sup>22</sup> For practical purposes, this distinction may not be of great relevance as most bodies of water that separate sufficiently proximate areas of land are referred to as straits or have equivalent titles.<sup>23</sup> Nevertheless, the recognition of a body of water as a 'strait' is an important starting point in the application of the Part III legal regime.<sup>24</sup>

The functional element was drawn from the *Corfu Channel Case* where the Court emphasised that the strait was being "used for international navigation".<sup>25</sup> While there was no analysis as to what volume of navigation through a strait would be required to meet the usage requirement, reference was made to the volume of navigation through the Corfu Channel between 1936 and 1937 which, in the view of the Court, assisted the determination that the Corfu Channel had been "a useful route for international maritime traffic."<sup>26</sup> Therefore, while this functional element remains a feature of UNCLOS, it is unclear what level of international navigation is required for a strait to be appropriately classified as an "international strait." It is doubtful whether infrequent or irregular use of a strait would suffice to meet the functional criterion. Likewise, the strait must have been used by foreign-flagged vessels and not only by local vessels. UNCLOS is silent on the matter whether a distinction should be drawn between surface navigation and subsurface navigation of a strait. This has particular relevance in the Arctic due to evidence of submarine navigation throughout the region, especially during the cold war.<sup>27</sup> Since UNCLOS does not distinguish between the various types of navigation, nothing bars subsurface submarine navigation from being taken into account in the determination whether a strait is used for the purpose of 'international navigation'.<sup>28</sup>

In straits used for international navigation between different parts of the high seas or the EEZ, the transit passage regime applies, so that ships engaged in international navigation are able to pass through a strait relatively un-

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22 K. Walker, Definitions for the 1982 Law of the Sea Convention – Part II: Analysis of the IHO Consolidated Glossary, 33 *California Western International Law Journal* 219 (2003), at 298, observed that "The geographic definition of a strait is a narrow passage of water between two land masses or islands, or groups of islands connecting two sea areas."

23 Of which the term channel is in state practice used as an alternate to strait, as in the *Corfu Channel*. Alternate terms that are used include *belt*, *mouth*, and *sound*, see ILC, *supra*.

24 D.R. Rothwell, International Straits and Trans-Arctic Navigation, 43 *Ocean Development & International Law* 267 (2012), at 270.

25 *Corfu Channel Case*, *supra* note 13, at 28.

26 *Ibid.*

27 K. Zysk, Military Aspects of Russia's Arctic Policy: Hard Power and Natural Resources, in *Arctic Security in an Age of Climate Change* 85 (James Kraska ed., 2011), at 91–94; D.W. Titley, Courtney C. St. John, Arctic Security Considerations and the U.S. Navy's "Arctic Roadmap", in *Arctic Security in an Age of Climate Change* 267 (James Kraska ed., 2011), at 274–275; and, more generally for incidents during the cold war, H. Critchley, Polar Deployment of Soviet Submarines, 39 *International Journal* 828 (1984).

28 D. Rothwell (2012), *supra*, at 271.

hindered.<sup>29</sup> Part III of UNCLOS also deals with other categories of straits, including:

- Straits regulated in whole or in part by long-standing international conventions;<sup>30</sup>
- Straits providing a route through the high seas or EEZ of similar convenience;<sup>31</sup>
- Straits between the mainland and an island where, seaward of the island, there is a route through the high seas or EEZ of similar convenience;<sup>32</sup> and
- Straits used for international navigation between one part of the high seas or EEZ and the territorial sea of a foreign State.<sup>33</sup> Within these straits, transit passage does not apply. Instead, alternate navigation regimes are recognised.<sup>34</sup>

Where there is a high seas or EEZ route through a strait, providing that route is of similar convenience regarding its navigational and hydrographical circumstances, then Part III does not apply.<sup>35</sup> In theory, this exception includes all straits that are broader than 24 nautical miles, although in marginal cases (e.g., where the breadth of the waters barely exceeds 24 nautical miles at its narrowest point), there may be discussion whether a narrow channel through the EEZ is one of 'similar convenience'.<sup>36</sup>

### 2.2.1 The Arctic Ocean and shipping

When these developments in the law of the sea are considered in the context of the Arctic, it is clear that they have considerable ramifications with respect to navigational rights and freedoms within the Arctic Ocean, and particularly with respect to the straits that make up the Northwest Passage and the Northeast Passage/Northern Sea Route. They are also significant for those sea routes that provide access to and from the Arctic Ocean. These issues were highlighted by the 2009 *AMSA Report*, which addressed the existence of certain

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29 UNCLOS, 1833 UNTS 397, Art. 37.

30 *Ibid.*, art. 35(c).

31 *Ibid.*, Art. 36.

32 *Ibid.*, Art. 38(1).

33 *Ibid.*, Art. 45.

34 See H. Caminos, *Categories of International Straits Excluded from the Transit Passage Regime under Part III of the United Nations Convention on the Law of the Sea*, in *Law of the Sea, Environmental Law and Settlement of Disputes 280* (T. M. Ndiaye and R. Wolfrum eds., 2007).

35 UNCLOS, art. 36.

36 See an expanded discussion on this point L.M. Alexander, *Exceptions to the Transit Passage Regime: Straits with Routes of Similar Convenience*, 18 *Ocean Development and International Law* 479 (1987).

chokepoints in the Arctic.<sup>37</sup> Chokepoints are navigation routes that are frequented by large volumes of ships due to their geographical location or strategic significance. As a result, the legal regime regulating the passage, and the geopolitical factors within those waters, take on particular significance for the international community. Navigational chokepoints that have traditionally attracted attention because of their strategic significance include the Straits of Dover, Taiwan, Gibraltar, Hormuz, Lombok, Malacca and Singapore, and Sunda.<sup>38</sup>

The Arctic Ocean also has significant chokepoints, being straits and associated waterways that allow for access to and from the Arctic Ocean and, ultimately, facilitate trans-Arctic shipping.<sup>39</sup> As a complementary counterpoint, Honderich has observed that the Arctic Ocean has few “exit” points:

“What points there are, are guarded and narrow. Exit from the Arctic can be made from only four points: out the Bering Sea, which is treacherously shallow; out through the thin gap between Greenland and Canada; out through the maze of the Canadian archipelago and the Northwest Passage; and finally out the widest route, the Greenland-Iceland-United Kingdom (GIUK) Gap, which is carefully monitored by NATO.”<sup>40</sup>

The Bering Strait and Fram Strait are of particular significance because they allow for a corridor between the Pacific and Atlantic Oceans via the Arctic Ocean,<sup>41</sup> thereby removing the need for shipping to navigate via the Suez or Panama Canals.<sup>42</sup> In this respect, the Arctic Ocean is distinctive from the world’s other oceans in that it is the only ocean surrounded by continents. There is only one major high seas point of access through the Greenland and Norwegian Seas.<sup>43</sup>

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37 AMSA Report available online at [http://www.arctic.noaa.gov/detect/documents/AMSA\\_2009\\_Report\\_2nd\\_print.pdf](http://www.arctic.noaa.gov/detect/documents/AMSA_2009_Report_2nd_print.pdf).

38 K. Booth, *Law, Force and Diplomacy at Sea*, Boston: George Allen & Unwin (1985), 98–99. See also the commentary in *World Oil Transit Chokepoints*, *Eurasia Review*, 20 January 2011, available online at [www.eurasiareview.com/20012011-world-oil-transit-chokepoints](http://www.eurasiareview.com/20012011-world-oil-transit-chokepoints).

39 *Supra* note 37.

40 J. Honderich, *Arctic Imperative: Is Canada Losing the North?*, University of Toronto Press (1987), 93–94. For further assessment of the GIUK Gap and its strategic significance, especially during the cold war, see H. Faringdon, *Strategic Geography: NATO, the Warsaw Pact, and the Superpowers*, 2nd ed. (London: Routledge, 1989), pp. 175–179.

41 AMSA Report (2009), *supra*, at 18.

42 E.J. Molenaar, R. Corell, *Background Paper: Arctic Shipping, Arctic Transform*, February 12 (2009), available online at [www.arctic-transform.eu](http://www.arctic-transform.eu), distinguish between trans-Arctic and intra-Arctic shipping – the latter being shipping within the confines of the Arctic Ocean along the Northwest Passage and the Northeast Passage/Northern Sea Route.

43 The Greenland Sea is the body of water to the north of Iceland that lies between Greenland and Svalbard, which via the Fram Strait provides access to the Arctic Ocean. The Norwegian Sea is the body of water off the coast of Norway, which between Svalbard and Norway provides access to the Barents Sea and the Northern Sea Route.

The points of access to the Arctic Ocean are through different bodies of water, all of which are referred to as straits but which have varying legal status under the law of the sea. Those straits and their littoral States are:

- the Bering Strait – between the Bering Sea and the Chukchi Sea with Russia and the United States as littoral States;
- the Nares Strait – between Baffin Bay and the Lincoln Sea with Canada and Denmark (Greenland) as littoral States;
- the Davis Strait – between the Labrador Sea and Baffin Bay with Canada and Denmark (Greenland) as littoral States;
- the Fram Strait – between the Arctic Ocean and the Greenland Sea with Denmark (Greenland) and Norway (Svalbard) as littoral States; and
- the Denmark Strait – between the Atlantic Ocean and the Greenland Sea with Denmark (Greenland) and Iceland as the littoral States.<sup>44</sup>

The Norwegian Sea between Iceland and Norway provides access to the Fram Strait; however, navigation through this body of water is predominantly through high seas equivalent areas so the Fram Strait is not considered to be part of an international strait or equivalent waterway.<sup>45</sup>

All relevant coastal States are parties to UNCLOS, except for the United States, which accepts that significant parts of the Convention are reflective of customary international law.<sup>46</sup> Of the Arctic State parties to the Convention that have significant international straits within their waters, none have made any declarations accompanying their ratification of the Convention that are relevant for the present purposes. Denmark made a declaratory statement on ratification with respect to the Danish straits and the application of Article 35(c) of UNCLOS to those straits.<sup>47</sup> This declaration has no implications for Danish interests in the Arctic.

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44 For more detail understanding, see the analytical map of the area available online at <http://maps.grida.no/arctic/#>.

45 Likewise, the waterway that exists between Svalbard and Franz Joseph Land is not considered in this article for the principal reason that it provides access to the Barents Sea and not to the North Atlantic other than via the Norwegian Sea.

46 The Interagency Group on the Law of the Sea and Ocean policy of USA is an advisory legal body under the auspices of the White House and its recommendations are very frequently followed by the president of the USA. For more information: <http://www.lawofrenewableenergy.com/tags/interagency-ocean-policy-task>.

47 Denmark ratified UNCLOS on 16 November 2004, available online at [http://www.un.org/depts/los/reference\\_files/chronological\\_lists\\_of\\_ratifications.htm](http://www.un.org/depts/los/reference_files/chronological_lists_of_ratifications.htm).

## 2.2.2 The Arctic straits and trans-Arctic shipping

### 2.2.2.1 The Bering Strait

The Bering Strait may be the most strategic of the Arctic chokepoints due to its location at the northern limit of the Pacific Ocean;<sup>48</sup> the direct access it provides between the Bering Sea and Chukchi Sea into the Arctic Ocean; its potential for shipping using the Northern Sea Route to access the Pacific Ocean and Asian markets; and its proximity to major trading powers such as China, Japan, and South Korea.<sup>49</sup> The potential for the Bering Strait to play a pivotal role in trans-Arctic shipping has received increased attention as a result of several successful commercial voyages undertaken in 2009 – 2011 between the Russian Arctic and Asia.<sup>50</sup> For example, in 2010, the M/V *Nordic Barents* with 40,000 tonnes of iron ore transited from Norway to China via the North-east Passage and Bering Strait, resulting in fuel savings of US\$550,000.<sup>51</sup> The Bering Strait has been referred to as the “next Panama Canal”<sup>52</sup> and awareness is growing in Alaska of the need to maintain appropriate navigational aids within the strait.<sup>53</sup> The presence of six commercial ports within the Bering Strait region – three U.S. and three Russian – located to the south of the strait further emphasises the commercial capacity for shipping through the region.<sup>54</sup>

The Bering Strait, bordering Russia to the west and the United States (Alaska) to the east, is, at its narrowest point, 53 nautical miles wide. The northern approach through the Chukchi Sea is relatively wide before it gradually narrows on approaching the strait, while the southern approach has the Aleutian Islands (United States) as a barrier to the east. High seas

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48 China and Russia are building up coalitional agreements on managing the potential opportunities that may be available to them pretty soon due to the opening of the Bearing Strait and its fully functional capacity. See <http://www.longshoreshippingnews.com/2010/03/melting-arctic-bering-strait-is-the-next-panama-canal/>; <http://www.pbs.org/newshour/rundown/china-has-a-new-short-cut-thanks-to-melting-arctic-ice/>.

49 The strait also has significant environmental dimensions. See AMSA Report (2009), *supra*, at 147.

50 J. Vidal, Arctic Sea Ice Melt Ushers in Fast Route for Shipping, *The Guardian*, 6 October 2011, at 34; German Ships Blaze Arctic Trail, *BBC News*, 11 September 2009, available online at [news.bbc.co.uk/go/pr/fr/1/2/hi/Europe/8251914.stm](http://news.bbc.co.uk/go/pr/fr/1/2/hi/Europe/8251914.stm).

51 H. Mahony, Arctic Shipping Routes Unlikely to Be ‘Suez of the North’, *Euobserver*, 6 July, 2011, online available at [euobserver.com/882/32483](http://euobserver.com/882/32483); W. Gibbs, Cargo Ship Embarks on Historic Arctic Passage, 4 September 2010, *Reuters* (U.S. edition), available online at [www.reuters.com/article/idUSTRE68318D20100904](http://www.reuters.com/article/idUSTRE68318D20100904).

52 A. Rogoff, Melting Arctic: Think of the Bering Strait as the Next Panama Canal, *Alaska Dispatch*, 28 February 2010, available at [alaskadispatch.com](http://alaskadispatch.com).

53 NOAA Ship Fair weather Maps Aid Shipping Through Bering Straits, *Energy Daily*, 22 July 2010, available online at [www.energy-daily.com](http://www.energy-daily.com).

54 AMSA Report (2009), *supra*, at 108. The U.S. ports are Nome, Kotzebue, and the DeLong Mountain Transportation System port that serves Red Dog Mine; the Russian ports are Provideniya, Anadyr, and Egvekinot.

navigation through the central Bering Sea presents no difficulties until St. Lawrence Island (United States) is reached immediately to the south of the strait proper. St. Lawrence Island straddles the southern entrance to the Bering Strait, forcing shipping to route to the east or to the west between the island and the Russian mainland. The distance between the southeast point of Cape Chukoski (Russia) and Northwest Cape on St. Lawrence Island is approximately 72 km (38 nm) while the Alaskan mainland is approximately 200 km (124 nm) at its closest point, allowing for navigation via a high seas corridor on either side of St. Lawrence Island before the Bering Strait is entered.

At the midpoint of the strait, there are two islands – Big Diomedé (Russia) and Little Diomedé (United States) – effectively creating three navigational channels: Bering Strait-East (between the Russian mainland and Big Diomedé Island), Bering Strait-West (between the United States mainland and Little Diomedé Island), and the Diomedé Channel (a 2.5 nm channel separating the Big Diomedé and Little Diomedé Islands).<sup>55</sup> Bering Strait-East and Bering Strait-West are recognised by the US Navy as international straits for the purposes of UNCLOS.<sup>56</sup>

The Bering Strait is the subject of a maritime boundary delimitation agreement between Russia and the United States, which extends in the south from the Bering Sea, through the Strait, into the Chukchi Sea. This 1990 Agreement Between the United States and former-Soviet Union on the Maritime Boundary<sup>57</sup> has as its principal focus the delimitation of the respective EEZ and continental shelf areas within the region and, at approximately 1,600 nm in length, is one of the longest maritime boundaries in the world.<sup>58</sup> The 1990 Agreement mirrors some of the principal provisions embedded in the 1867 Convention Ceding Alaska between Russia and the United States:<sup>59</sup> Articles 1 and 2 of the 1990 Agreement recognise the maritime boundary through the middle of the Bering Strait, and accordingly reflect the relative positions on either side of the boundary of Big Diomedé and Little Diomedé.<sup>60</sup> While the 1990 Agreement makes no express reference to navigational rights in the Bering

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55 There does not appear to be an official name for the body of water that separates the two islands, other than that the waters fall within the Bering Strait. Accordingly, it is referred to as the Diomedé Channel.

56 A. R. Thomas and James C. Duncan (eds.), *Annotated Supplement to The Commanders Handbook on the Law of Naval Operations*, International Legal Studies 73 (1999): 205, Table A2–3.

57 *Agreement between the United States and the Union of Soviet Socialist Republics on the Maritime Boundary*, 1 June 1990, International Legal Materials 29 (1990): 941.

58 E. G. Verille, *United States-Soviet Union*, in Jonathan I. Charney and Lewis M. Alexander (Eds.), *International Maritime Boundaries*, Vol. 1 (Dordrecht: Martinus Nijhoff, 1993), p. 447.

59 *Convention Ceding Alaska Between Russia and the United States*, 30 March 1867, in ed. C. Parry, 134 Consolidated Treaty Series 331.

60 This part of the 1867 Convention, *ibid*, also provided for the boundary between St. Lawrence Island and the Russian mainland, which passes through a midway point between the island and Cape Chukotski (Russia). Verille, *supra* note 52, at 450–451.

Strait, it is recognised that while the maritime boundary limits the extent of coastal State jurisdiction,<sup>61</sup> in all other respects the boundary does not affect or prejudice the rights of either State with respect to “the exercise of sovereignty, sovereign rights or jurisdiction with respect to the waters” of the area.<sup>62</sup> Other than the delimitation of the maritime boundary through the Bering Strait, the 1990 Agreement has no direct impact on the navigational regime that applies within those waters. This is in contrast to other boundary agreements dealing with international straits which expressly acknowledge the right of transit passage.<sup>63</sup> The 1990 Agreement has not been ratified by Russia, yet has been provisionally applied since 15 June 1990.<sup>64</sup>

The Bering Strait meets all geographical requirements of a strait for the purposes of Part III of UNCLOS: it is a body of water that connects one part of the EEZ/high seas (Bering Sea) with another part of the EEZ/high seas (Chukchi Sea). Although technically there may exist three geographic straits within the body of water known as the Bering Strait (Bering Strait-East, Bering Strait-West, and the Diomed Channel), this is irrelevant for the purposes of UNCLOS. There are many other international straits throughout the world that are formed by two opposite landmasses within which small islands may be scattered.<sup>65</sup> Whether the Bering Strait is used for “international navigation”, as per the *Corfu Channel Case*, may have been contestable in the past but based on emerging usage, the strait is currently certainly considered useful for international navigation.<sup>66</sup> While some caution needs to be exercised as this usage derives primarily from Russian-flagged shipping, projections predict clearly that in the future many ships, other than those flagged by Russia and the United States, will use the strait. On that basis, the Bering Strait meets the requirements of an international strait under Part III of UNCLOS so the regime of transit passage applies.<sup>67</sup>

A unique feature of the Bering Strait is that international shipping has effectively two viable routes through the strait: the Russian route to the west of the Diomed Islands through the Russian territorial sea; and the United

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61 U.S.-Soviet Union Boundary Agreement, *supra* note 55, art. 1(2).

62 *Ibid.*, art. 4.

63 This is the case with the 1978 Treaty Between Australia and the Independent State of Papua New Guinea Concerning Sovereignty and Maritime Boundaries in the Area Between the Two Countries, Including the Area Known as Torres Strait, and Related Matters (Torres Strait Treaty) [1985] Australian Treaty Series No. 4.

64 Verille, *supra*, at 452.

65 The Torres Strait (Australia/Papua New Guinea) and the Singapore Strait (Singapore/Indonesia) are significant examples.

66 AMSA Report (2009), *supra*, at 109, noted that: “150 large commercial vessels pass through the Bering Strait during the July-October open water period, with transits of these vessels most frequent at the beginning (spring) and end of the period (autumn).”

67 The view is also endorsed by the AMSA Report (2009), *supra*, at 109, which states that: “The Bering Strait region is an international strait for navigation and a natural chokepoint for marine traffic in and out of the Arctic Ocean from the Pacific Ocean.”

States route to the east of the Diomedede Islands through the United States territorial sea. The Diomedede Channel, at only 2.5 nm does not appear to be wide enough to be attractive to commercial shipping when compared to alternate routes. The waters between the islands fall within the Russia/United States maritime boundary so shipping would be subject to both Russian and US law at different times as they complete their transit.

In principle, the existence of US and Russian routes through the strait does not raise any significant international legal issues given that UNCLOS standards are equally applicable to each route, regardless whether the strait is a “one-State” or “two-State” strait. While US practice has been to adhere consistently to the transit passage regime and to accept its status as part of customary international law,<sup>68</sup> the fact that the US is not a party to UNCLOS creates a potential for variations in State practice in the interpretation of transit passage on either side of the strait. It also raises the prospect of different laws and regulations applying within the Russian and the US side of the strait. This is consistent with Article 42 of UNCLOS, though such laws must be non-discriminatory and must not deny, hamper, or impair the right of passage. Given the environmental sensitivity associated with all forms of shipping in the Arctic, consideration could be given to the establishment of sea-lanes and a traffic separation scheme through the Bering Strait, facilitating one-way north-south and south-north traffic on either side of the Diomedede Islands. Such measures would be consistent with Article 41 of UNCLOS, but require cooperation between Russia and the US in referring such a proposal to the International Maritime Organization for adoption. The 2009 *AMSA Report* noted that there were no vessel-routing measures within the Bering Strait and few aids to navigation. Given the significant potential of this strait for increased maritime traffic and the difficult navigational conditions, such arrangements need to be put in place soon.<sup>69</sup>

In 2010, the United States Coast Guard commenced a “Port Access Route Study” to assess the need to create new vessel-routing measures in the Bering Strait. While the area under review encompasses only US waters in the strait,

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68 See United States Presidential Proclamation 5928 (27 December 1988) in which President Ronald Reagan stated that: “In accordance with international law, as reflected in the applicable provisions of the 1982 United Nations Convention on the Law of the Sea, with the territorial sea of the United States, ... the ships and aircraft of all countries enjoy the right of transit passage through international straits.” See, generally, J.A. Roach, R.W. Smith, *United States Responses to Excessive Maritime Claims*, Martinus Nijhoff (2<sup>nd</sup> ed., 1996), 284–285.

69 *AMSA Report* (2009), *supra*, at 109. Olin Strader, *A Bering Strait Vessel Traffic Service: Critical Infrastructure for an Opening Arctic* (Part I), The Arctic Institute Center for Circumpolar Security Studies, 6 February 2012, available at [www.thearcticinstitute.org/2012/02/1278-bering-straitvessel-trafc-service.html](http://www.thearcticinstitute.org/2012/02/1278-bering-straitvessel-trafc-service.html), argued for the establishment of a Bering Strait Vessel Traffic Service.

this study offered the appropriate tools to facilitate the appropriate bilateral arrangements with Russia, insofar as deemed appropriate.<sup>70</sup>

### 2.2.2.2 *The Nares Strait*

The Nares Strait, situated between Ellesmere Island (Canada) and Greenland (Denmark), connects the Lincoln Sea on the fringe of the Arctic Ocean with Baffin Bay, eventually leading to the Davis Strait, Labrador Sea, and the Atlantic Ocean. The Nares Strait is distinctive, as it comprises a number of smaller interconnecting channels that were named by Arctic explorers, such as the Kennedy Channel and Robeson Channel.<sup>71</sup> The Nares Strait is the most northern strait providing direct access to the Arctic Ocean. Shipping coming from Asia via the Bering Strait might, subject to the presence of ice, find the Northwest Passage a shorter route when seeking access to North American ports. Likewise, the Fram Strait would be the preferred routing for ships making their way from the Bering Strait across the Arctic Ocean to Russian, Scandinavian, and southern European ports. The Nares Strait only presents an option for some forms of international shipping, as it has traditionally been heavily ice-clogged making it impassable for any form of surface shipping other than by icebreakers.

The waters of the Nares Strait have been delimited as part of the Canada/Denmark continental shelf maritime boundary. This 1973 Agreement between Canada and Denmark Relating to the Delimitation of the Continental Shelf between Greenland and Canada<sup>72</sup> extends from a southern point in the Davis Strait to the northern end of the Nares Strait and entrance to the Lincoln Sea. While predominantly a maritime boundary dealing with the continental shelf in the broad expanses of Baffin Bay and the Davis Strait through the Nares Strait, the Agreement effectively delimits the territorial sea. In places throughout the strait, this sea is only 20 nm in breadth. The Agreement predates the conclusion of UNCLOS and reflects continental shelf rights as provided for in the 1958 Convention on the Continental Shelf, as it technically only applies to the delimitation of the continental shelf.<sup>73</sup> The boundary also excludes Hans Island, located in the Nares Strait, which remains the subject of an unresolved sovereignty dispute between Canada and Denmark.<sup>74</sup>

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70 U.S. Department of Homeland Security: United States Coast Guard, Port Access Route Study: In the Bering Strait, 33 CFR Part 167, Federal Register 75 (No. 215), November 8, 2010.

71 A. R. Thomas, J. C. Duncan, Annotated Supplement to the Commanders Handbook on the Law of Naval Operations, 73 International Legal Studies 205 (1999), at 205, TableA2-3.

72 Agreement Between Canada and Denmark Relating to the Delimitation of the Continental Shelf Between Greenland and Canada, 17 December 1973, ILM 13 (1974): 506.

73 *Ibid.*, Art. 1.

74 L. M. Alexander, Canada-Denmark (Greenland), in International Maritime Boundaries, Vol. 1, 372 (Jonathan I. Charney and Lewis M. Alexander eds., Martinus Nijhoff, 1993).

The Nares Strait and its associated channels is clearly a strait connecting one area of the EEZ/high seas (Lincoln Sea and Arctic Ocean) with another area of the EEZ/high seas (Baffin Bay). It falls predominantly, though not exclusively, within the territorial sea of both Canada and Denmark.<sup>75</sup> However, while the Nares Strait meets the geographic criteria of an international strait in UNCLOS, doubt arises as to whether the strait, at this point in time, meets the functional criteria of a strait “used for international navigation” given the very low level of reported passages through it. Unlike the Northwest Passage, Northern Sea Route, or Bering Strait, there have been no reports of significant international maritime traffic using the Nares Strait to date.<sup>76</sup> This position may alter over time, but presently it is difficult to assert that the Nares Strait meets the criteria of a strait used for international navigation as referred to in Article 37 of UNCLOS. However, this does not give Canada or Denmark the right to bar navigation through the Nares Strait subject to Article 25(3) (temporary suspension of innocent passage), and there is no evidence that either State has sought to do so. It does mean that, instead of a right of transit passage applying through the strait, the innocent passage regime of the territorial sea applies, which gives the littoral States the right to regulate the ships passing through those waters.

### 2.2.2.3 *The Davis Strait*

The Davis Strait lies to the south of the Nares Strait and is principally located between Baffin Bay and the Labrador Sea and fringed to the west by Baffin Island (Canada) and Greenland (Denmark). The breadth of the strait varies from between 160 and 510 nm. In addition to providing an access route to and from the Nares Strait, it also provides an access route to and from the Northwest Passage. The strait is therefore very important for facilitating ease of access to and from the Northwest Passage for shipping *en route* from east coast Canadian and US ports. Another feature of the Davis Strait is that, like the Nares Strait, it has been the subject of continental shelf delimitation by means of the 1973 Canada/Denmark Agreement.<sup>77</sup> However, given the width of the strait, this had no implications for the delimitation of the territorial sea and there is no area of overlapping territorial sea within the strait.

While the Davis Strait is considered by some international commentators to be an international strait of more than 24 nm in breadth,<sup>78</sup> it is clearly a strait with a significant high seas corridor. As such, it is not subject to the transit passage regime. Instead, the freedoms of the high seas, such as naviga-

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75 Parts of the Kane Basin are beyond the limits of the Greenland territorial sea.

76 However, there remain reports of submerged submarine transits through the Nares Strait. See Critchley, *supra*, at 859–861.

77 Canada-Denmark Agreement, *supra*.

78 A. R. Thomas, J. C. Duncan, (1999), *supra*, at 205, Table A2–3.

tion, prevail. Given the increased level of international shipping – commercial and, increasingly, cruise traffic – passing through parts of the strait, there is little difficulty in classifying the Davis Strait as an international strait, albeit one in which the right of transit passage does not apply because the high seas freedom of navigation prevails. Therefore, other than the application of Canadian and Danish marine environmental measures within their respective territorial seas and EEZs, the legal regulation of navigation within the strait is not particularly contentious.

#### 2.2.2.4 *Fram Strait*

The Fram Strait is a large body of water within the Greenland Sea that lies between Greenland (Denmark) and Svalbard (Norway). It provides the most northern accessible route from the Atlantic Ocean (via the Denmark Strait or Norwegian Sea) to the Arctic Ocean and has the potential to become a significant trans-Arctic shipping route in conjunction with the Bering Strait.<sup>79</sup> The strait is historically renowned for the large volumes of ice that pass through it. Reference to this body of water as being a strait is something of a misnomer. While there are territorial sea claims asserted by both Denmark and Norway, the strait, at approximately 253 nm at its narrowest point, has a significant high seas corridor. This eliminates the need, in the normal course of events, for any ships passing through the strait to enter the territorial sea. In 2006, an agreement was reached between Denmark and Norway on a maritime boundary between Greenland and Svalbard concerning the respective continental shelf and EEZ areas.<sup>80</sup> The boundary agreement makes no reference to navigational issues. Since the Fram Strait is not a strait overlapped by territorial sea claims, and there is a significant high seas corridor within the strait, transit passage does not apply within the strait. Rather, the normal freedoms of high seas navigation apply. This means that one of the two major trans-Arctic navigation chokepoints is free of any significant level of strait State regulation, in contrast to, for example, the Bering Strait.

#### 2.2.2.5 *The Denmark Strait*

The Denmark Strait lies between Greenland (Denmark) and Iceland. Like the Davis Strait, it does not provide direct access to and from the Arctic Ocean. The Arctic Ocean can only be entered via the Fram Strait to the north or via

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79 D. Rothwell (2012), *supra*, at 276.

80 Agreement Between Norway and Denmark Together with the Home Rule Government of Greenland Concerning the Delimitation of the Continental Shelf and the Fisheries Zones in the Area Between Greenland and Svalbard, 20 February 2006, reproduced in A.G. Oude Elferink, *Maritime Delimitation between Denmark/Greenland and Norway*, 38 *Ocean Development and International Law* 375 (2007).

the Northern Sea Route through the Norwegian and Barents Seas to the east. The strait is widest at its southern entrance where the Greenland and Iceland coasts are separated by nearly 485 nm. At its narrowest point the strait is approximately 161 nm in breadth. Even though the Denmark Strait has been listed as an international strait for the purposes of Part III of UNCLOS,<sup>81</sup> it contains a broad high seas corridor of at least 137 nm. There are no significant navigational constraints that would require shipping to pass close to the coastline and through the territorial sea. While it is not a strait through which the right of transit passage applies, like the Fram Strait, high seas freedoms of navigation principally apply to the Denmark Strait.

The future strategic and commercial significance of the Denmark and Fram Straits should not be underestimated. They may become a significant maritime highway for trans-Arctic shipping *en route* (?) to the east coast of the United States and for shipping passing from the Northern Sea Route across to the Norwegian Sea to access US ports. Recognising its strategic location at the entrance to the Atlantic for Arctic shipping routes, Iceland is actively considering how to maximise economic opportunities arising from an increase in Arctic shipping.<sup>82</sup>

## 2.3 MULTIPLE LEVELS OF ARCTIC SHIPPING GOVERNANCE

### 2.3.1 Global level

Like global shipping, Arctic shipping is subject to the International Maritime Organization (IMO)'s governance structures, processes, rules and standards. A special agency of the United Nations, the IMO provides machinery for intergovernmental cooperation in the technical regulation of shipping engaged in international maritime trade.<sup>83</sup> It promotes the highest practicable standards for maritime safety, navigation efficiency and vessel-source pollution, encourages the removal of discriminatory practices by States, and supports the availability of shipping services to world commerce. Furthermore, it provides for the exchange of information among member States on matters under consideration. The IMO pursues these purposes irrespective of marine region, hence its significance for Arctic shipping.

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81 A. R. Thomas, J. C. Duncan, (1999), *supra* n. 51, at 205, Table A2–3.

82 See, generally, the papers prepared and conference summary of the conference “Breaking the Ice” Akureyri, Iceland, March 27–28 (2007), available online at [www.arcticportal.org/breaking-the-ice](http://www.arcticportal.org/breaking-the-ice).

83 Convention on the International Maritime Organization (adopted 6 March 1948, entered into force 17 March 1958) 289 UNTS 48; as amended, see Institute of Maritime Law, *The Ratification of Maritime Conventions* 4 Vols. Up-dated, Loose-leaf Service (Lloyd's Press, London, 1991-2003), Vol. 1. 1.10.

The IMO's maritime safety tools can assist to promote appropriate construction, equipment and seafaring standards for the Arctic. Adopted within the framework of the 1974 International Convention on Safety of Life at Sea (SOLAS), these tools provide a comprehensive range of rules and standards for virtually every aspect of ship construction, equipping, operation and crewing.<sup>84</sup> At present, no mandatory rules and standards specifically address the particular challenges of Arctic navigation so only general rules apply. Equally, the environmental protection tools could extend to the protection of the Arctic environment. UNCLOS allocates the competent international organisation (generally understood as referring to the IMO) the role of forum for the adoption of international rules and standards for vessel-source pollution and routing schemes.<sup>85</sup> Under the 1973/78 International Convention on the Prevention of Pollution from Ships (MARPOL), the IMO has designated special areas where vessel discharges are further restricted in several sensitive marine regions around the world. These regions include the Antarctic Waters and the Baltic, Caribbean, Mediterranean and North Sea.<sup>86</sup> Upon request of a member State, the IMO addresses the protection needs of particular areas in that State's maritime zone by adopting special mandatory measures and/or establishing a Particularly Sensitive Sea Area (PSSA) and associated protective measures (APMs).<sup>87</sup> Irrespective of special area and PSSA designation, the IMO has also approved routing measures to achieve particular environmental protection and conservation goals.<sup>88</sup> At present, the IMO has not designated special areas, PSSAs, special mandatory measures or routing measures in the Arctic Ocean. However, the northernmost section of the Western European PSSA at 62°N (United Kingdom, off the Shetland Islands) and some routing

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84 International Convention for the Safety of Life at Sea (adopted 1 November 1974, entered into force 25 May 1980) 1334 UNTS 2; Protocol of 1978 (adopted 17 February 1978, entered into force 1 May 1981) 1276 UNTS 237; Protocol of 1988 (adopted 11 November 1988, entered into force 3 February 2000) U.S. Treaty Doc. 102-2.

85 UNCLOS art. 211(1).

86 International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating thereto (adopted 17 February 1978, entered into force 2 October 1983), as amended, in MARPOL, Consolidated Edition (IMO, London, 2007). The IMO Assembly adopted guidelines for special area designation: Guidelines for the Designation of Special Areas under MARPOL 73/78, IMO Doc. A.22/Res 927, 15 January 2002; available online at [http://www.imo.org/includes/blastDataOnly.asp/dataid%3DI\\_0469/927.pdf](http://www.imo.org/includes/blastDataOnly.asp/dataid%3DI_0469/927.pdf).

87 Under UNCLOS Art. 211(6), the IMO may, on the request of a State Party, adopt special mandatory measures to address the needs of PSSAs within the EEZ. The IMO has not yet used this power. However, it has designated PSSAs under its own environmental mandate set out in its constitutive convention. The PSSA Guidelines were adopted under this mandate. Revised Guidelines for the Identification and Designation of Particularly Sensitive Sea Areas, IMO Doc. A.9822(4), 1 December 2005, available online at [http://www.imo.org/includes/blastDataOnly.asp/data\\_id%3D14373/982.pdf](http://www.imo.org/includes/blastDataOnly.asp/data_id%3D14373/982.pdf).

88 These are published in International Maritime Organization, *Ships' Routing* (9th ed.) (IMO, London, 2008).

schemes also located, at least in part, north of that latitude, spill into the Arctic Circle.<sup>89</sup>

The IMO has considered Arctic-specific safety issues in its various committees. In 2010, the Assembly adopted the Guidelines for Ships Operating in Arctic Ice-covered Waters (Arctic Guidelines).<sup>90</sup> The adoption followed consideration by the Sub-Committee on Ship Design and Equipment (DE) and approval by the Maritime Safety Committee (MSC) and the Marine Environment Protection Committee (MEPC). The Arctic Guidelines are current being considered for amendment.<sup>91</sup> The IMO has also responded to the call for additions to regional navigation areas (NAVAREAS): following consideration by the Sub-Committee on Search and Rescue (COMSAR), it proposed the creation of new and revision of existing (?) Arctic NAVAREAS and the allocation of responsibilities to coastal States in new areas.<sup>92</sup>

Accredited delegations from member States are the principal participants in IMO structures and processes. Global and regional intergovernmental organisations (IGOs) can enter into cooperation agreements and participate in meetings. Industry groups and non-governmental organisations (NGOs) can be granted consultative status enabling them to participate in meetings.<sup>93</sup> To date, the Arctic Council has not been accredited as an observer (nor is the IMO an observer on the Arctic Council),<sup>94</sup> nor has it entered into a cooperation

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89 Off the coast of Norway from Vardo to Rost (traffic separation scheme; recommended routes joining traffic separation schemes); partially (to a limited extent in the northernmost region) in Prince William Sound (traffic separation scheme); partially in the northernmost region of the Shetland Islands (precautionary area in the approaches to Lerwick); off the southwest coast of Iceland (two-way routes; mandatory reporting). Several measures have also been adopted for the Baltic Sea.

90 IMO Guidelines for Ships in Operating in Polar Waters, 2010, available online at <http://www.imo.org/en/Publications/Documents/Attachments/Pages%20from%20E190E.pdf>.

91 *Ibid.*; The DE Sub-Committee has considered amendments to the Arctic Guidelines but this has not happened yet. Report to the Maritime Safety Committee, IMO Doc. DE 51/28, 12 March 2008, available online at <http://www.imo.org/includes/blastDataOnly.asp?dataid%3D6629/1056-MEPC-Circ399.pdf>.

92 The MSC approved the Sub-Committee on Communications and Search and Rescue (COMSAR) proposal for the creation of Arctic NAVAREAs up to 90° North. The following countries were designated coordinators for the new NAVAREAs: Canada for NAVAREAs XVII and XVIII, Norway for NAVAREAs XIX, and Russia for NAVAREAs XX and =OU. The new NAVAREAs were originally proposed in a joint IMO/IHO/WMO Correspondence Group. Report of the Maritime Safety Committee at its Eighty-Third Session, IMO Doc. MSC 83/28, 26 October 2007, available online at <http://www.imo.org>.

93 For a list of organizations with consultative or observer status at the IMO see <http://www.imo.org/home.asp?topicid=315&doc id=851>.

94 A major UN body has observer status on the Council: the United Nations Development Programme (UNDP). A United Nations Environment Program (UNEP) centre based in Norway also has observer status, see online at <http://arctic-council.org/section/observers intergovernmentaland inter-parliamentary organization>.

agreement with the IMO.<sup>95</sup> A possible explanation is that Arctic Council member States protect their Arctic interests at the IMO as member States of the latter, cooperating on an occasional basis when they deem it necessary. Although this may be satisfactory from a national interest standpoint, it does not allow for a systematic regional approach to Arctic issues at the IMO, although there may be prior delegation to a member State to submit a regional communication or point of view on particular issues.<sup>96</sup> In contrast, industry and NGOs with an interest in the Arctic are able to participate in IMO meetings and influence the adoption of rules and standards. Accordingly, it would seem appropriate for the IMO to attain observer status in the Arctic Council.

### 2.3.1.1 *The analysis of the new IMO Polar Code*

The IMO (International Maritime Organization) provides a framework for ships in terms of safety, security, and the environment. It is important to have consistency in ships, as people use boats to transport people and goods all around the world. With the loss of sea ice, water ways are opening and with it more ships can travel the area. To address this issue along with other unique challenges, the IMO made the Polar Code in 2014. The Polar Code is an international code for ships in the polar region. The Arctic Council recognized the IMO an observer on May 5th, 2019. As this event was recent, this sub-chapter will present a critical analysis of the Polar Code and whether it accomplishes its goals. In recent years, the IMO has worked hard on the Polar Code in terms of safety, navigation, and “equally important, the protection of the unique environment and eco-systems of the polar regions.” The IMO states that environmental protection is just as important for ships as safety and navigations, and this paper seeks to assess if this contention is true. Can the Polar Code sufficiently protect the environment and its inhabitants? For the ships travelling to the Arctic, they pose a threat to the environment and its peoples with their emissions, trash, and waste. These factors affect walruses, whales, fish and other animal life from boats. Pollution heavily harms people in the Arctic region, especially the Indigenous peoples who depend on these resources for food and culture.

As time goes on, there is more interest to travel in the Arctic for fun as well as for transportation of goods. Along with this increase of popularity, the ice in Arctic has been melting rapidly. This situation creates new passages to travel as well as makes already traveled paths easier to traverse. A study

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95 For a list of IGOs having cooperation agreements with the IMO, see <http://www.imo.org/home.asp?topicid=315&docid=846>.

96 On some issues the Arctic Council has participated indirectly at the IMO, e.g., when the Arctic Guidelines were under consideration in MSC and DE. Although the Council does not have observer status, it has submitted documents on the Guidelines directly or through a member State.

found that the Arctic will be navigable entirely between 2040-2059. The IMO decided that the region needed special regulations.

At the beginning of 2017, the IMO enforced the Polar Code. However, they were making amendments from other polices such as from MARPOL (the International Convention for the Prevention of Pollution From Ships, effective since 1973) back in 2014 and took many years before the IMO started enforcing these policies. There are several parts to the Polar Code. The first part takes up most of the document, roughly thirty of its forty-two-pages. It is mostly about safety, navigation and ship structure. It makes sense that this section is the largest part of the Polar Code, as the Polar Regions are difficult to navigate and having regulations for that purpose is important. The Polar Code goes into detail about ship structure and machinery. Ships have strict equipment, design, construction, materials, operations and manning. There is not much to note in terms of environmental protection, but it is intricate, detailed and specific enough for the safety of the ships, crew and environment.

Part II-A of the Polar code goes into pollution prevention. The MARPOL Annex 1 has 43 regulations for what the boats can carry. For example, it “prohibits the carriage in bulk as cargo, or and use as fuel, of: having a density at 15°C higher than 900 kg/m<sup>3</sup>; oils, other than crude oils, having a density at 15°C higher than 900 kg/m<sup>3</sup> or a kinematic viscosity at 50°C higher than 180 mm<sup>2</sup>/s or bitumen, tar and their emulsions” (MARPOL). Other regulations discourage practices such as the use or transportation of heavy fuel oil in the Arctic. Noxious liquids in Chapter 2 of Part II-A, Sewage in Chapter 4, and pollution from Garbage in Chapter 5 are all banned and there are operational requirements for disposing of them properly. However, it is important to note no law enforcement enforces these bans, as the Polar Code is voluntary amongst countries. Chapter 3, Prevention of Pollutions by Harmful Substances Carried by Sea in Packaged Form, is unique as it is intentionally blank. This fact acknowledges there is room for improvement. Why would they bring it up at all if there is nothing to say now? This fact shows that improvements are in the works, most likely.

PAME has archived information dating back to 2005. The Arctic Marine Shipping Assessment Report used this data for their report in 2009. This data is the information that the Polar Code uses when making the ASTD (Arctic Ship Traffic Data) system, which “collect(s) and distribute(s) accurate, reliable and up-to-date information on shipping activities in the Arctic” (PAME, Borgir) and launched in February 2019. They do much more than track the ships, too, such as record emission information, history, activity in specific areas and fuel consumption. This information is essential for the Polar Code to monitor the progress in the Arctic and decide if improvements are necessary.

Disputes in the Northern Passage are another challenge in the Arctic. Michael Byers addresses the issues in his book *Who Owns the Arctic?: Understanding Sovereignty Disputes in the North*. With more waters come ships that will travel through the area. The Northwest Passage could accommodate

super-tankers or other ships too big for the Panama Canal. The United States argues that the Northwest Passage is an international strait, while Canada argues it is internal waters.<sup>97</sup> The relationship between the US and Canada makes this issue not a big deal due to their history of cooperation, but this tension still matters for ship traffic. If this waterway becomes an international strait, then this area would see an increase in ship traffic. This increase can also cause a problem with security, which the Arctic Council cannot discuss.

At the end of the day, the Arctic is for everyone and the Polar Code treats it as such. However, these disputes have the potential to heavily impact areas of travel in the Arctic and politics do not always consider the environmental impacts these decisions have. The Polar Code is beyond these issues, but the existence of these disputes show the changes in the Arctic go beyond environmental problems.

There have been studies on how the Arctic will change and using satellite data and Morten Winthers et al. predicts emission rates using this technique. With business as usual predictions, black carbon emissions will increase at least 80% by 2050 and sulphur dioxide will increase at least 1000%. Stephen G. Warren from the University of Washington has studied the effects of black carbon in the Arctic, stating that it can lower the albedo, which further accelerates the melting of ice. Although he concludes there has been a mostly stable amount of black carbon in the Arctic, the effects are still evident. Sulphur dioxide also is a well-known air pollutant. However, nearly half of this substance came from fishing ships. This problem led to a ban on fishing in the Arctic in most cases. The second biggest emitters are passenger ships. About 20% of black carbon emissions and 25% of sulphur dioxide come from the ships. The subsequent ships are tankers, general cargo, and container ships respectively, but their emissions are similar.

What about passenger ships? Dawson et al. finds a 115% increase in cruise ships in Arctic Canada between 2005 and 2019, which pushes them to say there "is a sense of urgency involved in governing the changing Arctic".<sup>98</sup> People want to travel to the Arctic and cruise ships will have to follow the Polar Code. A book by Michael Luck details the issue, noting the rise in the last decade is without precedent. He says, "A cloud of thick black smoke from heavy oil was emitted by Kapitan Dranitsyn all the way through the ice".<sup>99</sup> Although

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97 Byers, M, *Who Owns the Arctic?: Understanding Sovereignty Disputes in the North*-Understanding Sovereignty and International Law in the North Douglas & McIntyre, 2009 at p. 14.

98 Dawson et al, *Governance of Arctic expedition cruise ships in a time of rapid environmental and economic change*, page 96, available at: <https://www.sciencedirect.com/science/article/abs/pii/S0964569113003074>.

99 Michael Luck, *Polar Tourism: Human, Environmental and Governance Dimensions*, page 36, available at: [https://www.academia.edu/55701945/Polar\\_Tourism\\_Human\\_Environmental\\_and\\_Governance\\_Dimensions\\_edited\\_by\\_Patrick\\_T\\_Maher\\_Emma\\_J\\_Stewart\\_and\\_Michael\\_L%C3%BCck](https://www.academia.edu/55701945/Polar_Tourism_Human_Environmental_and_Governance_Dimensions_edited_by_Patrick_T_Maher_Emma_J_Stewart_and_Michael_L%C3%BCck).

said to emit no CO<sub>2</sub>, this trend is not the only emissions that affect the environment. More of the book details the unsustainable practices and the regulations from MARPOL found the cruise ship industry practices to be unacceptable, although some were ethical or somewhat ethical. The discharge of garbage, sewage, food waste, and treated sewage were banned, which left only 10.8% of cruises approved by the Polar Code. Although the Polar Code never explicitly discusses cruise ships, these regulations also apply here. This trend shows a potential change in these practices with the Polar Code. Studies on the subject are not yet out to see if this has been effective on cruise ships, but the Polar Code is addressing the issue of waste dumped from cruise ships.

According to PAME, the number of ships by country is heavily skewed. Out of 1869, 774 are from Russia and 228 are from the USA, while Norway, Canada, and Denmark are 179, 71, and 59 respectively. This fact is an important distinction, since cooperation from these countries will be important for the Polar Code to be successful. In an article by Richard Wanerman, he discusses the importance of enforcing the Polar Code. This article is from 2015, before enforcement happened. He stressed the inclusion of the Arctic Council, stating the combination of the IMO's expertise in maritime shipping and the Arctic Council's expertise in Arctic affairs from economics, to law, and to the environment would be essential to advisory and enforcement. With the highest number of ships coming from the Arctic States, all of which present in the Arctic Council, its success is attainable through the Arctic Council's connections. It is in these states' best interest to follow the Arctic Council to protect the environment and its peoples while also maintaining good relations. Thus, it is likely the Arctic States will follow the Polar Code. As stated before, the Polar Code is mostly, voluntary which is why it is essential that the Arctic Council supports these policies. This gives the enforcement of the Polar Code the highest chance by the Arctic States.

The Polar Code never mentions emissions, climate change, or carbon. How could it possibly mitigate climate change without this? The Polar Code focuses of pollutants from waste and oils on the environment rather than climate induced environmental impacts. Other regulations such as MARPOL address the issues of emissions to all ships and journals have already criticized their regulations. The Overview of MARPOL ANNEX VI Regulations for Prevention of Air Pollution from Marine Diesel Engines concludes ships are a significant contributor to climate change and atmospheric pollution. But the regulations in Annex VI is still a work in progress and emphasize the importance of change in manufacturers and fuel suppliers to keep up with the strict regulations to protect the environment. The Polar Code could include such regulations but doing so is repetitive.

In conclusion, will the Polar Code be enough for the environment in the future? With a seat on the Arctic Council and access to all this research, the Polar Code has the resources to adapt to future issues on top of already being well balanced and structured. However, improvement in passenger ships may

need attention as the industry increases. Information of these kind of changes were absent from IMO or the Polar Code. But intentions for change are in the discussion along with spaces left intentionally blank in the Polar Code. If these intentionally left blank areas are left there for future development, then the Polar Code will have addressed all the issues within its goal, including environmental impacts. The Polar Code is an essential step to mitigating the maritime issues in the Arctic. The future is dependent on the cooperation of the Arctic Council and the IMO with regulations as the Arctic develops and change.

### 2.3.2 Regional level

UNCLOS provides a role for ocean governance at the regional level. Arguably, the Arctic Ocean should be treated as a semi-enclosed sea, so that its coastal States are under an obligation to “endeavour, directly or through an appropriate international organization” to coordinate marine living resource “management, conservation, exploration and exploitation”, “the implementation of their rights and duties” for the protection and preservation of the marine environment and their scientific research policies, including undertaking joint research.<sup>100</sup> UNCLOS further provides for States, as appropriate, to cooperate:

“... on a regional basis, directly or through competent international organizations, in formulating and elaborating international rules, standards and recommended practices and procedures consistent with this Convention, for the protection and preservation of the marine environment, taking into account characteristic regional features.”<sup>101</sup>

As noted earlier, with respect to the adoption of standards and rules for vessel source pollution, UNCLOS speaks of a ‘competent international organization’ in the singular, and this is generally understood<sup>102</sup> to refer to the IMO.<sup>103</sup>

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100 UNCLOS arts. 122-123. Article 122 defines ‘semi-enclosed sea’ as “a gulf, basin or sea surrounded by two or more States and connected to another sea or the ocean by a narrow outlet or consisting entirely or primarily of the territorial seas and exclusive economic zones of two or more coastal States.” Although it is called ‘ocean’, it is the smallest of the world’s oceans and is effectively covered for the most part by the EEZs of five coastal States. Its hydrology is comparable to that of the Mediterranean Sea. The purpose of Arts. 122-123 is to encourage cooperation in marine areas within such a constraining geography. Further, like the Mediterranean, the Arctic Ocean has several subregional seas, several of which can also be described as semi enclosed, include the Barents, Bering, Beaufort, Greenland, Kara, Labrador, Laptev, Norwegian and Siberian Sea.

101 UNCLOS Art. 197.

102 T.L. McDorman, A Note on the Potential Conflicting Treaty Rights and Obligations between the IMO’s Polar Code and Article 234 of the Law of the Sea Convention, in *International Law and Politics of the Arctic Ocean Essays in Honor of Donat Pharand* 141 (S. Lalonde, T. L. McDorman, eds, Brill Nijhoff, 2015).

The Arctic States have chosen to cooperate on a political and regional basis with indigenous communities and other Arctic inhabitants through the Arctic Council. The Council was established in 1996 through a political declaration by the Arctic States, rather than by a treaty like many other regional marine environmental protection regimes. This followed their earlier adoption of the Arctic Environmental Protection Strategy.<sup>104</sup> In addition to a forum for political cooperation, the Council promotes scientific exchange. Although based on consensus, its decisions are not binding for its Members.

The governmental members of the Council are States whose territory is at least partially located north of 60° latitude, namely: Canada, Denmark, Finland, Iceland, Norway, Russian Federation, Sweden and the United States.<sup>105</sup> Not all of these States necessarily have coasts on the Arctic Ocean: Finland and Sweden are Baltic coastal States and Iceland is an island State in the Norwegian Sea, i.e., sub-Arctic waters.<sup>106</sup> The only States with coasts on the Arctic Ocean proper are Canada, Denmark (Greenland only, which enjoys home rule), Norway, Russia and the United States.

This has significant implications for their power to regulate shipping in the Arctic. The Council's interest in shipping is expressed through the Protection of the Arctic Marine Environment (PAME) program, which is a mechanism for cooperation in the environmental field. Cooperation on shipping matters is political and primarily focused on developing a knowledge base for shipping issues generally, as well as cooperation on contingency planning and response.

Arctic Ocean coastal States are prepared to split ranks with other Arctic States<sup>107</sup> and act outside the framework of the Arctic Council when they

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103 UNCLOS art. 211.

104 Declaration on the Establishment of the Arctic Council, Ottawa, 19 September 1996, available online at: <http://arctic-council.org/article/about>, [hereafter Ottawa Declaration]. In addition to regional cooperation, Arctic States cooperate on marine and environmental issues on a bilateral basis, see D.L. Vander Zwaag, A. Chircop et al., *Governance of Arctic Marine Shipping*, a report to the Arctic Marine Shipping Assessment (AMSA), 11 October 2008, available online at <http://arcticportal.org/uploads/vZ/6u/vZ6uVo9aTTQv45iw93oFw/AMSA-Shipping-Governance-Final-Report-Revised-November-2008.pdf>.

105 The following organizations are Permanent Participants in the Arctic Council: the Inuit Circumpolar Conference; the Saami Council with member organizations in Finland, Russia, Norway and Sweden; Association of Indigenous Minorities in the Far North, Siberia, the Far East of Russia (RAIPON); Aleut International Association, representing the Aleut on the Russian and American Aleutian, Pribilof and Commander Islands; Arctic Athabaskan Council, representing the interests of United States and Canadian Athabaskan member First Nation governments; and Gwich'in Council International (GCI), representing the Gwich'in in Canada and US.

106 Nonetheless, Finland has an interest in Arctic shipping and is one of three co-chairs of AMSA. The other co-chairs are Canada and the United States.

107 There are multilevel conflicts within the Arctic Stakeholders especially within the States that are littoral to the Arctic Ocean (Arctic 5) and the others (Arctic 8). More detailed discussion will take place in part II of the Thesis in this respect.

perceive this to be in their interest. This is not surprising as arguably their interests as coastal States outweigh those of other Arctic and non-Arctic States. Accordingly, the coastal States set out their vision for the Arctic in 2008 in Ilulissat (Greenland) – to the disappointment of other actors – through the adoption of a Declaration touching on three key points.<sup>108</sup> First, in response to proposals for a new comprehensive international legal regime for the Arctic Ocean, they stated that such a comprehensive legal instrument was unnecessary. Second, presumably as an assertion of their rights as coastal States, they espoused their readiness to undertake responsible management by using the existing framework for the international law of the sea. Third, and most significantly for shipping governance, they expressed their common intention to continue working together directly and through the IMO to strengthen existing and develop new safety measures to prevent and reduce vessel-source pollution.

Arctic States are not the only entities with a significant and legitimate interest in the region and in the prospect of new maritime trade routes. Non-Arctic States, especially some Asian and European States, may have an interest in the region's known hydrocarbon and mineral resource potential and in new trade routes that could significantly reduce transit time and freight rates. The analogy to the Antarctic is valid: non-Arctic States may have a non-territorial interest in its proper governance.<sup>109</sup> UNCLOS recognises extra-regional interests in a regional sea and, applied to the Arctic, this obliges Arctic State Parties to UNCLOS to endeavour to invite other States or international organisations to foster cooperation in the region.<sup>110</sup> The Agreement establishing the Arctic Council provides a mechanism for non-Arctic States to participate as observers, and many have.<sup>111</sup> Some non-Arctic States have openly expressed their interest in the future governance of Arctic shipping<sup>112</sup> or have invested in Arctic oceanic, atmospheric and related research.<sup>113</sup> The European Commission,

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108 Ilulissat Declaration, Arctic Ocean Conference, Ilulissat, Greenland, 27-28 May 2008, <http://www.oceanlaw.org/downloads/arcticIlulissatDeclaration.pdf>.

109 O. P. de la Barra, *Reminiscences of the 1959 Antarctic Treaty Conference*, 21 *Envtl. Pol'y & L.* 205 (1991).

110 UNCLOS art. 123(d).

111 Ottawa Declaration (*supra*, note 95) Art. 3. At present, observer States include: China, France, Germany, Poland, Spain, The Netherlands and United Kingdom. See Arctic Council, available online at <http://arctic-council.org/section/observers-nonarcticstates>.

112 For example, Germany recently convened a meeting to explore what form cooperation between Arctic and non-Arctic States could take. 'New Chances and New Responsibilities': International Conference of the German Federal Foreign Office in cooperation with the Ministries of Foreign Affairs of Denmark and Norway and the Max Planck Institute for Comparative Public Law and International Law, Berlin, 11-13 March 2009, information available online at <http://www.arctic-governance.org/index.htm>.

113 China has a 21,000-ton ice-breaker converted for polar research; The EU, Japan and Sweden have also funded Arctic research. The three-year Arctic Operational Platform (ARCOP) project was funded by the EU's DG Transport and Energy, see online at: <http://www.arcop.fi/index.htm>.

conscious that the European Union (EU) does not have Arctic coastlines, defined the EU's interests in Arctic policy on behalf of the EU Member States.<sup>114</sup> The EU's shipping and other interests in the region and its governance institutions were underscored.

Clearly, regional governance has an important role to play in Arctic shipping, but most likely as a political rather than as a standard-setting forum, because it could enable Arctic States to better coordinate their national and IMO efforts to regulate shipping. It is in the collective interest of Arctic States to have the Arctic Council assume a more visible institutional presence at the IMO, thereby alerting the maritime community that a viable regional cooperative arrangement exists which is beneficial to international shipping. The Arctic Council also has the potential to further engage with important and interested non-Arctic States or organisations, such as the EU.

### 2.3.3 National Level

The national level of governance in Arctic shipping plays a more significant role than in non-polar regions due to UNCLOS Article 234, which provides coastal States in ice-covered regions with additional powers of regulation over international shipping. Article 234 provides:

“Coastal States have the right to adopt and enforce non-discriminatory laws and regulations for the prevention, reduction and control of marine pollution from vessels in ice-covered areas within the limits of the exclusive economic zone, where particularly severe climatic conditions and the presence of ice covering such areas for most of the year create obstructions or exceptional hazards to navigation, and pollution of the marine environment could cause major harm to or irreversible disturbance of the ecological balance. Such laws and regulations shall have due regard to navigation and the protection and preservation of the marine environment based on the best available scientific evidence.”<sup>115</sup>

Negotiated as *lex specialis* to the general rules on the protection and preservation of the marine environment set out in UNCLOS Part XII and conferred as an additional power within the EEZ as set out in Part V, Article 234 was directly negotiated between relatively few States at UNCLOS III.<sup>116</sup> Article 234

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114 Communication from the Commission to the European Parliament and the Council, the European Union and the Arctic Region, COM(2008) 763 final, 20 November 2008, available online at: <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2008:0763:FIN:EN:PDF>. The Communication specifies that the Commission will apply for permanent observer status in the Arctic Council.

115 UNCLOS Art. 234.

116 Mainly between Canada, the USSR (at the time) and the United States. M.H. Nordquist, A. Yankov, N.R. Grandy and S. Rosenne, United Nations Convention on the Law of the Sea 1982: A Commentary, vol. IV, Nijhoff, Dordrecht (1991), 392-398.

enables Arctic coastal States to establish higher standards for vessel-source pollution than the standards established through the IMO. Therefore, national regulation pursuant to these powers applies to international shipping in addition to any applicable IMO rules and standards.

Canada and Russia are two Arctic States that have adopted national rules and standards for international shipping in the Arctic. Canada's principal legislation in this regard, the Arctic Waters Pollution Prevention Act 1970 (AWPPA),<sup>117</sup> was not enacted without protest from some States, but in view of the eventual adoption of UNCLOS and ratified by Canada, the AWPPA complies with Article 234. Since its adoption, the AWPPA has applied to waters north of 600 and only up to 100 nm from Canada's territorial sea baselines in the Arctic Ocean. Curiously, only in 2008 did Canada take the step to amend the AWPPA to encompass its entire EEZ in the definition of 'Arctic waters'.<sup>118</sup> The AWPPA and its derivative regulations provide a regime that includes: designation of shipping-safety control zones (16 of which have been designated); polar standards for ships; zero discharges from ships; a requirement to have an ice navigator on board; and voluntary reporting to the Arctic Canada Traffic System (NORDREG) for ships above 300 tons entering Canadian Arctic waters.<sup>119</sup> The latter was made mandatory in 2008.<sup>120</sup> AWPPA regula-

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117 Arctic Waters Pollution Prevention Act, R.S.C. 1985, c. A-12 [hereafter AWPPA]. Key regulations under the AWPPA are: Arctic Shipping Pollution Prevention Regulations, C.R.C., c. 353; Arctic Waters Pollution Prevention Regulations, C.R.C., c. 354. Other statutes relevant for safety and vessel-source pollution in the Arctic include: Canada Shipping Act, 2001, S.C. 2001, c. 26; Canadian Environment Protection Act, R.S.C., 1985, c. F-14; Migratory Birds Conventions Act, 1994, S.C. 1994, c. 22; Navigable Waters Protection Act, R.S.C., 1985, c. N-22; Marine Liability Act, S.C. 2001, c. 6; Oceans Act, S.C. 1996, c. 31.

118 An Act to Amend the Arctic Waters Pollution Prevention Act, Bill C-3, 1st Session, 40<sup>th</sup> Parliament, 57 Elizabeth II, 2008, introduced in December 2008 and which received its First Reading on 28 January 2009, available online at: <http://www2.parl.gc.ca/HousePublications/Publication.aspx?Docid=3625929&file=4>.

119 Arctic Shipping Governance, *supra* 53. The objectives of NORDREG are to: "... enhance the safe and expeditious movement of maritime transportation in Arctic waters; safeguard the Arctic environment; and contribute to the administration of Canadian Arctic waters and territories." It also issues acknowledgements to ships entering Arctic waters, distributes ice information and ice routings for individual ships and coordinates ice-breaker assistance, Office of Naval Research, Naval Ice Center, Oceanographer of the Navy and the Arctic Research Commission, 'Naval Operations in an Ice-Free Arctic,' Symposium, 17-18 April 2001, Final Report (US Office for Naval Research, Arlington, VA, 2001). In Canada 'Open water' is defined as: "A large area of freely navigable water in which ice is present in concentrations of less than 1/10. No ice of land origin is present." Transport Canada, Arctic Ice Regime System (AIRSS) Standards (Transport Canada, Ottawa, 1998), at 16. A concern is vessels smaller than 300 tons, especially yachts, which are increasingly being reported in Canadian Arctic waters, L. Brigham, B. Ellis, Arctic Marine Transport Workshop, 28-30 September, 2004, Appendix F, online available at [http://www.institutnorth.org/assets/images/uploads/articles/AMTW\\_book.pdf](http://www.institutnorth.org/assets/images/uploads/articles/AMTW_book.pdf).

tions set a higher standard for ship discharges than MARPOL,<sup>121</sup> so Canada issued a declaration on acceding to MARPOL to ensure that the higher national standard for Arctic waters permissible under UNCLOS Article 234 would continue to apply.<sup>122</sup>

In the wake of Arctic policy communications from the EU and the United States, Russia is expected to issue an Arctic policy statement soon. It has already legislated safety and pollution-prevention requirements for shipping using the Northern Sea Route.<sup>123</sup> This legislation draws on statutes and regulations adopted since 1990 and sets out standards for polar classes, ship inspection, emergency and repair supplies, ice-navigation qualifications of the master, pilotage requirements (compulsory in some straits), ice-breaking, civil liability for pollution damage, a compulsory notification system including

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120 Prime Minister Harper unveiled the plan in Tuktoyaktuk. A. Dowd, Canada to toughen requirements for ships in Arctic, Reuters, Tuktoyaktuk, 27 August (2008), available online at [http://www.immigrationwatchcanada.org/index.php?module=pagemaster&PAGE-user\\_op=view-page&PAGEid=3613&MMN-position=92:90](http://www.immigrationwatchcanada.org/index.php?module=pagemaster&PAGE-user_op=view-page&PAGEid=3613&MMN-position=92:90).

121 For the full text of MARPOL, see online at [http://www.imo.org/en/About/Conventions/ListOfConventions/Pages/International-Convention-for-the-Prevention-of-Pollution-from-Ships-\(MARPOL\).aspx](http://www.imo.org/en/About/Conventions/ListOfConventions/Pages/International-Convention-for-the-Prevention-of-Pollution-from-Ships-(MARPOL).aspx).

122 The declaration was as follows:

(a) The Government of Canada considers that it has the right in accordance with international law to adopt and enforce special non-discrimination laws and regulations for the prevention, reduction and control of marine pollution from vessels in ice-covered waters where particularly severe climatic conditions and the presence of ice covering such waters for most of the year create obstructions or exceptional hazards to navigation and pollution of the marine environment could cause major harm to or irreversible disturbance of the ecological balance.

(b) Consequently, Canada considers that its accession to the Protocol of 1978, as amended, relating to the International Convention for the Prevention of Pollution from Ships, 1973 (MARPOL 73/78) is without prejudice to such Canadian laws and regulations as are now or may in the future be established in respect of arctic waters within or adjacent to Canada. IMO, Status of Multilateral Conventions and Instruments in respect of which the International Maritime Organization or its Secretary-General Performs Depositary Functions (IMO, London, 2005), 96.

123 In particular the following: Instruction of the Government of the Russian Federation, on the authorization for cargo ships and tankers flying a foreign flag during 2007-2008 to call at Arctic ports and points, located on the Territory of the Russian Federation, 29 December 2006, No. 1855-p, available online at [http://www.morflot.ru/html/sevmorput/Document/RaspPravit\\_1855\\_r.doc](http://www.morflot.ru/html/sevmorput/Document/RaspPravit_1855_r.doc); Regulations for ice-breaker and pilot guiding of vessels through the Northern Sea Route, Guide to Navigation (1996), 84-89, available online at <http://www.morflot.ru/html/sevmorput/Document/RULES%200F%20NAVIGATION.doc>; Regulations for navigation on the seaways of the Northern Sea Route, 14 September 1990, Notice to Mariners No. 29 of 18 June 1991, in N. Koroleva, V. Markov and A. Ushakov, Legal Regime of Navigation in the Russian Arctic, Association of International Maritime Law, Soyuzmornii-proekt, Moscow, (1995), at 133-139. See also A.G. Gorshkovsky, Rules to be followed on the Northern Sea Route, Arctic Operational Platform Project Workshop proceedings, Deliverable No. D.6.1, 67 (Mar. 25, 2003), available online at: <http://www.arcop.fi/reports/workshop-report.pdf>; Gorshovsky also mentions Requirements Relating to the Design, Equipment, and Supply of Ships, *ibid.*

advance permission to use the route, and fees for services. Ship transits are monitored by the authorities. Like Canada, Russia is a party to MARPOL (except Annex VI) and its standards for vessel-source pollution are also higher than the basic MARPOL norm. The higher charges imposed on foreign ships as 'fees for services' are a topic of controversy. Russia has the world's largest fleet of icebreakers; several are nuclear-powered and able to provide year-round services on the route.

A State's exercise of its rights under Article 234 UNCLOS powers has certain constraints. Severe climatic conditions and ice cover must exist for most of the year, creating obstructions or hazards to navigation.<sup>124</sup> Although there is already significantly less ice in the summer, for the rest of the year the ice cover is and will remain significant. Irreversible damage could be caused to the environment by international shipping. This requirement can be interpreted qualitatively. It is not necessarily a high volume of shipping that will adversely affect the marine environment because even one serious casualty could result in substantial and irreversible pollution of sensitive Arctic ecosystems.<sup>125</sup> The regulatory authority must be exercised within the limits of the EEZ. The phrase 'within the EEZ', as defined in UNCLOS Part V, was intentionally negotiated. Pharand, a leading expert on the Arctic, considers that the terminology 'within the EEZ' should be interpreted to comprise the territorial sea.<sup>126</sup> UNCLOS is unambiguous in its intention to restrict its application to the EEZ. The laws and regulations enacted pursuant to this provision must be non-

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124 A possible interpretation of ice cover is in the Arctic Guidelines which require at least 9/10ths ice cover for their application. Arctic Guidelines, *supra*.

125 In 2006, there were still reports that resources affected by the Exxon Valdez oil spill in Prince William Sound, Alaska, in 1989, had not yet recovered. *Exxon Valdez* Oil Spill Trustee Council, Status of Injured Resources, available online at: <http://www.evostc.state.ak.us/Recovery/status.cfm>.

126 D. Pharand, *The Arctic Waters and the Northwest Passage: A Final Revisit*, 38 ODIL (2007), at 47. Professor Pharand refers to the literature on both sides of the argument. Despite the more flexible interpretation that Professor Pharand advances and the literature he invokes in support, the fact is that the text of UNCLOS Arts. 55 and 234 is sufficiently clear in intent. Art. 55 defines the EEZ as: "...an area beyond and adjacent to the territorial sea...". Art. 57 provides a methodology to measure the outer limit. Canada's declaration on accession to MARPOL was followed by reactions from the US and several European States. In particular, Belgium, Denmark, France, Germany, Greece, Italy, the Netherlands, Portugal, Spain and the United Kingdom stated that while taking note of Canada's declaration relating to Article 234, "...it should be read in conformity with Articles 57, 234 and 236 of the United Nations Convention on the Law of the Sea. In particular, the... Government recalls that Article 234 of that Convention applies within the limits of the exclusive economic zone or of a similar zone delimited in conformity with Article 57 of the Convention and that the laws and regulations contemplated in Article 234 shall have due regard to navigation and the protection and preservation of the marine environment based on the best available scientific evidence."

discriminatory,<sup>127</sup> and with due regard to the freedom of navigation. The purpose of these regulations is to prevent, reduce and control pollution, which raises the question whether such regulations must necessarily be limited to pollution-related purposes, or whether they could extend to safety purposes. For example, rules and standards concerning crew and passenger safety (such as lifeboat and survival suit requirements) are not related to pollution prevention. Arguably Article 234 powers cannot be used for such purposes. Instead, mandatory rules adopted under SOLAS and the voluntary Arctic Guidelines would apply. In practice, situations will occur in a polar context where it will be difficult to distinguish between pollution and safety regulation. Extensive/comprehensive safety regulation is essential to prevent incidents that could have a detrimental impact on the marine environment. Domestic regulations may contain specific requirements such as appropriate hull classes for different ice conditions, ensuring no fuel or oil cargo tank is located against the hull, and installing an ice navigator. These regulations relate to both pollution prevention and safety.

The requirement that Article 234 regulations be based on the best scientific evidence available was negotiated to ensure that coastal State requirements imposing higher standards than those adopted through the IMO are scientifically justified. This is a reasonable imposition on Arctic coastal States, considering that Article 234 does not require these States to request and receive IMO approval for their regulations. Elsewhere in UNCLOS, there is a requirement to proceed through the IMO.<sup>128</sup> In practice, and as shipping in the Arctic increases, purely unilateral approaches to standard-setting for shipping in the region are not advisable or even sufficient to protect the marine environment. High seas areas remain where shipping is guided by the IMO, not coastal State standards, as is conceivable for the trans-polar route. Furthermore, international ships navigating through the territorial seas of Arctic coastal States cannot be subjected to Article 234 standards that are inconsistent with IMO standards, because the regime of innocent passage will still apply. This is the same for right of transit passage through straits used for international navigation. Cooperation between flag States is essential to ensure proper control of ships because most seafarers will continue to be trained in maritime academies not necessarily located in Arctic States. Accordingly, a better approach to the use of Article 234 is to use the powers conferred as part of a broad cooperative approach to the setting of polar shipping rules and standards. Certain safety issues, for which the Arctic States would want to adopt the highest standards possible, are not necessarily covered by the domestic regulation-licence of Article 234. These higher safety standards can only be obtained through the

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127 A potential concern is Russian regulatory requirements for ice-breaker service, but with fees which discriminate between Russian and international shipping, Arctic Shipping Governance, op. cit, *supra*, at 67.

128 UNCLOS art. 211(6).

IMO. Arctic coastal States (in consultation with the other Arctic and interested States, possibly using the Arctic Council as a vehicle) should take the lead in the IMO to establish appropriate safety and environmental rules and standards, and then use their Article 234 powers to effectively enforce them. It is reasonable to interpret Article 234 as providing a leadership mandate for these States.

## 2.4 APPLYING INTERNATIONAL RULES AND STANDARDS TO ARCTIC SHIPPING

### 2.4.1 Maritime safety

The IMO has developed an extensive system of mandatory and voluntary rules and standards for ship construction, equipment, operations (including handling and carriage of cargo and passengers) and crewing, which apply to shipping in the Arctic. An important question is the extent to which, if at all, these rules and standards apply Arctic navigation on a practical level. The global maritime safety regime developed incrementally and primarily with reference to fundamentally different navigational environments. Two examples illustrate this point. Firstly, where a ship is surrounded by ice and requires evacuation, its crew may have to abandon the ship on ice rather than in lifeboats. Crew members may not have the appropriate safety equipment for this purpose and may not have received training to survive on ice for a sufficiently long period before being rescued. Secondly, the collision avoidance rules for steering and sailing are premised on the ability of a ship to move freely in open water.<sup>129</sup> A ship breaking ice, or following the path of an icebreaker or navigating in an area with icebergs and growlers, does not navigate in open water. It may seek open water for easier and safer navigation but course changes to avoid close-quarters situations may be significantly constrained.

The Arctic Guidelines recognise that SOLAS and related safety instruments do not fully address the safety needs of Arctic shipping.<sup>130</sup> These Guidelines have a narrower scope than the full gamut of international safety rules and standards: they only provide for a system of polar classes with related construction requirements and recommendations concerning ship and crewing operations on board. They are currently being considered for amendment. Usefully, the International Association of Classification Societies' (IACS) Unified Requirements in large measure reflect the Guidelines; a major weakness of

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129 Convention on the International Regulations for Preventing Collisions at Sea (adopted 20 October 1972, entered into force 15 July 1977, 1050 UNTS 16), as amended, Institute of Maritime Law, *The Ratification of Maritime Conventions* (Lloyd's Press, London, 1991-2003), Vol. I.1. 10.

130 O. Jensen, Arctic shipping guidelines: towards a legal regime for navigation safety and environmental protection?, *Polar Record* 44 (229): 107-114 (2008).

these Guidelines is that their construction and operational stipulations are not binding.<sup>131</sup>

Other safety concerns exist. For example, mandatory training standards for Arctic seafaring (including survival skills) are urgently needed. The IMO, the International Labour Organization (ILO) and the World Health Organization (WHO) do not have polar-specific binding instruments for training crews. The Arctic Guidelines briefly address this need with some highly concise provisions concerning training ice navigators (e.g., no prior ice-navigation experience avoids ice build-up).<sup>132</sup> This issue should be regulated under the 1978 International Convention on Standards of Training, Certification and Watch keeping for Seafarers (STCW).<sup>133</sup> An IMO sub-committee is working on amendments to the STCW and consideration of the training needs of Arctic seafarers is called for.

In addition to seafaring matters, the Arctic Guidelines fall short of providing more specific requirements for certain classes of vessels operating in the Arctic. Cruise ships and liquefied natural gas carriers are cases in point. The potential problem posed by cruise ships in polar waters was well illustrated by the casualty of the *MV Explorer* in the Southern Ocean.<sup>134</sup> That ship, an ice strengthened vessel, had inadequate life-saving equipment on board, lifeboats were open-top (the Arctic Guidelines recommend closed lifeboats, but at the time of writing these do not apply to Antarctic waters) and some crew members evacuated the ship on life rafts. Fortunately, there were ships in the vicinity able to respond to the distress call within a few hours.<sup>135</sup>

Moreover, Arctic waters are not included in any of the zones, areas and seasonal periods in Annex II of the 1966 International Convention on Load Lines, in which draught limitations are imposed and on a seasonal basis in the interests of safety.<sup>136</sup> Because of their particular characteristics, many other marine regions have zones and seasonal periods with related requirements. It remains to be seen whether it is safe to transport any cargo in the

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131 For instance, Ø. Jensen, *The IMO Guidelines for Ships Operating in Arctic Ice-Covered Waters: From Voluntary to Mandatory Tool for Navigation Safety and Environmental protection?*, 2/2007 FNI Report, Fridtjof Nansen Institut, Oslo (2007). With little legal incentive to implement the Arctic Guidelines, Jensen states that no State has yet legislated them.

132 Ø. Jensen, *Arctic shipping guidelines: towards a legal regime for navigation safety and environmental protection?*, 44 (229) *Polar Record* 107 (2008).

133 *International Convention on Standards of Training, Certification and Watchkeeping for Seafarers* (adopted 7 July 1978, entered into force 28 April 1984), 1361 UNTS 2.

134 N. Marchenko, *Floating Ice Induced Ship Casualties*, 22nd IAHR International Symposium on Ice, Singapore, August 11-15, 2014, online available at [http://www.unis.no/35\\_STAFF/staff\\_webpages/technology/nataly\\_marchenko/NM\\_2014\\_IAHR.pdf](http://www.unis.no/35_STAFF/staff_webpages/technology/nataly_marchenko/NM_2014_IAHR.pdf).

135 A. Chircop, *The Growth of international shipping in the Arctic: Is regulatory review timely?*, 24 *The International Journal Of Maritime and Coastal Law* 355 (2009), at 374.

136 *International Convention on Load Lines* (adopted 5 April 1966, entered into force 21 July 1968), ATS 1968 no. 23.

Arctic or whether there should be particular requirements for the carriage of certain cargoes.<sup>137</sup>

In sum, this overview of maritime safety issues suggests that a systematic review of international maritime safety instruments with reference to increased international shipping in the Arctic as a result of new routes is necessary. This review should identify gaps and global safety rules and standards that might need to be enhanced to respond to the unique demands of navigation in this region. Many issues have already been anticipated in the national regulations of the Arctic States but it is appropriate to consider whether international shipping is sufficiently served by domestic rules and standards, regardless of their scope and quality, or whether international rules and standards are required, especially considering that shipping in the Arctic will traverse different national maritime zones and high sea areas.

#### 2.4.2 Marine environmental protection

The particular sensitivity of the Arctic marine environment makes the region a prime candidate for an elevated level of protection under MARPOL. At present, the basic general MARPOL rules and standards on ship discharges apply in most parts of the Arctic, except in the EEZs of coastal States that are not parties to a particular annex (e.g., Canada and the US are not parties to MARPOL Annex IV), or have legislated higher discharge standards as a result of UNCLOS Article 234. No MARPOL "special areas" with discharge restrictions are designated in the region; consequently, MARPOL permits certain discharges of various wastes, in very small quantities and at a certain distance from the nearest land. MARPOL Annex 1 restricts oily water discharges to 1/15k (for old tankers, based on cargo-carrying capacity) and 1/30k (for new tankers, based on the total cargo carried), with a maximum discharge rate of 30 litres per nm at a distance of 50 nm from the nearest land. Garbage is important in this environment, but although MARPOL prohibits the discharge of plastics, it permits discharge of packing materials (25 nm from the nearest land) and other materials, including paper, glass, rags and metal (12 nm from the nearest land). MARPOL permits sewage discharge, if comminuted or disinfected, at four knots at a distance of 12 nm from the nearest land (Annex IV) but stricter controls are needed. The use of heavy-grade oils (HGOs) as fuel might also need to be banned. The critical question is whether the basic MARPOL rules are sufficient in this environment.

In comparison to MARPOL, Canada and Russia have a zero-discharge rule for oil. Canada does not permit the discharge of garbage, but permits sewage

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137 Arctic Shipping Governance, *op. cit.*, *supra*.

discharge without regard to distance from land. This renders its standard for sewage discharge lower than MARPOL.<sup>138</sup>

The Arctic is particularly susceptible to harm from vessel discharges so waste use on board must be maximized.<sup>139</sup> A strong case for special area designation under MARPOL Annexes I (oil), II (noxious substances), V (garbage) and an emission control area under Annex VI can be made, as with other sensitive cold regions that have some seasonal ice cover, such as Antarctic Waters and the Baltic. The challenge for special areas in the Arctic is that there are relatively few ports in the region for the reception facilities that must accompany special area designation. Such facilities at present are not only variable, but also unlikely to meet existing MARPOL requirements. Even if there were facilities, the ultimate disposal of received wastes is open to question. Moreover, port services and practices in this regard must be harmonised.<sup>140</sup> In considering the possibility of designating special areas or emission control areas, Arctic coastal States would need to review their adhesion to relevant MARPOL annexes. As of 2015, Canada and the US are not parties to Annex IV, Canada is not a party to Annex V, and Canada and the Russian Federation are not parties to Annex VI.

One possibility is to designate a large PSSA (Particular Sensitive Sea Area) over much of the Arctic Ocean. An alternative would be to establish a series of PSSAs in critical areas, and use MARPOL special area designations and higher discharge standards as appropriate APMs. Other measures are also conceivable, such as mandatory routeing and reporting schemes, so that Arctic coastal States can focus logistical support on designated navigation routes. PSSA designation is premised on demonstrating that the threat from international shipping to the marine environment is such that additional protection is needed, and that the proposed measures are appropriate to counter the threat and within the IMO's mandate to provide. A low volume of shipping with the potential for greater impact could justify PSSA designation, as long as the threat is demonstrated. As in the case of the Baltic Sea and Western European Waters,<sup>141</sup> Arctic Ocean coastal States could collectively submit a joint proposal for the region to the IMO or, alternatively, individual or groups of Arctic States can submit separate proposals for different areas of the Arctic Ocean. The politics of PSSA designation should not be underestimated. As the Baltic PSSA demon-

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139 W. Ostreng, *The Natural and Societal Challenges of the Northern Sea Route: A Reference Work*, Kluwer, Dordrecht (1999).

140 Det Norske Veritas, *Port Reception Facilities in the PAME Region*, Technical Report No. 2006-1517 Rev. No. 01 (Norwegian Maritime Directorate, Hovik, 2006).

141 More analysis on that can be found online at <http://channelislands.noaa.gov/sac/pdfs/imo-area-based-protection.pdf>.

strated,<sup>142</sup> lack of consensus behind a regional PSSA could result in non-participation by dissenting neighbours and exclusion of their waters (in that case, Russia).

Environmental concerns also relate to the current legal framework for salvage and pollution response in the Arctic. The International Convention on Salvage (Salvage Convention) provides a useful regime for this purpose, but the difficulty in the Arctic is to identify a safe place where the salvaged vessel may be taken by the salvor.<sup>143</sup> At present States have little experience in Arctic salvage, with the possible exception of Russia, which employs a large fleet of ice-breakers, including modern nuclear vessels, conducting salvage provision among many other tasks. Coastal State regulation in the Arctic could pose a problem for salvors as additional impositions might further constrain an already difficult operation. On the one hand, "[t]he salvor should ensure that the salvage plan and actions represent the best environmental option for the Company and the coastal State(s) concerned."<sup>144</sup> On the other hand, the Arctic Ocean coastal States may use regulatory authority under Article 234 UNCLOS to impose other requirements. The salvor is expected to take the salvaged vessel to a safe place, which can be challenging in areas with substantial ice. In addition, places of refuge for ships in need of assistance are normally designated in locations where certain infrastructure and a likelihood of timely assistance to the ship and response to the threat of a casualty exist, following the guidance offered by the 2003 IMO Guidelines on Places of Refuge for Ships in Need of Assistance.<sup>145</sup> The remoteness of navigation routes in the Arctic and the harsh environment may necessitate the development of "good practices" that are adjusted to the specific circumstances in this region. Regional cooperation can play an important role, possibly within the framework of the 1990 Convention on Oil Pollution Preparedness and Response

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142 O. Lindén, A. Chircop, M. Pourzanjani, J.U. Schröder, S. Raaymakers, PSSA in the Baltic Sea: present situation and future possibilities Monograph/Research Brief, online available at [http://www.balticmaster.org/media/files/general\\_files\\_706.pdf](http://www.balticmaster.org/media/files/general_files_706.pdf).

143 International Convention on Salvage (adopted on 28 April 1989, entered into force 14 July 1996), UKTS 1996 No. 93.

144 Guidelines on the Control of Ships in an Emergency, IMO Doc. MSC.I/Circ.1251, 19 October 2007, available online at <http://www.imo.org/includes/blastDataOnly.asp/dataid%3D20243/1251.pdf>.

145 Guidelines on Places of Refuge for Ships in Need of Assistance, IMO Doc. A.949(23), 5 December 2003. available online at: <http://www.imo.org/includes/blastDataOnly.asp/dataid%3D9042/949.pdf>.

(OPRC),<sup>146</sup> which requires stockpiling of equipment, holding exercises and detailed planning.<sup>147</sup>

The marine environmental concerns considered in this section suggest that Arctic Ocean States would do well to cooperatively approach the IMO to designate MARPOL special areas and PSSAs in the Arctic. Incipient regional and substantial bilateral cooperation on contingency planning and response already exists. However, the Arctic States should also consider cooperating on salvage and places of refuge in the region.

## 2.5 PRELIMINARY CONCLUSIONS

Arctic States and the maritime community interested in shipping in the region face several challenges. The first is a regulatory challenge: there is significant regulatory inconsistency and insufficiency on safety and pollution. Ideally, international shipping in the Arctic should occur within a harmonised framework of predictable and uniform international and national rules and standards appropriate for safe and environmentally responsible navigation in the Arctic. To achieve this, a consistent approach is needed to what should be mandatory (in comparison to the currently voluntary Arctic Guidelines) international and national rules for polar class ship construction, vessel operations and reporting requirements. Acting through the IMO, Arctic States are in a position to make a substantial leap forward in protecting the marine environment through the establishment of MARPOL special areas and PSSAs in the region. However, Arctic coastal States that stand to gain most from these environmental protection tools must send a clear message of common commitment to the rest of the maritime world by becoming parties to all relevant maritime conventions and their annexes. Adopting a new regional port State control regime to promote compliance and enforce common shipping standards would greatly assist efforts to meet this regulatory challenge.

The Arctic coastal States will be able to influence the economics of Arctic shipping if they take on the infrastructure challenge. Appropriate infrastructure consists of ports and related facilities and services, navigation aids, timely meteorological and ice forecasts, standing services (e.g., salvage, places of refuge, pollution response, search and rescue) for ships and crews needing assistance and to prevent and avoid pollution damage. These are costly and

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146 Adopted 30 November 1990, entered into force 13 May 1995) 30 ILM 733; Protocol on Preparedness, Response and Co-operation to Pollution Incidents by Hazardous and Noxious Substances (adopted 15 March 2000, entered into force 14 June 2007), IMO Doc. HNSOPRC/CONF/I 1/Rev 1, 15 March 2000, available online at: <http://www.imo.org>.

147 Arctic States cooperate in information exchange through the Arctic Council's Emergency Prevention, Preparedness and Response (EPPR) Working Group, available online at <http://eppr.arctic-council.org/>. Bilateral cooperation between Canada and the US and between Canada and Denmark also exists. Arctic Shipping Governance, *supra*.

it is important that cost-recovery through fees levied on shipping must be for services actually provided and on a non-discriminatory basis. A sensible approach for Arctic coastal States would be to consider cooperating on a regional basis in the provision of services to shipping. Rather than tackling each need on an issue-by-issue basis, it makes economic sense to take an integrated approach and share proportionate responsibilities within or in the vicinity of their respective jurisdictions. International shipping can then expect consistent rules and standards and provision of services throughout the route(s), and freight and insurance rates will benefit.

Third is the seafarer challenge. A significant shortage of seafarers already exists, and seafaring knowledge and skills for safe work in this environment must be reviewed. A better understanding of qualifications, training requirements and health issues is required. Appropriate global standards for training and certification are needed and maritime academies (most of which are located in non-Arctic States) must be capable and equipped to train crews for the demands of seafaring in this region. No one level of governance is equipped to address all these challenges at its level alone. The global, regional and national levels of governance in the Arctic must plan for international shipping in the region in a concerted and systematic manner. This could be in the form of a combination of IMO rules and standards, coordinated national rules and implementation (ideally through the IMO) pursuant to UNCLOS Article 234. The use of Article 234 regulatory authority should be coordinated to achieve consistent and higher standards for international shipping through Arctic waters. Shipping is an international activity involving many flag States, ship owners, carriers, shippers and cargo owners in different countries, global financiers and suppliers, and crews of diverse nationalities. It is in the interest of Arctic States, as well as the international community, that standards for Arctic shipping do not remain purely national or regional, or perhaps even simply industry and class practices, but are indeed an integral part of the global regulatory regime. In this regard, regulators should recognise that the development of technologies to support high safety and environmental standards are frequently industry-driven, if not also -funded. Industry can play an important role in defining and implementing those standards. Experience shows that certain existing shipping standards have evolved from industry practice (e.g., the International Maritime Dangerous Goods Code).<sup>148</sup>

The scope of these tasks necessitates large-scale and long-term anticipatory and cooperative planning. Given the significance of likely new maritime trade routes in the future and the lasting impact on international shipping, Arctic States and the IMO, with the participation of industry and NGOs, should undertake a comprehensive assessment of the international maritime rules, regula-

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148 International Maritime Organization, *International Maritime Dangerous Goods Code* (London, IMO, 2008). Background information on the IMDG Code is available online at <http://www.imo.org/TCD/mainframe.asp?topic-id=158>.

tions and standards to determine their short- and long-term practical application in the Arctic environment. A legislative programme may be necessary. The express intention of the Arctic coastal States to cooperate, including through the IMO, is vital for the future of international shipping through the Arctic. Although only a consultative political body, the Arctic Council has an important role to play in building the knowledge base in the region, advancing regional positions in the IMO and facilitating the conclusion of bilateral and multilateral arrangements. In particular, the Arctic Council should have a more visible presence in IMO meetings and processes.

## 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.<sup>1</sup> 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 composition of fisheries.<sup>2</sup> 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.<sup>3</sup>

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.<sup>4</sup> 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, I 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.<sup>5</sup>

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'),<sup>6</sup> 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)).<sup>7</sup>

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<sup>8</sup> which would permit their enforcement<sup>9</sup> 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.<sup>10</sup> 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.<sup>11</sup> 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'<sup>12</sup> 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."<sup>13</sup>

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.<sup>14</sup> 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'.<sup>15</sup>

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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.<sup>16</sup> 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).<sup>17</sup>

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<sup>18</sup> in both oceans, such as in the 'Loophole' in the Barents Sea<sup>19</sup> and the 'Donut Hole' in the central Bering Sea,<sup>20</sup> 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

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16 Molenaar E.J. (2009) Climate Change and Arctic Fisheries. In: Koivurova T., Keskkitalo E., Banks 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.<sup>21</sup>

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*)”.<sup>22</sup> 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.<sup>23</sup> The ACIA chapter also notes the complexity of the functioning of Arctic marine ecosystems as well as the limitations and shortcomings of science.<sup>24</sup>

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

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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 CO<sub>2</sub> (which is not just relevant to the Arctic marine area).

These changes will affect Arctic marine ecosystems unavoidably, however accurate predictions cannot be made.<sup>25</sup> 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.”<sup>26</sup>

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<sup>27</sup>). 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 coverage 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.<sup>28</sup> 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.

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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.<sup>29</sup> 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.<sup>30</sup> 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<sup>31</sup> and Iceland and Norway are parties to the EEA Agreement.<sup>32</sup>

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.<sup>33</sup> 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

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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”.<sup>34</sup>

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.<sup>35</sup> 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.<sup>36</sup> 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.<sup>37</sup>

The Treaty of Spitsbergen<sup>38</sup> 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.<sup>39</sup>

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.<sup>40</sup> 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.<sup>41</sup>

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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](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.<sup>42</sup> 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.<sup>43</sup>

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; [...]

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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 [...]”<sup>44</sup>

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.”<sup>45</sup>

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 trans-boundary fish stocks in the Arctic Ocean.”<sup>46</sup>

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

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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”.<sup>47</sup> 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.”<sup>48</sup>

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.<sup>49</sup> 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”.<sup>50</sup>

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

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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.<sup>51</sup> 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.<sup>52</sup> 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”.<sup>53</sup> In addition, Article 3(1)(b) CAOFA allows for commercial fishing based on “interim conservation and management measures”<sup>54</sup>

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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)<sup>55</sup> 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<sup>56</sup> 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

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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,<sup>57</sup> 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,<sup>58</sup> as well as over violations of conditions for entry into port).

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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"<sup>59</sup>.

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.<sup>60</sup>

### 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,

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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).<sup>61</sup>

### 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;<sup>62</sup>
- the bilateral (Canada and the United States) International Pacific Halibut Commission (IPHC), established by the IPHC Convention;<sup>63</sup>
- the bilateral (Russia and the United States) Intergovernmental Consultative Committee (ICC), established by the Agreement on Mutual Fisheries Relations;<sup>64</sup>

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

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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](http://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;<sup>73</sup>
- the Yukon River Panel of the bilateral (Canada and the United States) Pacific Salmon Commission (PSC), established by the Pacific Salmon Treaty;<sup>74</sup> and
- the annual Conference of Parties (CoP) to the CBS Convention.<sup>75</sup>

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.<sup>76</sup> 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.<sup>77</sup>

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,<sup>78</sup> 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

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 United 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](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);<sup>79</sup> 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,<sup>80</sup> the FAO Code of Conduct for Responsible Fisheries,<sup>81</sup> and its Technical Guidelines, international plans of action (IPOAs) – for instance the IPOA-IUU<sup>82</sup> – and the Model Scheme on PSM<sup>83</sup> and UNGA Resolutions, among other things on drift-nets and destructive fishing practices.<sup>84</sup>

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 28<sup>th</sup> 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 26<sup>th</sup> 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,<sup>85</sup> UNCLOS lays down several basic obligations which restrict these entitlements. These are:<sup>86</sup>

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

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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".<sup>87</sup> Its scope of application encompasses not only areas beyond national jurisdiction but also areas within national jurisdiction.<sup>88</sup>

While the Fish Stock Agreement does not alter the basic jurisdictional framework of UNCLOS,<sup>89</sup> 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,<sup>90</sup> 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.<sup>91</sup> 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.<sup>92</sup> 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).<sup>93</sup> 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

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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.<sup>94</sup> Within the United States, these developments have led to the adoption of the Senate joint resolution (SJ Res.) No. 17 of 2007.<sup>95</sup>

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<sup>96</sup> was not formally closed and resumed 2010.<sup>97</sup> 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.<sup>98</sup> 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;<sup>99</sup>

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](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.<sup>100</sup> 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”.<sup>101</sup> 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,<sup>102</sup> 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.<sup>103</sup>

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

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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.<sup>104</sup>

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”.<sup>105</sup>

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.<sup>106</sup> 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.<sup>107</sup>

### 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.<sup>108</sup>

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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.<sup>109</sup> 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.<sup>110</sup>

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

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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), at 147-149.

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

Arctic FMP on 5 February 2009.<sup>111</sup> 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”.<sup>112</sup>

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”.<sup>113</sup> 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”.<sup>114</sup> 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.<sup>115</sup> The Arctic Council has so far not focused on the conservation and management of target species, lacks an express

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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.<sup>116</sup> 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.<sup>117</sup>

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

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<sup>116</sup> See above section 3.

<sup>117</sup> 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<sup>118</sup> 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.<sup>119</sup> 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

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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 been adopted.<sup>120</sup> As noted above, the European Commission's Arctic Communication has supported such an initiative.<sup>121</sup>

### 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<sup>122</sup> 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,<sup>123</sup> the two relevant boundaries of FAO Statistical Area No. 18 already existed in 1970 and have not changed since then.<sup>124</sup> The spatial scope of the OSPAR Convention and its two predecessors – the Oslo Convention<sup>125</sup> and the Paris Convention<sup>126</sup> – is also identical to that of the NEAFC

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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.<sup>127</sup>

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.<sup>128</sup> 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.<sup>129</sup> 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.<sup>130</sup>

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.<sup>131</sup> 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

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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.<sup>132</sup>

A word of caution is warranted here, however. While the Arctic LMES defined by PAME have taken 'trophic relationships' into account,<sup>133</sup> 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<sup>134</sup> – 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.<sup>135</sup> 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.<sup>136</sup> 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

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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.<sup>137</sup> 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.<sup>138</sup> NEAFC is then charged with determining and allocating the high seas TAC.<sup>139</sup> 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.<sup>140</sup>

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-

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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.<sup>141</sup> While there is currently no universally accepted definition for the term 'integrated, cross-sectoral ecosystem-based ocean management',<sup>142</sup> 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.<sup>143</sup> 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.<sup>144</sup>

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,<sup>145</sup> 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.<sup>146</sup> 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<sup>147</sup> 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

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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](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](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<sup>148</sup> and the proposal for an OSPAR marine protected area (MPA) situated beyond 200 nm from the coast<sup>149</sup> are aimed at testing this conduciveness.<sup>150</sup>

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<sup>151</sup> has so far received little support by non-EU member States. Linking a legally binding instrument for the marine Arctic to UNCLOS,<sup>152</sup> 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.

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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 7<sup>th</sup> 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.<sup>153</sup> 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”.<sup>154</sup> Proposals on Arctic governance<sup>155</sup> 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.<sup>156</sup> 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.<sup>157</sup>

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

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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 5<sup>th</sup> Conference of Parliamentarians of the Arctic Region (2002), available online at <http://www.arcticparl.org>).

coordination.<sup>158</sup> 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

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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.

PART II

Arctic governance, environmental protection  
and security



## 4.1 INTRODUCTION

Evolving from the AEPS<sup>1</sup> which addressed pollutants and environmental protection in the Arctic,<sup>2</sup> the Arctic Council was established as a regional cooperation forum pursuant to a Declaration adopted in Ottawa, September 1996.<sup>3</sup> The Declaration established the institutional structure that remains largely intact today. The Council consists of eight member States,<sup>4</sup> it is innovative because it includes indigenous organisations as permanent participants,<sup>5</sup> as well as observers.<sup>6</sup> The Council is charged with promoting cooperation on common Arctic issues including issues of sustainable development,<sup>7</sup> but security matters are excluded from the scope of the Council's mandate.<sup>8</sup> The four original working groups under the AEPS continued under the auspices of the Arctic Council<sup>9</sup> with two additional working groups subsequently

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1 More detailed discussion of the AEPS will take place in the next Chapter.

2 For discussions of the AEPS and its history, see D.V. Zwaag, R. Huebert, S. Ferrara, *The Arctic Environmental Protection Strategy, Arctic Council and Multilateral Environmental Initiatives: Tinkering While the Arctic Marine Environment Totters*, 30 *Denver Journal of International Law and Policy* 131 (2002), at 142-153; and T. Koivurova, *Limits and Possibilities of the Arctic Council in a Rapidly Changing Scene of Arctic Governance*, 46 *Polar Record* 146 (2010), at 146-148; and Chapter Five of this Thesis.

3 Joint Communique and Declaration on the Establishment of the Arctic Council [hereafter *Arctic Council Declaration*], September 19, 1996, reprinted in 35 *ILM* 1382 [1996].

4 Members of the Council are: Canada, Denmark/Greenland, Finland, Iceland, Norway, the Russian Federation, Sweden and the United States of America.

5 Six indigenous organisations presently have permanent participant status: Aleut International Association, Arctic Athabaskan Council, Gwich' in Council International, Inuit Circumpolar Council, Russian Association of Indigenous Peoples of the North (RAIPON) and the Saami Council, see Arctic Council, *Permanent Participants*, available online at <http://www.arctic-council.org/index.php/en/about-us/Permanent-participants>.

6 Observer status in the Arctic Council is open to non-Arctic States, inter-governmental and interparliamentary organizations, and non-governmental organizations, *Arctic Council Declaration*, *supra* note 3, para. 3. Current observer States include: France, Germany, Netherlands, Poland, Spain and the United Kingdom, see Arctic Council, *Non-Arctic States*, available online at <http://www.arctic-council.org/index.php/en/about-us/partners-links>.

7 *Arctic Council Declaration*, *supra* note 3, para. 1 (a).

8 *Ibid.*, ft 1.

9 They are: the Arctic Monitoring and Assessment Programme (AMAP), Conservation of Arctic Flora and Fauna (CAFF), Protection of the Arctic Marine Environment (PAME) and

added. These are the Sustainable Development Working Group (SDWG)<sup>10</sup> and the ACAP.<sup>11</sup> The Council depends on voluntary financial and human resource contributions from member States to carry out projects and hold meetings.<sup>12</sup>

With accelerated thinning and loss of sea ice linked to climate change<sup>13</sup> and projected commercial developments on numerous fronts including oil and gas, shipping, tourism and mining,<sup>14</sup> the adequacy of the Arctic Council has come under intensified scrutiny due to its lack of competence to tackle the abovementioned issues pursuant to its mandate.<sup>15</sup> Whether a 'soft law' regional forum largely dedicated to monitoring the Arctic environment and undertaking projects and assessments is up to the task of meeting the mounting challenges posed by climate change and globalisation has been questioned by various scholars and non-governmental organisations.<sup>16</sup> Calls have been made to further strengthen Arctic cooperation through one or more legally binding agreements. Various options have been proposed.<sup>17</sup> These include

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Emergency Prevention, Preparedness and Response (EPPR); Arctic Council Declaration, *supra*, para. 1 (b).

- 10 The SDWG, building upon an AEPS Task Force on Sustainable Development and Utilization, was established in 1998, Iqaluit Declaration on the Occasion of the First Ministerial Meeting of the Arctic Council, Iqaluit, Canada, 17-18 September, 1998, para. 9, available online at <http://www.arctic-council.org/index.php/en/about/documents/category/5-declarations#>.
- 11 ACAP was formally endorsed as a working group at the October 2006 Ministerial meeting, Salekhard Declaration on the Occasion of the Tenth Anniversary of the Arctic Council and the Fifth AC Ministerial Meeting, October 26, 2006, Salekhard, Russia 6, available online at <http://www.arctic-council.org/index.php/en/about/documents/category/5-declarations#>.
- 12 Koivurova (2010), *supra*, at 148.
- 13 Scientific predictions as to when the Arctic Ocean may be ice-free in summer have varied, as early as 2020 or as late as 2100, with one recent estimate being by 2030, U.S. National Snow and Ice Data Center, Frequently Asked Questions about Arctic Sea Ice, available online at [http://nsidc.org/arcticseaice/news/faq.html#really\\_declining](http://nsidc.org/arcticseaice/news/faq.html#really_declining); and Arctic May Be Ice-Free Within 30 Years: Data Showing Dramatic Sea Ice Melt Suggests Warming at North Pole Is Speeding Up, *The Guardian*, July 11, 2011, available online at <http://www.guardian.co.uk/environment/2011/jul/11/arcticice-free?INTCMP=SRCH>.
- 14 L. W. Brigham, Thinking about the Arctic's Future: Scenarios for 2040, *The Futurist* (September-October 2007), at 27.
- 15 *Supra* note 6.
- 16 For views emphasizing the need to fully implement existing international commitments rather than developing a binding legal regime for the Arctic, see A. H. Hoel, Do We Need a New Legal Regime for the Arctic Ocean?, 24(4) *The International Journal of Marine and Coastal Law* 443 (2009); O. S. Stokke, The Law of the Sea Convention and the Idea of a Binding Regime for the Arctic Marine Environment, Paper prepared for the 7th Conference of Parliamentarians of the Arctic Region, Kiruna, Sweden, August 2-4, 2006, available online at <http://www.fni.no/doc&pdf/oss-2006-arctic-parlamentarians.pdf>;
- 17 For a review of options, see L. Nowlan, Arctic Legal Regime for Environmental Protection, IUCN Environmental Policy and Law, Paper No. 44 (2001), at 58; Alexander N. Vylegzhanin, Constant and Changing Components of the Arctic Regime, *The Arctic and World Order*, 10<sup>th</sup> Chapter, 2020, available at: <https://transatlanticrelations.org/wp-content/uploads/2020/12/The-Arctic-and-World-Order-ch10.pdf>; Ekrem Korkut and Lara B. Fowler, An Overview of Arctic Legal Regime Regarding the Protection of the Marine Environment and Some

a framework treaty formalising the existing Arctic Council arrangements,<sup>18</sup> a regional seas agreement with annexes or protocols,<sup>19</sup> and even a multilateral agreement dedicated to protecting the Arctic environment.<sup>20</sup>

A long list of reasons has been put forward for not 'disturbing the balance' too far through excessive legalisation. Those reasons include: the time-consuming nature of diplomatic negotiations; the lack of ratification of existing agreements; the danger of adopting lowest common denominator standards; the need to implement existing international commitments as a first priority; and the concern over interfering with the existing status of indigenous organisations as permanent participants.<sup>21</sup>

This Chapter takes stock of how the Arctic Council is faring as a governance institution for about twenty years after its establishment. Section 2 highlights how the Arctic Council has edged forward on numerous fronts through its six working groups and biennial ministerial meetings. Section 3 evaluates the key challenges confronting the Arctic Council: fully implementing existing commitments and recommendations; completing the Arctic Council's restructuring; addressing future ocean governance of areas beyond national jurisdiction in the Arctic and, strengthening the 'Arctic voice' in international fora.

## 4.2 ARCTIC COUNCIL WORKING GROUPS

### 4.2.1 Arctic Monitoring and Assessment Program (AMAP)

The AMAP Working Group has been progressive in monitoring and assessing the status, trends and risks of pollutants in the Arctic. It has developed a typical assessment approach of first issuing non-technical summary reports followed by more detailed, fully referenced scientific reports.<sup>22</sup> Multiple summary reports have been issued since the 2006 non-technical report on

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Suggestions, *The Journal of Territorial and Maritime Studies* Vol. 6, No. 1 (WINTER/SPRING 2019), pp. 64-84

18 T. Koivurova, *Alternatives for an Arctic Treaty – Evaluation and a new proposal*, 17 *Review of European Community and Int'l Environmental Law* 1 (2008), at 14.

19 H. H. Hertell, *Arctic Melt: The Tipping Point for an Arctic Treaty*, 21 *Georgetown International Environmental Law Review* 565 (2009).

20 B. A. Malloy, *On Thin Ice: How a Binding Treaty Regime Can Save the Arctic*, 16 *Hastings West-Northwest Journal of Environmental Law & Policy* 471 (2010).

21 D. L.V. Zwaag, *Climate Change and the Future of Arctic Governance: A Slushy Seascape and Hard Questions*, in, *Climate Governance in the Arctic* 403 (T. Koivurova, E. Carina H. Keskitalo, N. Bankes eds., 2009), at 416; O. R. Young, *If an Arctic Ocean Treaty Is Not the Solution, What Is the Alternative?*, 47 *Polar Record* 327 (2011), at 332.

22 Reports available online at <http://www.amap.no/Assessment/GeneralPublic.htm>.

Arctic Acidification and Haze.<sup>23</sup> They provide an illustration of AMAP assessment progressions and are briefly summarised here.

First, the latest mercury assessment report of 2021<sup>24</sup> provides updated information on the levels and sources of mercury in the Arctic and offers various policy recommendations. About 130 tons of mercury are estimated to enter the Arctic Ocean from the air each year with an additional 120 tons (approximately), thought to inflow, from the Atlantic and Pacific Oceans, rivers and coastal erosion.<sup>25</sup> Asian States, with China and India being the highest emitters, are estimated to be responsible for 65 % of global mercury emissions.<sup>26</sup> The report warns of the effects of climate change on the mercury cycle with increased releases arising from permafrost thaws, ice melts and rising river discharges,<sup>27</sup> noting that some Arctic biota, especially marine top predators like polar bears, exhibit high levels of mercury in their bodies which exceed thresholds for biological effects.<sup>28</sup> In light of the scientific findings, the 2021 assessment recommends, *inter alia*, that the Arctic Council continue to support intergovernmental negotiations to develop a legally-binding global instrument on mercury, and that health authorities develop culturally appropriate communication strategies concerning contaminants and human health.<sup>29</sup>

Second, AMAP's Snow, Water, Ice and Permafrost in the Arctic (SWIPA) Assessment,<sup>30</sup> also released in 2017, provides an update on climate change impacts on the Arctic 'cryosphere', that is, seasonally or perennially frozen areas.<sup>31</sup> Key findings include: the revelation that surface air temperatures in the Arctic since 2005 have been higher than any five-year period since measurements began around 1880;<sup>32</sup> multi-year sea ice, mountain glaciers, ice caps and the Greenland Ice Sheet have all been declining faster since 2011 than they did in the previous decade;<sup>33</sup> the Arctic Ocean is projected to become nearly ice-free in summer, likely within the next 20 to 30 years;<sup>34</sup> and Arctic infrastructure faces increased risks of damage due to changes in

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23 AMAP, Arctic Pollution Assessment, Acidifying Pollutants, Arctic Haze, and Acidification in the Arctic (2006), available online at file:///C:/Users/tpapa/Downloads/aar2006-Acidification.pdf.pdf.

24 AMAP, Arctic Pollution Assessment: Mercury in the Arctic (2021), available online at: <https://www.amap.no/documents/doc/2021-amap-mercury-assessment.-summary-for-policy-makers/3510>.

25 AMAP (2021), *supra*, iv.

26 AMAP (2011), *supra*, at 6.

27 AMAP (2011), *supra*, at v.

28 AMAP (2011), *supra*, at 26.

29 AMAP (2011), *supra*, at iii.

30 AMAP, Snow, Water, Ice and Permafrost in the Arctic [SWIPA] (2017), available online at <http://www.amap.no/swipa/>.

31 AMAP-SWIPA (2011), *supra*, at 3.

32 AMAP-SWIPA (2011), *supra*, at 4.

33 AMAP-SWIPA (2011), *supra*, at 6.

34 AMAP-SWIPA (2011), *supra*, at 7.

the cryosphere, particularly the loss of permafrost and land-fast ice.<sup>35</sup> Among the recommendations, the report urges Arctic governments to develop and implement Arctic adaptation strategies and member States of the Arctic Council to increase their leadership in international negotiations to reduce global greenhouse gas emissions as a matter of urgency.<sup>36</sup>

Third, building on previous AMAP assessments in 1997, 2002,<sup>37</sup> 2009,<sup>38</sup> a 2021 *State of the Arctic Environment* Report gave an updated picture on three areas: persistent organic pollutants, human health and radioactivity.<sup>39</sup> The assessment highlighted the need to consider further international and national regulatory actions for groups of chemicals accumulating in Arctic food webs including brominated flame retardants and fluorinated compounds used as stain repellents and as non-stick surfaces in cookware.<sup>40</sup> The report noted that 65 high-production volumes (> 100,000 tons per year) industrial organic chemicals and pesticides may have the ability to bio magnify into Arctic indigenous peoples' traditional foods.<sup>41</sup> About 4,300 organic chemicals, most with low or unknown production, are thought to have Arctic accumulation properties.<sup>42</sup>

The report also reviewed the risks and inputs of radioactivity from existing sources, such as nuclear fuel reprocessing plants, nuclear power plants in the vicinity of the Arctic, nuclear submarine decommissioning in the Russian Federation and radioisotope thermoelectric generator.<sup>43</sup> The report summarised some of the numerous international assistance efforts to help the Russian Federation to decommission nuclear submarines, to better manage stored nuclear wastes and to dismantle existing RTGs.<sup>44</sup> Potential sources of radionuclides were highlighted including Russian plans for developing floating nuclear power plants and technologically enhanced naturally occurring radioactive materials (TENORM) from various industrial activities such as mineral mining, oil and gas extractions, phosphate production and the use

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35 AMAP-SWIPA (2011), *supra*, at 9.

36 AMAP-SWIPA (2011), *supra*, at 15.

37 AMAP, Arctic Pollution: Persistent Organic Pollutants, Heavy Metals, Radioactivity, Human Health, Changing Pathways (2002), available online at: <https://www.pame.is/projects/arctic-marine-shipment/amsa>, and AMAP, Arctic Pollution: A State of the Arctic Environment Report (1997), available online at <http://www.amap.no/documents/doc/arctic-pollution-issues-a-state-of-the-arctic-environment-report/67>.

38 AMAP, Arctic Pollution: Persistent Organic Pollutants, Radioactivity, Human Health (2009), available online at <http://www.amap.no/documents/doc/arctic-pollution-2009/88>.

39 <https://public.wmo.int/en/media/news/arctic-assessment-report-shows-faster-rate-of-warming>

40 AMAP (2009), *supra*, at 6-20.

41 AMAP (2009), *supra*, at 22.

42 *Ibid.*

43 RTGs are self-contained devices using radioactive decay to produce electricity for remote areas, such as lighthouses, AMAP (2009), *supra*, at 73.

44 AMAP (2009), *supra*, at 70-74.

of geothermal energy.<sup>45</sup> The assessment report recommended increased attention to TENORM in future assessments and urged information to be provided from all countries engaged in or planning Arctic oil and gas extraction and uranium or other mining.<sup>46</sup>

Fourth, the 2009 summary report, *The Greenland Ice Sheet in a Changing Climate*<sup>47</sup> emphasised the worrisome rate of loss in the Greenland Ice Sheet with the annual loss of ice between 1995 and 2000, averaging about 50 gigatonnes (Gt),<sup>48</sup> and this transitioned to a dramatically increasing average annual loss during 2003-2006 of about 160 Gt.<sup>49</sup> The report was presented in December 2009 as an Arctic Council contribution to a side event at the UNFCCC Conference of the Parties.<sup>50</sup> The current situation of the Greenland Glaciers seems to confirm the findings of these reports. Scientists studied data on 234 glaciers across the Arctic territory spanning 34 years through 2018 and found that annual snowfall was no longer enough to replenish glaciers of the snow and ice being lost to summertime melting.<sup>51</sup>

That melting is already causing global seas to rise about a millimeter on average per year. If all of Greenland's ice goes, the water released would push sea levels up by an average of 6 meters – enough to swamp many coastal cities around the world. This process, however, would take decades.<sup>52</sup>

Fifth, the 2009 *Update on Selected Climate Issues of Concern*<sup>53</sup> highlighted the substantial contributions of short-lived climate forcers, black carbon, methane and ozone to Arctic warming and suggested mitigation options.<sup>54</sup>

Sixth, AMAP's *Arctic Oil and Gas 2007 Report*, finalised in 2008,<sup>55</sup> provided an overview of present and potential future impacts of oil and gas activities

45 AMAP (2009), *supra*, at 74-78.

46 AMAP (2009), *supra*, at ix.

47 AMAP, *Climate Change and the Arctic Cryosphere: Snow, Water, Ice and Permafrost in the Arctic [SWIPA]* (2009), available online at <https://oarchive.arctic-council.org/handle/11374/954>.

48 A Gt = 1,000,000,000 tonnes. AMAP-SWIPA (2009), *supra*, at 9.

49 *Ibid.*

50 AMAP, *Information on GRIS and the SWIPA Project*, available online at <http://amap.no/swipa/press2009/GRJSCContent.htm>.

51 King, M.D., Howat, I.M., Candela, S.G. et al. Dynamic ice loss from the Greenland Ice Sheet driven by sustained glacier retreat. *Commun Earth Environ* 1, 1 (2020). <https://doi.org/10.1038/s43247-020-0001-2>

52 *Ibid.*

53 AMAP, *Update on Selected Climate Issues of Concern: Observations, Short-lived Climate Forcers, Arctic Carbon Cycle, and Predictive Capability* (2009), available online at [file:///C:/Users/tpapa/Downloads/update\\_climate\\_issues\\_2009.pdf.pdf](file:///C:/Users/tpapa/Downloads/update_climate_issues_2009.pdf.pdf).

54 Options include, among others: emissions controls on diesel engines and oil and gas flaring; improvements in agricultural practices such as reduced burning; and capturing or eliminating methane emissions from major industrial and waste treatment sources, AMAP-Update (2009), *supra*, at 8.

55 AMAP, *Arctic Oil and Gas Assessment [OGA]* (2007), available online at <http://www.amap.no/oil-and-gas-assessment-oga>.

in the Arctic and the likely course of hydrocarbon developments. Russia was identified as the dominant Arctic producer of oil and gas, possessing over 75 % of known Arctic oil and over 90 % of known Arctic gas.<sup>56</sup> An increase in oil and gas activity was projected given that the Arctic contains an estimated quarter of the world's undiscovered oil and gas.<sup>57</sup> Among numerous recommendations, the report urged Arctic oil and gas activities to be conducted in accordance with the precautionary approach and polluter pays principle,<sup>58</sup> and suggested that consideration be given to the need for additional protected areas and areas closed for oil and gas activities.<sup>59</sup>

AMAP expert groups are also assessing Arctic Ocean acidification and short-lived climate forcers with a particular focus on tropospheric ozone and methane.<sup>60</sup>

#### 4.2.2 Arctic Contaminants Action Program (ACAP)

The ACAP Working Group has mainly focused on undertaking inventories and pollution reduction and control projects in the Russian Federation.<sup>61</sup> These projects have been implemented through six Project Steering Groups (PSGs).<sup>62</sup> They address: areas of integrated hazardous waste management; environmentally-sound management of obsolete and prohibited pesticides; reduction and elimination of dioxin and furan releases; reduction of mercury releases; phasing out polychlorinated biphenyls (PCB); the reduction and elimination of sources and releases of brominated flame retardants; and local sources of contamination in indigenous communities.<sup>63</sup>

The project outcomes can be deduced from ACAP's report for the Senior Arctic Officials (SAOs), which summarises main achievements from 2009 to 2011.<sup>64</sup> Some of the progress made includes the improved storage of 6,500 tons of obsolete pesticides in nine northern Russian priority districts directly

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56 AMAP-OGA (2007), *supra*, at ix.

57 AMAP-OGA (2007), *supra*, at 32.

58 AMAP-OGA (2007), *supra*, at v.

59 AMAP-OGA (2007), *supra*, at vi.

60 AMAP, Work Plan for 2011-2013 with tentative deliverables in: Senior Arctic Officials [SAO] Report to Ministers, Nuuk, Greenland (2011), available online at <https://oaarchive.arctic-council.org/handle/11374/1535>, at 30, 31.

61 The need to broaden activities to be more circumpolar in nature has been identified by ACAP as a desirable future direction, see ACAP Report for 2009-2011 in AMAP- SAO (2011), *supra*, at 9.

62 For a full listing and more detailed project descriptions, see ACAP Projects, available online at: <https://www.acap.aq/working-groups>

63 The Indigenous Peoples Contaminants Action Programme, having its Project Steering Group terms of reference approved by ACAP in September 2010, is tasked with developing model demonstration projects addressing local sources of contamination in indigenous communities, see AMAP- SAO (2011), *supra*, at 11.

64 AMAP- SAO (2011), *supra*, at 9-11.

impacting the Arctic,<sup>65</sup> and the completion in 2010 of a project in several Russian chloralkali facilities to reduce mercury releases in wastewater and improve mercury monitoring systems.<sup>66</sup> Further, ACAP has identified the lack of facilities in Russia to destroy obsolete pesticide stocks in an environmentally sound manner as a major limitation.<sup>67</sup> In summer and autumn of 2021, the ACAP Chair and Executive Secretary had calls with the Chairs and Executive Secretaries of SDWG, CAFF and AMAP to discuss cross-cutting issues and plans for collaboration.<sup>68</sup> ACAP and AMAP are planning several joint sessions on contaminants at the expert level, and intend to continue collaboration on several projects. AMAP experts reviewed and provided feedback to ACAP's updated fact sheets on dioxins. Moreover, ACAP and SDWG have started implementation of a joint project on solid waste management in remote Arctic communities. Potential synergies between the work of the 2 WGs in the field of community health have been identified. Youth engagement and the CLEO Initiative is another opportunity for cooperation. ACAP and CAFF have been cooperating within the CLEO Initiative. The two working groups, together with the AEC Secretariat, are currently working on the development of an initial concept of an innovation prize for youth with a plan to present it to all the other AC WGs. Another promising area of cooperation with CAFF and AMAP is the development of educational materials on pollutants, their impact on biodiversity and ways of addressing this problem. The ACAP has been developing the "Wildland Fire Management Practices and Emissions of Black Carbon and Other Air Pollutants" project proposal, in consultation with CAFF, EPPR, AMAP and EGBCM.<sup>69</sup>

#### 4.2.3 Conservation of Arctic Flora and Fauna (CAFF)

A comprehensive review of CAFF's monitoring assessment and conservation activities is beyond the scope of this chapter.<sup>70</sup> Nonetheless, two main initiatives stand out in the context of monitoring and assessment. First, the Circumpolar Biodiversity Monitoring Program (CBMP), endorsed by Arctic

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65 AMAP- SAO (2011), *supra*, at 10.

66 *Ibid.*

67 AMAP- SAO (2011), *supra*, at 9.

68 The latest Arctic Council SAO Meeting took place at 1 – 2 DECEMBER in Salekhard, in Russia and a summary of his work can be found at: [https://oaarchive.arctic.org/bitstream/handle/11374/2754/SAORU201\\_2021\\_Salekhard\\_08\\_ACAP-Progress-Report.pdf?sequence=1&isAllowed=y](https://oaarchive.arctic.org/bitstream/handle/11374/2754/SAORU201_2021_Salekhard_08_ACAP-Progress-Report.pdf?sequence=1&isAllowed=y)

69 ACAP Progress Report to SAOs, SAO Meeting 1-2 December 2021, available at: <https://oaarchive.arctic-council.org/handle/11374/2754>

70 For a detailed listing of CAFF initiatives, see CAFF Report, in AMAP- SAO (2011), *supra*, at 14-19.

Council Ministers in 2004,<sup>71</sup> continues to evolve as an international network of scientists and conservation experts dedicated to harmonising and integrating efforts to monitor living resources in the Arctic.<sup>72</sup> Working through Expert Monitoring Groups, the CBMP is developing four umbrella monitoring plans for marine, terrestrial, freshwater and coastal ecosystems.<sup>73</sup> In addition, a Pan-Arctic Polar Bear Monitoring Plan is under development.<sup>74</sup> In April 2011, the Marine Expert Monitoring Group released the first of the four general plans: the Arctic Marine Biodiversity Monitoring Plan.<sup>75</sup> The Plan establishes eight Arctic Marine Areas by which monitoring efforts and results will be organised;<sup>76</sup> sets out a suite of biological parameters and indicators to be monitored;<sup>77</sup> identifies existing monitoring programs with contribution potential for the CBMP;<sup>78</sup> and includes a ten year implementation schedule and budget.<sup>79</sup>

In response, the Nordic and other Arctic countries tasked the Conservation of Arctic Flora and Fauna (CAFF) biodiversity working group of the Arctic Council to develop the Circumpolar Biodiversity Monitoring Programme (CBMP). The CBMP works to coordinate biodiversity monitoring. This project focuses on the CBMP's Marine component.

The CBMP Marine Biodiversity Monitoring Plan was published in 2011 to guide and coordinate marine monitoring in the Arctic. CBMP Marine is led by a steering group composed of representatives from the Arctic coastal states and representatives of permanent participants of the Arctic Council. In 2017, the CBMP Marine group published in the State of the Arctic Biodiversity Report

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71 Reykjavik Declaration on the Occasion of the Fourth Ministerial Meeting of the Arctic Council, November 24, 2004, available online at <http://www.arctic-council.org/index.php/en/about/documents/category/5-declarations>.

72 CBMP, History of the CBMP, available online at <http://caffportal.arcticportal.org/about-the-cbmp/history-of-the-cbmp>.

73 CBMP, e-CBMP Newsletter, Summer 2011, available online at <http://www.caff.is/e-cbmp-newsletter>.

74 See D. Vongraven, E. Peacock, Development of a Pan-Arctic Monitoring Plan for Polar Bears: Background Paper, CAFF Monitoring Series Report No. 1 (2011), available online at [https://www.fws.gov/alaska/fisheries/mmm/polarbear/pdf/Vongraven\\_Peacock\\_2011\\_PBCircumpolarMonitor.pdf](https://www.fws.gov/alaska/fisheries/mmm/polarbear/pdf/Vongraven_Peacock_2011_PBCircumpolarMonitor.pdf).

75 CAFF, Arctic Marine Biodiversity Monitoring Plan [CBMP-Marine Plan], CAFF Monitoring Series Report No. 3 (2011).

76 The eight areas are: Atlantic Arctic, Davis-Baffin, Hudson Complex, Arctic Archipelago, Beaufort, Pacific-Arctic, Kara-Laptev and Arctic Basin, CAFF-CBMP-Marine Plan (2011), *supra*, at 22.

77 Suggested parameters and indicators are set out for plankton, sea-ice biota, benthos, fish, seabirds and marine mammals, *ibid.*, CAFF-CBMP-Marine Plan (2011), *supra*, at 32-40.

78 CAFF-CBMP-Marine Plan (2011), *supra*, at 41-47.

79 CAFF-CBMP-Marine Plan (2011), *supra*, at Appendix A.

(SAMBR), a synthesis of the status and trends of the Arctic Marine Environment.<sup>80</sup>

The SAMBR report provides recommendations to improve monitoring and improve the state of knowledge for decision making for the sustainable management of the Arctic at national, regional and local decision scales. It provides an important baseline to further prioritize issues for further cooperation within CAFF and the Arctic Council.<sup>81</sup>

#### 4.2.4 Protection of the Arctic Marine Environment (PAME)

The PAME Working Group has made substantial progress in relation to Arctic shipping. Following a mandate set out in the Arctic Council's Arctic Marine Strategic Plan,<sup>82</sup> PAME undertook a comprehensive assessment of present and likely future shipping activities in the Arctic. Consequently, the 2009 *Arctic Marine Shipping Assessment Report* (AMSA)<sup>83</sup> provided a detailed critique of the adequacy of applicable international agreements and guidelines.<sup>84</sup> The report made seventeen recommendations organised under three themes for strengthening shipping governance. Under the 'Enhancing Arctic Marine Safety' theme, AMSA recommended: Arctic States to support the updating and mandatory application of relevant parts of the Guidelines for Ships Operating in Arctic Ice-Covered Waters;<sup>85</sup> augment IMO ship safety and pollution prevention conventions, with specific mandatory requirements or other provisions aimed at protecting the Arctic environment;<sup>86</sup> consider possible harmonisation of national shipping regulatory regimes;<sup>87</sup> and develop and implement a multi-national Arctic SAR instrument.<sup>88</sup>

Under the second theme, "Protecting Arctic People and the Environment," AMSA, urged Arctic States to: identify areas of heightened ecological and cultural significance and to implement protective measures from the impacts of Arctic marine shipping;<sup>89</sup> explore the need for internationally designated areas of the Arctic Ocean for special environmental protection (possibly

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80 The report can be found at: <https://www.caff.is/assessment-series/431-state-of-the-arctic-marine-biodiversity-report-full-report>.

81 *Ibid.*

82 Para. 7.1.5 called for a comprehensive assessment of Arctic marine shipping at current and projected levels, Arctic Council, Arctic Marine Strategic Plan [AMSP] (2004), available online at <http://www.pame.is/arctic-marine-strategic-plan>.

83 AMSA Report (2009), *supra*.

84 AMSA Report (2009), *supra*, at 50-69.

85 AMSA Report (2009), *supra*, at 6, Recom. I. B.

86 *Ibid.*

87 AMSA Report (2009), *supra*, at 6, Recom. I. C.

88 AMSA Report (2009), *supra*, at 6, Recom. I.E.

89 AMSA Report (2009), *supra*, at 7, Recom. II. C.

through the IMO by the use of 'Special Area' or PSSA designations);<sup>90</sup> and consider working with the IMO to address shipping impacts on marine mammals through developing and implementing mitigation strategies.<sup>91</sup>

Recommendations under the third theme, 'Building Arctic Marine Infrastructure', included the need for Arctic States to: improve Arctic marine infrastructure;<sup>92</sup> continue developing circumpolar environmental pollution response capabilities (for example, through circumpolar or bilateral agreement(s));<sup>93</sup> and increase investments relating to the provision of hydrographic, meteorological and oceanographic data for Arctic waters.<sup>94</sup>

The AMSA report is a living document, as monitoring implementation of AMSA recommendations will be an on-going part of the PAME agenda with regular reports to Arctic Council Ministers. Therefore, many recommendations have already received substantial follow-ups.<sup>95</sup> The IMO has already adopted a legally binding Polar Shipping Code.<sup>96</sup> The five Arctic coastal States, on 6 October 2010, established an Arctic Regional Hydrographic Commission under the auspices of the International Hydrographic Commission to promote enhanced charting and routing in the Arctic region.<sup>97</sup> Furthermore, the SDWG, AMAP and CAFF are cooperating in a study of areas of heightened ecological and cultural significance in the Arctic.<sup>98</sup> In May 2011, Arctic States adopted an Agreement on Cooperation on Aeronautical and Maritime Search and Rescue in the Arctic.<sup>99</sup>

PAME has also made advances in addressing land-based marine pollution and oil and gas activities. In 2009, it completed a revision of the Regional Program of Action for the Protection of the Arctic Marine Environment from

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90 AMSA Report (2009), *supra*, at 7, Recom. II. D.

91 AMSA Report (2009), *supra*, at 7, Recom. II. G.

92 AMSA Report (2009), *supra*, at 7, Recom. III. A.

93 AMSA Report (2009), *supra*, at 7, Recom. III. C.

94 AMSA Report (2009), *supra*, at 7, Recom. III. D.

95 For a full review see Arctic Council, Status on Implementation of the AMSA 2009 Report Recommendations, May 2011, available online at <http://www.arctic-council.org/index.php/en/about/documents/category/26-pame-nuuk-ministerial>.

96 In 2009 the Maritime Safety Committee (MSC) of IMO tasked its Design and Equipment Sub-Committee with developing a mandatory code for ships operating in polar waters with a target completion date of 2015 and the IMO's Marine Environment Committee (MEPC) subsequently concurred in the decision, see MSC, Report of the Maritime Safety Committee at Its Eighty-Sixth Session, MSC 86/26 at 111 (2009) and MEPC, Report of the Marine Environmental Protection Committee on Its Sixtieth Session, MEPC 60/22 at 104 (2010).

97 See Statutes of the Arctic Regional Hydrographic Commission, available online at [http://www.iho.int/srv1/index.php?option=com\\_content&view=article&id=435&Itemid=690](http://www.iho.int/srv1/index.php?option=com_content&view=article&id=435&Itemid=690).

98 AMSA Report (2009), *supra*, at 8.

99 2011 Agreement on Cooperation on Aeronautical and Maritime Search and Rescue in the Arctic, available online at: <https://oarchive.arctic-council.org/handle/11374/531>.

Land-based Activities (RPA).<sup>100</sup> The RPA reviews the status of nine pollution source categories in the Arctic,<sup>101</sup> ranks source categories as high, medium or low in priority for action,<sup>102</sup> and suggests specific measures for addressing the two highest priorities: persistent organic pollutants<sup>103</sup> and heavy metals.<sup>104</sup>

PAME also led the revision of Arctic Offshore Oil and Gas Guidelines (the Guidelines), adopted by the Arctic Council on 29 April 2009.<sup>105</sup> The Guidelines encourage regulators in the eight Arctic States to adopt common principles<sup>106</sup> and practices in managing oil and gas activities. The Guidelines encourage the application of environmental assessment procedures with special consideration given to potential impacts on indigenous ways of life and cultural heritage.<sup>107</sup> The Guidelines propose operating practices to control or prevent waste discharges, for example, the use of non-oil-based drilling fluids and zero discharge from wastes where feasible.<sup>108</sup>

A further PAME initiative, launched in 2009, is particularly promising for strengthening future Arctic Ocean governance. PAME's Arctic Ocean Review (AOR) project in Phase I, completed in 2011, produced a descriptive overview of the existing global and regional agreements and arrangements relevant to marine environmental protection in the Arctic.<sup>109</sup> Phase II of the AOR produced a final report to Arctic Council Ministers in 2013 with suggestions for the enhancement global and regional agreements and measures for the manage-

100 PAME, Regional Programme of Action [RPA] for the Protection of the Arctic Marine Environment from Land-based Activities (2009), available online at: <https://oaarchive.arctic-council.org/handle/11374/872>.

101 The nine categories are POPs, heavy metals, physical alteration and destruction of habitats, radionuclides, petroleum hydrocarbons, sewage, nutrients, sediments and litter, PAME-RPA (2009), *supra*, at 6-12.

102 POPs and heavy metals are listed as high priorities while sewage, nutrients, sediments and litter are listed as low, *ibid.*

103 For example, Arctic States are encouraged to ratify the 1998 Protocol to the 1979 Convention on Long-range Transboundary Air Pollution on Persistent Organic Pollutants, 2230 UNTS 79 [1998 LRTAP POPs Protocol], and the 2001 Stockholm Convention on Persistent Organic Pollutants, 22 May 2001, 2256 UNTS 119, and to phase out certain POPs in addition to existing requirements under international agreements, see PAME-RPA (2009), *supra*, at 14.

104 For example, Arctic States are encouraged to ratify the 1998 Protocol to the 1979 Convention on Long-Range Transboundary Air Pollution on Heavy Metals, 2237 UNTS 4 [1998 LRTAP Heavy Metals Protocol], and to cooperate in activities at the global level on mercury reduction, *ibid.* at p. 14.

105 Arctic Council, Arctic Offshore Oil and Gas Guidelines, April 29, 2009, available online at: <https://oaarchive.arctic-council.org/handle/11374/63>.

106 Key general principles include the precautionary approach, polluter pays, continuous improvement and sustainable development, Arctic Council, Arctic Offshore Oil and Gas Guidelines, *supra*, at 6-7.

107 Arctic Council, Arctic Offshore Oil and Gas Guidelines, *supra*, at 13.

108 Arctic Council, Arctic Offshore Oil and Gas Guidelines, *supra*, at 31-33.

109 PAME, The Arctic Ocean Review [AOR]: Phase I Report 2009-2011 (2011), available online at: <https://oaarchive.arctic-council.org/handle/11374/1623>.

ment of the Arctic marine environment.<sup>110</sup> An AOR Expert Workshop, held in 2011 in Reykjavik, explored ideas to advance cooperation in the areas of Arctic marine science, Arctic pollution sources, living marine resource management, offshore oil and gas, and shipping. In 2021, there was a meeting that led to the best shipping practices introduced by PAME.<sup>111</sup> As leading projects from Iceland, technology development on black carbon emission reduction from shipping activities in the Arctic was discussed to compare methods of fuel and exhaust gas treatment to find the best way for reducing the harmful gases emitted by vessel engines.<sup>112</sup>

From Russian experts, projects on regional reception facilities and Paris MOU and MOU Polar code inspection campaigns were discussed with details of the proposed sustainable Arctic shipping project.<sup>113</sup> Canadian experts discussed the development of Acoustic intensity maps for shipping in the Circumpolar Arctic together with a briefing on Arctic marine tourism and passenger vessel trends (2013-2019) with a special focus on smaller vessel/pleasure craft activities that are not captured within the ASTD system, and the Arctic shipping best practice information forum, among others. Moreover, additional 2021 ministerial deliverables were focused on understanding impacts of underwater noise in the Arctic with defining management solutions, increase in Arctic shipping 2013-2019, and Heavy Fuel Oil (HFO) use by ships, among others. Subsequently, a review was made on proposed and reported projects' inclusion in the PAME 2021-2023 work plan. Finally, proposals, ideas, and recommendations for strengthening PAME's monthly SEG calls were made including other comprehensive ideas.<sup>114</sup>

#### 4.2.5 Sustainable Development Working Group (SDWG)

The SDWG carries out numerous projects and activities<sup>115</sup> in six thematic areas,<sup>116</sup> largely focused on Arctic human health and socio-economic

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110 PAME, The Arctic Ocean Review [AOR] Project 2009-2013 (2013), available at: <https://oaarchive.arctic-council.org/handle/11374/69>.

111 More about this meeting and the work of the Shipping committee can be found at: <https://pame.is/arcticshippingforum>.

112 PAME I-2021 Shipping Experts Group (SEG) pre-meeting, April 7, 2021, more information available at: <https://www.nipr.ac.jp/arcs2/e/dispatch/2021-04-07-1/>

113 *Ibid.*

114 *Ibid.*

115 For a chronological listing of SDWG projects and activities since 1996, see SDWG Work Plans and Projects List, available online at: <https://www.sdwg.org/what-we-do/projects/>.

116 The themes are Arctic human health, Arctic socio-economic issues, adaptation to climate change, energy and Arctic communities, management of natural resources, and Arctic cultures and languages, SDWG Work Plan 2011-2013, in AMAP- SAO (2011), *supra*, at 44.

issues.<sup>117</sup> The SDWG in collaboration with the PAME Working Group undertook a major policy-relevant project, Best Practices in Ecosystem-based Oceans Management in the Arctic, which was completed in 2009.<sup>118</sup> The project produced a comprehensive report on indigenous perspectives and the practices of seven Arctic States relating to ecosystem-based management.<sup>119</sup> It also developed a summary document on best practices in ecosystem-based ocean management in Arctic countries.<sup>120</sup> The report highlighted a major gap in existing management, namely the lack of integrated planning in the trans-boundary context.<sup>121</sup>

Projects are proposed under the themes of Arctic human health, socio-economic issues and Arctic cultures and languages. However, no on-going projects are proposed under the themes of adaptation to climate change, energy and Arctic communities, and management of natural resources.<sup>122</sup> At the Nuuk Ministerial meeting in May 2011, Arctic Council Ministers issued a further assessment mandate to be taken up by the SDWG. Ministers called for an assessment of the current state of human development on the Arctic and its relationship with climate change and other factors affecting Arctic communities.<sup>123</sup> The SDWG is in the process of developing a project, Arctic Human Development II, to provide a circumpolar assessment of human development and quality of life in the Arctic.<sup>124</sup>

The SDWG published a new State of Knowledge Report *Renewable Economies in the Arctic* on 24 January 2022.<sup>125</sup> This book offers multidisciplinary perspectives on renewable economies in the Arctic and how these are being supported scientifically, economically, socially, and politically by the Arctic

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117 For example, the Arctic Human Health Initiative, led by the United States and began as an International Polar Year coordinating project for human health research, has continued with 28 projects under its umbrella, SDWG, Arctic Human Health Initiative Report to the Arctic Council Ministerial, April 2009, available online at: <https://www.sdwg.org/what-we-do/projects/>.

118 A. H. Hoel, Best Practices in Ecosystem-based Oceans Management in the Arctic, Norwegian Polar Institute (2009)

119 Case studies included: Russia, Finland, Norway, Iceland, Denmark/Greenland, Canada and USA.

120 PAME, Observed Best Practices in Ecosystem-based Oceans Management in the Arctic Countries (2008), available online at: <https://oaarchive.arctic-council.org/handle/11374/873>.

121 See e.g. the Canadian report and its highlighting the lack of integrated planning in the shared marine waters of the Beaufort Sea (Canada-USA) and Baffin Bay and Davis Strait (Canada-Denmark/ Greenland), R. Sinn, D. V. Zwaag, H. Fast, Ecosystem-based Ocean Management in the Canadian Arctic, in Best Practices in Ecosystem-based Oceans Management in the Arctic, Norwegian Polar Institute 81 (A. H. Hoel ed., 2009), at 81.

122 SDWG Work Plan 2011-2013, *supra*, at 45.

123 Nuuk Declaration 2011, available online at <https://oaarchive.arctic-council.org/handle/11374/922>.

124 SDWG Work Plan 2011-2013, *supra*, at 46.

125 Natcher, D.C., & Koivurova, T. (2021). *Renewable Economies in the Arctic* (1st ed.). Routledge. <https://doi.org/10.4324/9781003172406>

States. The economic development of the Arctic region is witnessing new, innovative trends which hold promise for the sustainable development of the region. This book discusses the emerging forms of renewable economies to understand where intellectual and technological innovations are being made. It draws on the expertise of scholars from across the Arctic and provides the reader with a foundation of knowledge to identify the unique challenges of the region and explore opportunities to unlock the immense potential of renewable resources to boost the region's economy. This book offers a holistic Arctic perspective against the backdrop of prevailing social, economic, and climatic challenges. With critical insights on the economic state of play and the role of renewable resources in the development of the Arctic region, this book will be a vital point of reference for Arctic scholars, communities, and policy makers.<sup>126</sup>

#### 4.2.6 Arctic Council ministerial meetings

For most of the Arctic Council's history, Ministerial meetings could be characterised as discussion-based with limited law and policy outcomes. Decisions were dominated by approving working group work plans, projects and other recommendations suggested by SAOs.<sup>127</sup> At the Sixth Ministerial meeting in Tromsø, Norway, in 2009, a major shift occurred, with Ministers taking more of a policy-shaping role.<sup>128</sup> Ministers decided to establish a task force on short-lived climate forcers to identify measures to reduce emissions and to recommend immediate response actions. A progress report was requested for the next Ministerial meeting.<sup>129</sup> The Ministers approved the recommendations set out in the AMSA report, urged that parts of the Guidelines for Ships Operating in Arctic Ice-covered Waters be made mandatory, and called for the augmentation of global IMO ship safety and pollution conventions in order to better protect the Arctic environment.<sup>130</sup> The greatest policy formation initiative was the decision to establish a task force to develop and nego-

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126 *Ibid.*

127 A common practice is for Working Groups to provide reports to SAOs and for SAOs to draw many of their recommendations to Ministers from the submitted reports.

128 More details available online at <http://www.arctic-council.org/index.php/en/>.

129 Tromsø Declaration on the Occasion of the Sixth Ministerial Meeting of the Arctic Council (2009), available online at <http://www.arctic-council.org/index.php/en/about/documents/category/5-declarations>, at 3. An initial report was subsequently published, see Technical Report of the Arctic Council Task Force on Short-Lived Climate Forcers, An Assessment of Emissions and Mitigation Options for Black Carbon for the Arctic Council (2011) available online at <http://www.arctic-council.org/index.php/en/about/documents/category/7-working-groupsscientific-reportsassessments>.

130 Tromsø Declaration, *supra*, at 4.

tiate an international instrument on cooperation in Arctic SAR operations which was adopted at the Ministerial meeting in 2015.<sup>131</sup>

A task force under Arctic Council auspices subsequently negotiated an Arctic Search and Rescue Agreement (the Agreement), which was signed during the Arctic Council Ministerial meeting in Nuuk, Greenland on 12 May 2011.<sup>132</sup> Besides delineating regions of national SAR responsibility, the Agreement calls for joint SAR exercises and training to facilitate cooperative responses to SAR situations. Canada hosted the first gathering of SAR specialists from the eight Arctic Council States for an Arctic SAR table-top exercise in October 2011, in Whitehorse, Yukon. At the Seventh Ministerial meeting in Nuuk, Greenland in May 2011, Ministers welcomed reports on SLCF and encouraged Arctic States to implement recommendations for reducing black carbon emissions at the national level.<sup>133</sup> Ministers also decided to establish a Short-Lived Climate Forcer Contaminants project steering group to undertake circumpolar demonstrative projects to reduce black carbon and other SLCF emissions.<sup>134</sup> Ministers further advanced the Council's governance-shaping role by establishing a task force to develop an international instrument on Arctic marine oil pollution preparedness and response.<sup>135</sup>

In 2021, the Arctic Council's journey towards a sustainable Arctic made its final stop to Harpa in Reykjavik (and online) for its 12th Ministerial Meeting concluding the Icelandic chairmanship (2019-2021). Although most media headlines had frantically focused on the "Russian take-over of the Arctic Council" in the lead up to the event, last year's ministerial meeting brought back some much-needed normalcy to the Arctic Council after an eventful 2019 Ministerial Meeting in Rovaniemi.<sup>136</sup> With 2021 marking the 25th anniversary of the signing of the Ottawa Declaration, this year's Ministerial brings both consistency and innovation. Not only did Arctic States officials sign the usual Ministerial Declaration, for the first time, the Arctic Council also published a Strategic Plan with detailed goals and actions to be achieved by 2030.<sup>137</sup> Focused on many aspects of the climate crisis and other environmental issues, including plastic pollution, sustainable shipping, the impact of rapidly changing weather on ecosystems and communities in the Arctic. The Covid-19 pandemic certainly impacted the functioning of Iceland's chairmanship last year and yet Iceland's Foreign Minister noted that whilst some plans were

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131 Tromsø Declaration, *supra*, at 5.

132 2011 Agreement on Cooperation in Aeronautical and Maritime Search and Rescue, *supra*.

133 Nuuk Declaration, *supra*, at 3.

134 *Ibid.*

135 Nuuk Declaration, *supra*, at 4.

136 More about the first and only Arctic Council in history without a Joint Announcement held in 2019 can be found at: <https://www.highnorthnews.com/en/first-ever-arctic-council-ministerial-meeting-without-joint-declaration>

137 More details can be found at: <https://www.thearcticinstitute.org/recap-arctic-council-ministerial-meeting-2021-reykjavik/>.

hindered, the Council was able to meet more frequently through online platforms.<sup>138</sup> With the Finnish Chairmanship concluding in 2019 without an official declaration, the Arctic Council member States were eager to put tension behind them. In 2021, the Ministers representing the eight Arctic nations, joined by representatives of the six Permanent Participant organizations of the Arctic Council, signed onto the Reykjavik Declaration 2021.<sup>139</sup> The 2021 joint Declaration reaffirms the commitment to maintain the Arctic as a peaceful region, emphasizing the Arctic States' unique position to promote responsible governance with a focus on the climate crisis and sustainable use of the area.

### 4.3 SEA OF CHALLENGES

The key challenges facing the Arctic Council beyond its initial twenty years can be summarised under four headings: fully implementing existing commitments and recommendations; completing the Arctic Council's restructuring; addressing future governance of Arctic areas beyond national jurisdiction; and strengthening the 'Arctic voice' in international fora.

It is difficult to quantify the numerous commitments and recommendations flowing from Arctic Council Ministerial meetings and reports since the Council has not required national reporting or project follow-up monitoring.<sup>140</sup> For example, although the RPA recommended the development of a reporting procedure and format for assessing implementation and effectiveness,<sup>141</sup> no national reporting system has been created. Three important challenges to implementation may be identified.

#### 4.3.1 Obtaining full ratification of international agreements

While Arctic States are encouraged to sign and ratify key international agreements, implementation remains a challenge. For example, the RPA urges Arctic States to ratify the POPs Convention and the LRTAP Protocols on POPs and heavy metals.<sup>142</sup> However, the United States has not ratified the Stockholm Conven-

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138 *Ibid.*

139 The text of the Declaration can be found at: [https://www.international.gc.ca/world-monde/international\\_relations-relations\\_internationales/arctic-arctique/reykjavik-declaration-2021.aspx?lang=eng](https://www.international.gc.ca/world-monde/international_relations-relations_internationales/arctic-arctique/reykjavik-declaration-2021.aspx?lang=eng).

140 The exception standing out is the AMSA report where review is on-going, AMSA Report (2009), *supra*.

141 RPA, *supra*, at 16.

142 RPA, *supra*, at 14. 1998 LRTAP POPs Protocol, *supra* and 1998 LRTAP Heavy Metals Protocol, *supra*.

tion,<sup>143</sup> Russia and the United States are not parties to the LRTAP POPs Protocol<sup>144</sup> and Iceland and Russia are not parties to the Heavy Metals Protocol.<sup>145</sup>

Ratification of the International Convention for the Control and Management of Ships Ballast Water and Sediments<sup>146</sup> was one of the key recommendations of the AMSA report,<sup>147</sup> but implementation has been slow. Only Canada, Norway and Sweden have ratified the Convention.<sup>148</sup> National reasons for the lack of ratifications are too diverse to elaborate in this Chapter.

### 4.3.2 Following through with AMSA recommendations

While considerable progress in implementing AMSA recommendations has occurred since the report was published in 2009,<sup>149</sup> many 'unfinished agendas' remain. For example, the AMSA Implementation Status Report of May 2011 noted that more work needs to be done to identify and protect areas of heightened ecological and culture significance within the Arctic. Further, sharing Arctic maritime domain awareness information on positions and movements of ships should be enhanced among Arctic Council members.<sup>150</sup> Further effort to ensure adequate spill response capacity across the Arctic was also identified as an item for attention.<sup>151</sup>

In order to ensure compliance on the AMSA recommendation, shipping-related infrastructure in the Arctic needs to be improved by Arctic States. This stands out as a difficult challenge given the long list of infrastructure deficits<sup>152</sup> and the need for major national financial and human resource com-

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143 The Russian Federation ratified the Convention on 17 August 2011 and it will enter into force for the Federation on 15 November 2011 (this statement was correct at the time of writing, and at the time of going to press the Stockholm Convention entered into force for Russia). Denmark has ratified but with a territorial exclusion of Faroe Islands and Greenland. 2001 Stockholm Convention status of ratification available online at: <http://chm.pops.int/Countries/StatusofRatifications/PartiesandSignatoires/tabid/4500/Default.aspx>.

144 1998 LRTAP POPs Protocol, United Nations, Treaty Series, vol. 2230, p. 79.

145 1998 LRTAP Heavy Metals Protocol status of ratification available online at [http://treaties.un.org/pages/ViewDetaus.aspx?src=TREATY&mtdsg\\_no=XXVn-l-f&chapter=278dang=en](http://treaties.un.org/pages/ViewDetaus.aspx?src=TREATY&mtdsg_no=XXVn-l-f&chapter=278dang=en).

146 2004 International Convention for the Control and Management of Ships' Ballast Water and Sediments, IMO Doc. BWM/CONF/36 Annex.

147 AMSA Report (2009), *supra*, at 7, Recom. II. E.

148 IMO, Status of Conventions, available online at <http://www.imo.org/About/Conventions/StatusOfConventions/Pages/Default.aspx>.

149 AMSA Report (2009), *supra*.

150 AMSA Report (2009), *supra*, at 3.

151 *Ibid.*

152 AMSA Report (2009), *supra*, at 7, Recom. III. A.

mitments.<sup>153</sup> Shipping infrastructure is more advanced in the Barents Sea and Northern Sea Route regions than in other areas of the Arctic.<sup>154</sup>

The International Maritime Organization (IMO) in view of the urgency for all sectors to accelerate their efforts to reduce GHG emissions as emphasized in the recent IPCC reports and the Glasgow Climate Pact, recognized the need to strengthen the ambition of the Initial IMO GHG Strategy during its revision process and has it agreed to initiate the revision of its GHG strategy. IMO's Marine Environment Protection Committee (MEPC), meeting virtually for its 77th session, 22-26 November 2021, also adopted a resolution on voluntary use of cleaner fuels in the Arctic, to reduce black carbon emissions.<sup>155</sup> In other work, the MEPC adopted a strategy to address marine plastic litter from ships; adopted revised guidelines for exhaust gas cleaning systems (EGCS) and agreed the scope of work on discharge water of EGCS; and considered matters related to the Ballast Water Management Convention.<sup>156</sup> Furthermore, the MEPC agreed to initiate the revision of the Initial IMO Strategy on Reduction of GHG emissions from ships, recognizing the need to strengthen the ambition during the revision process. The move comes in the wake of the United Nations Climate Change Conference (COP 26), held in Glasgow, United Kingdom, (1-12 November 2021) and in view of the urgency for all sectors to accelerate their efforts to reduce GHG emissions. A final draft Revised IMO GHG Strategy would be considered by MEPC 80 (scheduled to meet in Spring 2023), with a view to adoption. Moreover, the MEPC adopted a resolution which urges Member States and ship operators to voluntarily use distillate or other cleaner alternative fuels or methods of propulsion that are safe for ships and could contribute to the reduction of Black Carbon emissions from ships when operating in or near the Arctic.<sup>157</sup>

The resolution encourages Member States to commence addressing the threat to the Arctic from Black Carbon emissions, and report on measures and best practices to reduce Black Carbon emissions from shipping. The Committee further agreed the terms of reference for the PPR Sub-Committee's future work on reduction of the impact on the Arctic of Black Carbon emissions from international shipping.

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153 For a recent lament over limited infrastructure in the Arctic, see L. W. Brigham, *Marine Protection in the Arctic Cannot Wait*, 478 *Nature* 157 (2011).

154 See, e.g. AMSA Report (2009), *supra*, at 5, and M. Bennett, *The Northwest Passage Versus the Northern Sea Route* (2011), available online at <http://foreignpolicyblogs.com/2011/08/19/the-northwest-passage-versus-northern-sea-route/>.

155 The text of the resolution can be found at: <https://cleanarctic.org/wp-content/uploads/2021/11/MEPC-77-9-Comments-on-the-outcome-of-PPR-8-Canada-Finland-France...-1.pdf>

156 For more details about the MEPC please see: <https://www.imo.org/en/MediaCentre/MeetingSummaries/Pages/MEPC77.aspx>.

157 The resolution can be found at: <https://wwwcdn.imo.org/localresources/en/OurWork/Environment/Documents/Air%20pollution/MEPC.342%2877%29.pdf>.

### 4.3.3 Putting the ecosystem approach into practice

While the Arctic Council's Arctic Marine Strategic Plan highlights the ecosystem approach as a way forward in managing the Arctic marine environment,<sup>158</sup> subsequent Council activities relating to the ecosystem approach are largely 'conceptual and informative'. The Council's project on "Best Practices in Ecosystem based Management in the Arctic" developed a list of core elements essential to implementing the ecosystem-based management concept.<sup>159</sup> The PAME Working Group has established an Ecosystem Approach Expert Group. They held a workshop in January 2011, which discussed possible revisions to an existing map of seventeen Large Marine Ecosystems (LMEs) in the Arctic and collected information on the numerous assessments already being carried out in the LMEs.<sup>160</sup> The Ecosystem Approach Expert Group has already planned the further development of ecosystem status reports for the various LMEs.<sup>161</sup> This will help identify ways to better integrate existing national and international monitoring and assessment programs and to contribute to the revision of the Arctic Marine Strategic Plan in light of ecosystem approach expertise.<sup>162</sup>

The manner in which the ecosystem approach will be advanced within the Arctic Council remains uncertain. Arctic Ministers at the Ministerial meeting in May 2011 decided to establish an expert group on Arctic ecosystem-based management for the Arctic environment. It has been mandated to recommend further activities for possible consideration by the SAOs.<sup>163</sup> Moreover, in 2019 PAME has adopted the EA Guidelines Implementing an Ecosystem Approach to Management of Arctic Marine Ecosystems.<sup>164</sup> The EA was adopted as an overarching principle and approach by Arctic Council Ministers in 2004 as part of the Arctic Marine Strategic Plan (AMSP). In 2011, the Ministers established an expert group on Arctic ecosystem-based management (EBM), which reviewed the EA (or EBM) concept and provided a definition of EA along with principles and recommendations that were adopted as part of the Kiruna

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158 AMSA Report (2009), *supra*, at para. 7.4.

159 Some core elements include: the application of the best available scientific and other knowledge to understand ecosystem interactions and to manage human activities; an integrated and multi-disciplinary approach to management that takes into account the entire ecosystem; the assessment of cumulative impacts; setting explicit conservation standards, targets and indicators; and enhancing transboundary arrangements, PAME Practices (2008), *supra*, 1-2.

160 PAME – Ecosystem Approach (2011), *supra*.

161 Please see for more information at: <https://www.pame.is/projects/ecosystem-approach>.

162 PAME Work Plan 2011-2013, *supra*, at 7.

163 Nuuk Declaration, *supra*, 4.

164 The text of the Declaration can be found at: <https://pame.is/document-library/pame-reports-new/pame-ministerial-deliverables/2019-11th-arctic-council-ministerial-meeting-rovaniemi-finland/424-guidelines-for-implementing-an-ecosystem-approach-to-management-of-arctic-marine-ecosystems/file>.

Declaration in 2013. In Iqaluit in 2015, and in Fairbanks in 2017, the Arctic Council Ministers recognized the need for EA and requested and encouraged the development of practical guidelines for EA implementation in the Arctic, while the Guidelines have been finally adopted by PAME in 2019.

The International Union for Conservation of Nature (IUCN), an observer to the Arctic Council, has collaborated with the Natural Resources Defence Council in hosting three workshops on ecosystem-based management in the Arctic marine environment. They have suggested, among other things, the possible development of an Arctic Marine Ecosystem-based Management Strategy by the Council,<sup>165</sup> and identified ecologically and biologically significant areas (EBSAs) in the Arctic which may warrant special protection.<sup>166</sup>

Navigating from high-level discussions and assessments to concrete management commitments and measures in light of ecosystem-based management is likely to be incremental. The establishment of a network of marine protected areas in the Arctic and development of integrated management planning in the LME and trans-boundary contexts stand out as unmet challenges.<sup>167</sup>

#### 4.3.4 Completing the Arctic Council's restructuring

While the issue of the Arctic Council's efficiency and effectiveness has been on the Arctic Council's agenda since 2006, progress in improving the administration and organisation of the Council has been slow.<sup>168</sup> In the Tromsø Declaration of 2009, Ministers decided to strengthen the political role of the Council by having deputy minister level meetings, with representatives of permanent participants, to discuss emerging issues between Ministerial meetings.<sup>169</sup> They called for further consideration of how the Arctic Council should be best structured and for continued discussions on the role of

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165 IUCN/NRDC, IUCN/NRDC Workshop on Ecosystem-based Management in the Arctic Marine Environment Workshop Report, June 16-18, 2010, Washington, D.C., available online at: [https://www.iucn.org/downloads/arctic\\_workshop\\_report\\_final.pdf](https://www.iucn.org/downloads/arctic_workshop_report_final.pdf).

166 IUCN/NRDC, IUCN/NRDC Workshop to Identify Areas of Ecological and Biological Significance or Vulnerability in the Arctic Marine Environment, Workshop Report, November 2-4, 2010, La Jolla, CA, available online at: [https://library.wmo.int/index.php?lvl=author\\_see&id=4498#.YoDsUehBw2w](https://library.wmo.int/index.php?lvl=author_see&id=4498#.YoDsUehBw2w).

167 While the CAFF Working Group has provided useful maps identifying protected areas in the Arctic, CAFF has not been successful in developing a circumpolar protected areas network (CPAN) and a CPAN program is currently listed as dormant, see Arctic Council, CAFF – Conservation of Arctic Flora and Fauna, available online at <http://arctic-council.org/index.php/en/caff>.

168 See Koivurova (2010), *supra*, at 152-153.

169 Tromsø Declaration, *supra*, at 8.

observers in the Arctic Council.<sup>170</sup> It was also decided to develop guidelines for engagement in outreach activities and an Arctic Council communication and outreach plan.<sup>171</sup>

A breakthrough occurred at the Nuuk Ministerial meeting in May 2011 with key steps towards strengthening the Arctic Council. Ministers established a Standing Arctic Council Secretariat in Tromsø, Norway, which was operational at the beginning of the Canadian chairmanship of the Council in 2013.<sup>172</sup>

Whether an entity enjoys international legal personality or not is the decisive factor for its standing in international law. It determines whether an entity can act in the international realm, has rights or can have obligations imposed on it – in general, whether an entity can be considered as such (in the international context) and as what exactly. As important as it is, the concept of international legal personality is equally controversial. There is heated debate about this concept within the realm of international organisations and what it entails. Regardless of this, its application is not always black and white either. It is widely agreed that the Arctic Council for example, does not enjoy an international legal personality. In the case of the Secretariat of the Arctic Council, however, it is debateable whether the same can be said.<sup>173</sup>

Generally, international legal personality is the quality of being an international person, which itself is defined as ‘a subject of international law’ that is ‘capable of possessing international rights and duties’ and that ‘has capacity to maintain its rights by bringing international claims’.<sup>174</sup> Although there is a substantial doctrinal debate concerning the basis of international legal personality, the currently prevailing opinion states that this ‘status is given to them, either explicitly or, if there is no constitutional attribution of this quality, implicitly’ (as found by the ICJ in *Reparation for Injuries*, introducing the ‘doctrine of implied powers’). The entity ‘must be deemed to have those powers which, though not expressly provided in the Charter, are conferred upon it by necessary implication as being essential to the performance of its duties’.<sup>175</sup>

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170 Tromsø Declaration, *supra*, at 9. The addition of further observers has become controversial with requests for permanent observer status by the EU, China, Italy, and South Korea being denied in 2009 pending further discussions within the Arctic Council on how to address the criteria for observers, see EU Observer, 30 April 2009, Arctic Council Rejects EU Observer Application, available online at <http://euobserver.com/885/28043>.

171 Tromsø Declaration, *supra*, at 9.

172 Nuuk Declaration, *supra*, at 2.

173 Timo Kivurova, *Is this the End of the Arctic Council and the Arctic Governance as we know it?*, blog post at The Polar Connection, 2019, available at: <https://polarconnection.org/arctic-council-governance-timo-koivurova/>.

174 *Reparation for Injuries Suffered in the Service of the United Nations*, ICJ, 1949 available at: <https://www.icj-cij.org/sites/default/files/case-related/4/004-19490411-ADV-01-00-EN.pdf> at p 179.

175 *Ibid.* at p. 182.

The Council itself is an intergovernmental forum for the promotion of cooperation in the Arctic. The fact that the Council does not refer to itself as an international organisation but an intergovernmental forum indicates, among other things, the lack of an international legal personality of the Council. At the seventh Council conference in 2011, it was decided to establish a standing Secretariat in Norway no later than 2013 to strengthen the Council's work.<sup>176</sup> The Secretariat is hence based on an external agreement and not on the Ottawa Declaration that initially established the Council.<sup>177</sup> This external document contains no explicit elaborations concerning the international legal personality of the Secretariat, nor does the Council explicitly mention such personality anywhere else. Other agreements between any of the member States that confer such a personality upon the Secretariat do not exist either.<sup>178</sup> Therefore, the first alternative (explicit attribution) discussed by the ICJ does not exist and the existence of any implicit attributions must be discussed. Further details as to the scope of the Secretariat's work were later determined by the deputy ministers of the States involved. This includes, for example, the Terms of Reference of the Council's Secretariat (*Terms of Reference*). Its Article 6(1) in fact addresses legal personality, but merely on a *domestic* level with regard to Norway. In a reverse conclusion, it could thus be assumed that a legal personality on an international level was also considered and discussed, but not desired and therefore actively not included. An implicit international legal personality would, therefore, contradict the intention of the drafters of the *Terms of Reference* and must hence be denied.<sup>179</sup>

In 2013, the Secretariat, however, concluded a Host Agreement with Norway.<sup>180</sup> The fact that such an agreement is possible, shows that there is an acceptance of a certain international legal personality endowed on the Secretariat by either the international community or at least Norway bilaterally, as similarly with Austria and the Organization for Security and Co-operation in Europe, for example. The agreement could not have been concluded without the recognition of an international legal personality, as the Secretariat would otherwise legally not exist as an 'international person'. The Host Country Agreement could thus be taken as an indicator that to some extent international legal personality has implicitly been granted. Specifically so, as concluding

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176 7<sup>th</sup> Ministerial Meeting at Nuuk, 2011, Joint Declaration available at: <https://oarchive.arctic-council.org/server/api/core/bitstreams/e7765ce9-f7da-49ab-b25d-d1fdea45b3f2/content>.

177 JOINT COMMUNIQUE OF THE GOVERNMENTS OF THE ARCTIC COUNTRIES ON THE ESTABLISHMENT OF THE ARCTIC COUNCIL, Ottawa 1996, available at: <https://oarchive.arctic-council.org/server/api/core/bitstreams/bdc15f51-fb91-4e0d-9037-3e8618e7b98f/content>.

178 *Supra* note 173.

179 *Supra* note 173.

180 Host Country Agreement Between the Government of the Kingdom of Norway and the Arctic Council Secretariat, 2013, available at: <https://oarchive.arctic-council.org/server/api/core/bitstreams/946cbad7-8968-4d72-b55b-0544267106f8/content>.

such an agreement can be seen as 'essential to the performance of its duties'.<sup>181</sup> The Secretariat is placed in a position where it is expected to perform a function that cannot be carried out properly without the necessary international legal status. Inasmuch, the conclusion of the agreement can also indicate that the Secretariat, too, must have seen a certain need for or rather considered itself to have such a legal status, at least bilaterally with Norway – especially considering the existence of Article 6(1) of the *Terms of Reference*.

The assumption that international legal personality is not conferred upon the Secretariat at all cannot stand without the controversy that the Secretariat nevertheless concluded a Host Country Agreement with Norway. This contradictory situation can only be explained through Norway's bilateral recognition of the Secretariat's international legal personality thus endowing limited international legal personality on the Secretariat.

In conclusion, although the Council is not endowed with an international legal personality, the same cannot be said without hesitation for the Secretariat. Arguments can be put forward both for and against this assumption, as illustrated by prof. Koivurova.<sup>182</sup> Due to Norway's bilateral recognition, it can be assumed that the Secretariat – at least to some extent – has international legal personality. The question posed here can thus hesitantly be answered in the affirmative. Whether other participating States (bilaterally) recognise its international legal personality and in what context remains to be seen. The Secretariat and its legal status hence require close observation in the future. Especially considering what it would mean if a secretariat had international legal personality, but the overarching body did not.

Ministers also established a task force to implement decisions to strengthen the Arctic Council, including necessary arrangements for the Secretariat, and approved the terms of reference for the task force as set out in the SAO Report to Ministers in 2011.<sup>183</sup> The SAO Report included an annex, *Framework for Strengthening the Arctic Council*, which provided details on the proposed secretariat. A key commitment was to provide an administrative budget to cover the operating costs of the secretariat with the budget to be determined at the Ministerial meeting every second year and the budget financing to be equally shared by the eight Arctic States in an amount which should not exceed US \$ 1 million.<sup>184</sup> The Framework also requested the Arctic Council to use a range of approaches to address emerging challenges in the Arctic, including scientific assessments, guidelines, best practices, new legally binding instruments, and an increased use of task forces.<sup>185</sup>

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181 *Supra* note 2.

182 *Supra* note 173.

183 *Ibid.*

184 SAO Report, *supra*, Annex 1, at 49.

185 SAO Report, *supra*, at 49-50.

Ministers adopted the SAOs' recommendations on the role and criteria for observers to the Arctic Council, deciding to apply the criteria to evaluate pending applicants for observer status.<sup>186</sup> The criteria by which observer suitability is to be determined by the Council include the extent to which observers:

- accept and support the objectives of the Arctic Council defined in the Ottawa Declaration;
- recognise Arctic States' sovereignty, sovereign rights and jurisdiction in the Arctic;
- recognise that an extensive legal framework applies to the Arctic Ocean including, notably, the Law of the Sea, and that this framework provides a solid foundation for responsible management of this ocean;
- respect the values, interests, culture and traditions of Arctic indigenous peoples and other Arctic inhabitants;
- have demonstrated a political willingness as well as financial ability to contribute to the work of the Permanent Participants and other Arctic indigenous peoples;
- have demonstrated their Arctic interests and expertise relevant to the work of the Arctic Council; and
- have demonstrated a concrete interest and ability to support the work of the Arctic Council, including through partnerships with Member States and Permanent Participants bringing Arctic concerns to global decision making bodies.<sup>187</sup>

The role of observers was also clarified. For example, observers may submit written statements at Ministerial meetings and at meetings of the Council's subsidiary bodies. They may, at the discretion of the Chair, make statements after Arctic States and permanent participants, present written statements and submit relevant documents. Observers may propose projects through an Arctic State or a permanent participant, but financial contributions from observers to any given project may not exceed the financing from Arctic States, unless otherwise decided by SAOs.<sup>188</sup>

A final strengthening component adopted by Ministers in Nuuk related to Arctic Council communications. Ministers adopted Communication and Outreach Guidelines and instructed SAOs to develop a Strategic Communications Plan for the Council, which was adopted in 2020.<sup>189</sup> While the Arctic Council's structural transitioning offers hope for a more effective Council, other challenges loom on the horizon.

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186 Nuuk Declaration, *supra*, at 2.

187 SAO Report, *supra*, at Annex 1,50.

188 SAO Report, *supra*, at 50-51.

189 Nuuk Declaration, *supra*, at 2., Arctic Council Communications Strategy 2020, available online at: <https://oarchive.arctic-council.org/handle/11374/2510>.

By far the biggest challenge may be ensuring adequate financing for Arctic Council assessments and projects and other activities.<sup>190</sup> The new budgetary expenditures being proposed for covering the Arctic Council are limited to secretariat costs.<sup>191</sup> The Nuuk Declaration itself highlights the continuing financial limitations of the Council. Ministers reiterated:

“[t]he need to finance circumpolar cooperation, as well as the importance of providing adequate funding to Permanent Participants to support their preparations for, and participation in, the Arctic Council, the working groups, task forces and Arctic Council projects.”<sup>192</sup>

The suggestions on methods for strengthening the Arctic Council, offered by various groups and authors, have not been followed. Suggestions have included: holding one or more Ministerial meetings at the head of State level,<sup>193</sup> reforming the Council’s mandate to include security and education,<sup>194</sup> restructuring the working groups,<sup>195</sup> and creating a category of consultative party status to enhance the role of leading non-State actors and to encourage them to contribute to an Arctic Fund.<sup>196</sup>

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190 A Project Support Instrument (PSI), managed by the Nordic Environment Finance Corporation (NEFCO), has been launched to support Arctic Council projects but since priority is to be given to projects related to pollution prevention, abatement and elimination, it appears likely most funding will be directed towards Russian clean-up and pollution reduction projects, see NEFCO, PSI Status, AC AP Working Group Meeting, Ottawa, Canada, September 16-18, 2009, available online at <http://www.ac-acap.org/WGM%2016-18.09.09%20Ottawa.The.Voice.of.Russia>, October 5, 2011, Russia Gives 10 mln Euros for Arctic Clean-Up, available online at <http://english.ruvr.ru/2011/10/05/58195725.html>.

191 SAO Report, *supra*, at 49.

192 Nuuk Declaration, *supra*, at 6.

193 AGP, The Arctic Governance Project, Arctic Governance in an Era of Transformative Change: Critical Questions, Governance Principles, Ways Forward, Report of the Arctic Governance Project, April 14 (2010), available online at <https://arcticgovernance.custompublish.com/>.

194 AGP (2010), *supra*, at 17.

195 For example, merging working groups with environmental action roles, specifically Arctic Athabaskan Council, Improving the Efficiency and Effectiveness of the Arctic Council: A Discussion Paper, March 2007, available online at: [https://oarchive.arctic-council.org/bitstream/handle/11374/694/ACSAO-NO01\\_10\\_1\\_AAC\\_AC\\_Future.pdf?sequence=1&isAllowed=y](https://oarchive.arctic-council.org/bitstream/handle/11374/694/ACSAO-NO01_10_1_AAC_AC_Future.pdf?sequence=1&isAllowed=y) at 8.

196 F. Griffiths, Towards a Canadian Arctic Strategy, Foreign Policy for Canada’s Tomorrow No. 1, Canadian Int’l Council (2009), online available at: <https://carc.org/wp-content/uploads/2017/10/North-2030-Towards-a-Canadian-Arctic-Strategy-Franklyn-Griffiths.pdf>, at 16.

#### 4.4 ADDRESSING FUTURE OCEAN GOVERNANCE OF AREAS BEYOND NATIONAL JURISDICTION IN THE ARCTIC

Another pressing challenge is the need to consider future directions for governance arrangements in the Central Arctic Ocean (CAO) beyond national jurisdiction. A large high seas 'donut hole' exists in the CAO beyond the 200 nm zones of coastal States and at least two deep seabed areas have been predicted to lie beyond national jurisdiction once the Arctic coastal States delimit the outer extent of their continental shelves.<sup>197</sup>

Various governance proposals have been made, including: establishment of a regional fisheries management organisation;<sup>198</sup> possible expansion of the fisheries jurisdiction of the North-East Atlantic Fisheries Commission;<sup>199</sup> creation of a regional ocean management organisation;<sup>200</sup> adoption of an Arctic Ocean framework convention applicable to the Arctic marine environment both within and beyond national jurisdictions;<sup>201</sup> a regional *sui generis* approach whereby the five coastal States would divide the area beyond national jurisdiction (ABNJ) into national sections;<sup>202</sup> and a freeze on jurisdictional claims to the central Arctic basin.<sup>203</sup>

The Arctic is one of the earth's last pristine environments, supporting a rich biodiversity that offers stability to the region's critical ecosystems.<sup>204</sup> Its marine area, some 14 million square kilometers representing around 3–4 percent of earth's ocean surface, is the size of Antarctica; of which 2.8 million

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197 R. Macnab, *Outer Continental Shelves in the Arctic Ocean: Sovereign Rights and International Cooperation*, Meridian 1 (Spring/Summer 2006), at 1, 2. Regarding the legal complexities and uncertainties relating to continental shelf extensions see A. Proelss, T. Muller, *The Legal Regime of the Arctic Ocean*, 68 *Zeitschrift fuer auslandisches offentliches Recht und Voelkerrecht* 651 (2008).

198 See R. Huebert, B. B. Yeager, *A New Sea: The Need for a Regional Agreement on Management of the Arctic Marine Environment*, WWF International Arctic Programme (2008), at 33.

199 For a discussion of the option and its unlikely feasibility see T. Koivurova, E.J. Molenaar, D.L.V. Zwaag, *Canada, the European Union, and Arctic Ocean Governance: A Tangled and Shirting Seascape and Future Directions*, in *Understanding and Strengthening European Union – Canada Relations in Law of the Sea and Ocean Governance* 107 (T. Koivurova *et al.* eds., 2009), at 137-141.

200 R. Rayfuse, *Protecting Marine Biodiversity in Polar Areas Beyond National Jurisdiction*, 17 *RECIEL* 3 (2008), at 11; and R. Rayfuse, *Melting Moments: The Future of Polar Oceans Governance in a Warming World*, 16 *RECIEL* 196 (2007), at 215.

201 T. Koivurova, E.J. Molenaar, *International Governance and Regulation of the Marine Arctic: A Proposal for a Legally Binding Instrument*, WWF International Arctic Programme (2010).

202 D.M. Johnston, *The Future of the Arctic Ocean: Competing Domains in International Public Policy*, 17 *Ocean Yearbook* 596 (2003), at 616.

203 O. R. Young, *Whither the Arctic? Conflict or Cooperation in the Circumpolar North*, 45(1) *Polar Record* 73 (2009), at 79.

204 Eurasia Group for The Wilson Center, *Challenges for Arctic Oil and Gas Development* (2013), available at [https://www.wilsoncenter.org/sites/default/files/Arctic%20Report\\_F2.pdf](https://www.wilsoncenter.org/sites/default/files/Arctic%20Report_F2.pdf).

square kilometers are the high seas,<sup>205</sup> representing approximately 1.2 percent of the whole of the world's ocean ABNJ. While it is a relatively small maritime area, this ocean space has tremendous significance because of its fragile and sensitive ecosystem and its unique biodiversity. The Arctic Ocean is the habitat of around 21,000 species. These include 5,000 animal species, such as marine mammals, birds, fish and other higher organisms; 2,000 types of algae; and tens of thousands of ecologically critical microbes.<sup>206</sup> These species are highly adaptive to the Arctic's cold climate and crucial to its marine ecosystem.

One of the major factors affecting Arctic biodiversity today is the rapid rise in the region's temperature, now proceeding at twice the global rate.<sup>207</sup> Ice in the Arctic Ocean has become progressively thinner and is leaving more open water, especially during the summer months. This has brought increased access to Arctic marine areas, soon to include parts of the central Arctic Ocean. Human activities, such as navigation, oil and gas extraction, fisheries and tourism are expected to increase commensurately followed by other likely developments, such as marine research and bioprospecting, pipeline and cable placement, and the creation of artificial islands and similar installations. The likely effect of all these activities is the destruction of marine ecological balance of the Arctic Ocean.

Given the sensitivity and the fragility of the Arctic ecosystem, several parts of the Arctic Ocean can be regarded as ecologically and biologically significant areas (EBSAs): they have uniqueness or rarity with special importance for life history stages of endangered or threatened species. Therefore, a balance is needed between conservation and sustainable use of marine resources, including maintenance of ecosystem services and resilience to climate change and ocean acidification.

The newly adopted Agreement under the United Nations Convention on the Law of the Sea on the Conservation and Sustainable Use of Marine Biological Diversity of Areas beyond National Jurisdiction<sup>208</sup> ("BBNJ Agreement") will have a considerable impact on the governance of marine biodiversity in the regions that include an area beyond national jurisdiction. In the Arctic the BBNJ Agreement applies to the High Seas, the area of the Central Arctic Ocean, approximately 2.8 million square kilometers that lie beyond the 200-mile Exclusive Economic Zones of the five Arctic coastal states.

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205 See Why an International Fisheries Agreement Is Needed in the Central Arctic Ocean, Pew Charitable Trusts, <http://www.pewtrusts.org/en/projects/arctic-ocean-international/solutions/faqs>.

206 Conservation of Arctic Flora and Fauna, Arctic Biodiversity Assessment (2013), available at <http://arcticlcc.org/assets/resources/ABA2013Science.pdf>.

207 Susan Joy Hassol, Arctic Climate Impact Assessment 124 (2005).

208 Agreement under the United Nations Convention on the Law of the Sea on the Conservation and Sustainable Use of Marine Biological Diversity of Areas beyond National Jurisdiction, adopted at the 19<sup>th</sup> of June 2023, available at: [https://treaties.un.org/Pages/ViewDetails.aspx?src=TREATY&mtdsg\\_no=XXI-10&chapter=21&clang=\\_en](https://treaties.un.org/Pages/ViewDetails.aspx?src=TREATY&mtdsg_no=XXI-10&chapter=21&clang=_en).

Although the treaty text does not discuss specific aspects of its implementation in different regions, the agreement is aimed to directly impact governance and conservation regimes of these Arctic marine areas. Characterized by harsh conditions, the Arctic marine environment is biologically rich and extremely vulnerable to human induced activities. With dramatic shifts caused by climate change, these waters are becoming more accessible as the ice melts. The cumulative impact of harmful activities such as shipping, oil and gas exploration, deep sea mining, industrial fishing and other resource exploitation can further threaten already fragile ecosystems.

The mechanism to create high seas protected areas that the treaty aims to introduce can play a critical role in mitigation of the impacts of climate change and consequential economic activities in frangible marine environments like in the Arctic. The BBNJ Agreement is crucial for the implementation of the newly adopted Global Biodiversity Framework<sup>209</sup> that aims to protect and conserve at least 30% of the oceans by 2030, especially in the Central Arctic Ocean, where the existing framework for biodiversity conservation is limited and fragmented.

The text of the BBNJ Agreement aims to cover this legal and regulatory gap, encouraging cooperation between states and existing international instruments, frameworks and bodies that have relevant competence or jurisdiction, for instance, the CAO Fisheries Agreement<sup>210</sup> that sets out a moratorium on fisheries in the Arctic Ocean, the Convention for the Protection of the Marine Environment of the North-East Atlantic that covers the North-East Atlantic including part of the Arctic area, or global regulatory instruments such as under the International Maritime Organisation. Embracing an ecosystem-based approach, a legal regime featuring an integrated management system with restrictions on human activities and specific, a new Arctic-specific legal regime offers complementary measures for marine environmental protection. The BBNJ agreement addresses conservation and sustainable use of marine biodiversity in ABNJ. However, it is important to look at whether the general character of the instrument may be capable of endorsing Arctic-specific conditions to safeguard its critical marine biodiversity in the ABNJ

– *Gaps in existing regulatory mechanisms focusing on the Arctic*

While regulatory tools exist to protect marine biodiversity, they leave gaps when it comes to the Arctic. The UN Convention on the Law of the Sea (UNCLOS) and the Convention on Biological Diversity (CBD) provide legal

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209 The Kunming-Montreal Global Biodiversity Framework, adopted on 18<sup>th</sup> of December 2023, available at: <https://www.cbd.int/gbf/targets/>.

210 Agreement to prevent Unregulated High Seas Fisheries in the Central Arctic Ocean, adopted at 25/06/2021 available at : <https://www.mofa.go.jp/files/000449233.pdf>

frameworks that comprehensively address marine biodiversity protection. Yet, the rules in these instruments are rather broad-brush, requiring further action from the states parties to be effective. The International Maritime Organization (IMO) provides other tools at the international and regional levels that apply to the Arctic: in particular, its Polar Code;<sup>211</sup> amendments to Annexes I, II, IV, and V of MARPOL; and a new Chapter XIV within the framework of its International Convention for the Safety of Life at Sea (SOLAS).<sup>212</sup> The measures, effective from 2017, focus on safe vessel operation and protection of the marine environment in polar waters. Other applicable conventions are the International Convention on Oil Pollution Preparedness, Response and Cooperation (OPRC),<sup>213</sup> geared to controlling and reducing pollution after oil spills, and the London Convention, which deals with ocean dumping. Also salient in this regard are treaties concluded under the auspices of the Arctic Council – a high level inter-governmental forum of the eight circumpolar Arctic states and six circumpolar indigenous associations representing Arctic Indigenous Peoples with permanent participant status – examples being the Aeronautical and Maritime Search and Rescue in the Arctic<sup>214</sup> and Oil Spill Agreements.<sup>215</sup> Lastly, one could cite the obligations, although not legally binding, put forward in agreements concluded by the IMO and the Arctic Council. While these instruments offer an array of relevant sector-specific mechanisms to protect marine biodiversity, they fall short of being a comprehensive legal regime for the Arctic, in particular in ABNJ. A more effective governance structure is required.

The BBNJ agreement is expected to mitigate the regulatory gaps within the framework of an existing legal structure – the CBD and the UNCLOS, which are, again, rather broad-brush. The ongoing work for an internationally binding legal agreement is intended to guarantee a meaningful governance regime for marine biodiversity in the ABNJ in general, which would also include the Arctic Ocean. However, even though the legal regime being developed under the auspices of the UN General Assembly may be a significant development, it still seems right to call for either a specific section for the Arctic in particular or a separate regime requiring attention to be paid to Arctic-specific fragility.

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211 IMO, International Code for Ships Operating in Polar Waters (Polar Code), IMO Doc. MSC.385(94) (Nov. 21, 2014), available at <http://www.imo.org/en/MediaCentre/HotTopics/polar/Documents/POLAR%20CODE%20TEXT%20AS%20ADOPTED.pdf>.

212 International Convention for the Safety of Life at Sea, UNTS 1184, 1185 (p.2).

213 the International Convention on Oil Pollution Preparedness, Response and Cooperation, UNTS 1891.

214 Arctic Council 7th Ministerial Meeting, Agreement on Cooperation on Aeronautical and Maritime Search and Rescue in the Arctic (May 12, 2011), available at <http://www.ifrc.org/docs/idrl/N813EN.pdf>.

215 Agreement on Cooperation on Marine Oil Pollution Preparedness and Response in the Arctic (May 15, 2013), available at <https://oaarchive.arctic-council.org/handle/11374/529>.

– *A new legal regime to protect Arctic marine biodiversity in the ABNJ?*

The BBNJ treaty that has been already adopted, having a general scope, will fall short of an effective regime for the protection of marine biodiversity in the Arctic Ocean because of the uniqueness, fragility, and the sensitivity of the Arctic marine ecosystem. At this stage it is worth mentioning the process of Negotiations in order to be able to understand the importance of this Agreement.

It has been extensively discussed the inclusion of an Arctic-specific chapter to be included in this Agreement. This has been rejected at the end, but even if an Arctic-specific chapter was added to the proposed agreement, one has to bear in mind that the Prep Com was mandated to prepare a draft by the end of 2017 only to submit it to the UN General Assembly. Thereafter, the UN General Assembly would have taken an initiative for an international conference to negotiate a treaty. It would require legal commitments from a large number of states, and the treaty would come into force only after a long process of ratification by each state. This time-consuming process of negotiating the treaty would have left the Arctic's marine biodiversity unprotected. When eventually the treaty comes into force, non-party States still will not be bound by the treaty.

Given the urgency in the context of the Arctic, an alternative solution would be to negotiate a regional agreement between the Arctic States under the auspices of the Arctic Council addressing the sensitive ecosystem of Arctic marine areas for the greater protection of its biodiversity in the ABNJ. The legal regime might take the form of an agreement for the protection of BBNJ applicable to Arctic Ocean EBSAs. While the concept of EBSAs is endorsed within the ambit of the CBD regime, it has not yet become a concrete tool to employ for the conservation of marine biodiversity. Some argue that CBD-endorsed MPAs, complemented by the UNCLOS obligations concerning the preservation of marine biodiversity, do offer tools to protect marine biodiversity. However, despite the legal basis for the creation of MPAs under the general obligation of marine protection set forth in UNCLOS, Article 192, in combination with the specific protection of "rare or fragile ecosystems as well as the habitat of depleted, threatened or endangered species" in Article 194(5) of UNCLOS, it is not explicit whether MPAs can be established in an ABNJ. The general view is that MPAs can be established within the Exclusive Economic Zone (EEZ) to which coastal states have authority to extend national regulations.

It has been highlighted in the Prep Com meeting that a universal standard for MPA establishment is not possible, cautioning against a "one-size-fits-all" approach to ABMTs. An Arctic-specific MPA would offer a regional legal regime, which would curtail the otherwise lengthy process of treaty negotiation by involving a limited number of States, those having a clear stake in the Arctic Ocean and a duty of stewardship towards the region. These are states that are more willing than most to endorse biodiversity management, given the

findings put forward by the Arctic Council in the extensive studies of its working group, Protection of the Arctic Marine Environment (PAME), and in its “Arctic Biodiversity Assessment” (ABA).

The question is whether such an Arctic-specific legal regime, when established, would offer effective legal protection for marine biodiversity in ABNJ. The law of the sea articulates unequivocal freedoms allowing all states to use ABNJ, for fishing, among other purposes.<sup>216</sup> As long as the proposed BBNJ treaty does not restrict high sea freedoms otherwise, a regional agreement would not necessarily bind states that are not parties to it. However, the Arctic states having coastlines around the Arctic Ocean do have stewardship roles compelling them to protect the Arctic marine area, even in ABNJ. In particular, the five coastal states control large portions of the maritime areas in the Arctic Ocean as part of their EEZs. In this light, the Arctic Council, given its previous experiences of brokering similar agreements, such as the 2013 Oil Spill Agreement, cited earlier,<sup>217</sup> whose jurisdiction extends into ABNJ, could be an appropriate venue for negotiating such an agreement. On the one hand, it would offer an effective regime for Arctic biodiversity, and on the other hand would be faster to negotiate. The UN General Assembly-initiated proposed BBNJ treaty with general scope will then complement well the regional, Arctic-specific agreement.

An Arctic-specific legal regime would offer an extension of cooperation in ABNJ. However, unless legal compliance by non-Arctic States is secured, the effectiveness of such a regime will be questionable. Yet, although non-Arctic States that are not parties to the treaty would incur no legal obligations, the instrument would provide an exemplar encouraging them to cooperate with the Arctic States proper – the members of the Arctic Council, who boast a strong regional institution in the Council. Indeed, influential non-Arctic actors, such as China, an observer on the Council, probably would not want to disregard the regime’s institutional norms despite their not being legally binding. Moreover, now that the BBNJ treaty is in place, the Arctic-specific regional treaty can be expected to gain greater legitimacy. A regional agreement would be the most expeditious solution for achieving better governance of biodiversity in the high Arctic marine areas, including ABNJ.

#### 4.5 STRENGTHENING THE ‘ARCTIC VOICE’ IN INTERNATIONAL FORA

Many of the environmental threats to the Arctic arise largely from outside the region and an on-going challenge is to translate the seriousness of Arctic

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216 [10] J. Scott Davidson, *New Zealand: United Nations Convention on the Law of the Sea Act 1996*, 12 *Int’l J. Marine and Coastal Law* 404, 404–12 (1997).

217 Arctic Ocean Conference, May 27–29, 2008, *The Ilulissat Declaration* (May 28, 2008), available at [http://www.oceanlaw.org/downloads/arctic/Ilulissat\\_Declaration.pdf](http://www.oceanlaw.org/downloads/arctic/Ilulissat_Declaration.pdf).

human and environmental stresses into effective law and policy responses at the global level.<sup>218</sup> While AMAP assessments have been influential in the negotiation of agreements relating to chemicals<sup>219</sup> and heavy metals,<sup>220</sup> the ability for the Arctic Council to push a strong environmental agenda in global fora, besides the IMO, has been weak to non-existent. For example, adequate climate change mitigation responses, reflecting the serious Arctic consequences of melting ice and rising temperatures, have yet to be forged under the UNFCCC.<sup>221</sup> In light of the vast quantities of chemicals found in the Arctic with bioaccumulation potential, there is a need to consider more proactive approaches to chemicals management.<sup>222</sup>

The Council's Arctic Ocean Review project promises to help mobilise an Arctic Council agenda at the global and regional levels to better protect Arctic communities and their environment. The Phase II report, published in 2013, develops options to strengthen international agreements and measures as one of its major aims.<sup>223</sup> Representatives of the eight Arctic States negotiated the final AOR recommendations. As a consensus-based discussion forum, the Arctic Council is limited by the political views and sensitivities of its eight Member States and reaching consensus on a common voice may be difficult. It is Member States that are parties to international agreements and are members of international organisations, not the Arctic Council itself. Conceptualising how the Council might best find ways to make the voice of the Arctic heard

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218 D. V. Zwaag, R. Huebert, S. Ferrara (2002), *supra*; O. R. Young (2011), *supra*, at 334.

219 See D. L. Downie, T. Fenge (eds.), *Northern Lights Against POPs: Combating Toxic Threats in the Arctic*, McGill Queens University Press (2003).

220 For example, AMAP Mercury assessments have fed into the decision of the UN Environmental Program Governing Council in 2009 to develop a global legally binding instrument on mercury and subsequent negotiations with a goal of a final agreement in 2013. UNEP, *The Negotiating Process*, available online at <http://www.unep.org/hazardoussubstances/Mercury/Negotiations/tabid/3320/Default.aspx>.

221 At the Nuuk meeting, Ministers merely confirmed the commitment of all Arctic States to work together and with other countries to implement the agreements reached in Cancun by the next climate talks in Durban, South Africa, and urged all parties to the 1992 United Nations Framework Convention on Climate Change, 1771 UNTS 107 (1992) [UNFCCC] to take urgent action to meet the long term goal of holding the increase in global average temperature below 2° above pre-industrial levels, Nuuk Declaration, *supra*, at 4. On the inadequacy of mitigation efforts see M. Doelle, *The Climate Change Regime and the Arctic Region*, *Climate Governance in the Arctic 27* (T. Koivurova, E. Carina H. Kesitalo, N. Bankes eds., 2009); More about the Contribution of the Arctic Council to the Paris Agreement can be found at: <https://unfccc.int/news/arctic-council-contribution-to-the-impact-of-the-paris-agreement>.

222 For a solid review of more precautionary ways forward including the possibility of a global reverse listing approach where only chemicals on a 'safe list' would be allowed to be produced and marketed, see D. L. V. Zwaag, *The Precautionary Approach and the International Control of Toxic Chemicals: Beacon of Hope, Sea of Confusion and Dilution*, 33 *Houston Journal of International Law* 605 (2011).

223 SAO Report, *supra*, at 26.

in international settings is difficult.<sup>224</sup> Suggestions have included the establishment of an international cooperation working group, a coordinating committee for external relations,<sup>225</sup> and a joint working group on the voice of the Arctic among key partners.<sup>226</sup>

The Arctic Council Communication and Outreach Guidelines, adopted at the Nuuk Ministerial meeting in 2011 supplemented by the most recent ones at 2020, may assist to some extent.<sup>227</sup> These Guidelines give the SAO Chair the key role of disseminating information and appearing at conferences, seminars and meetings of international organisations in order to increase the profile of the Arctic Council. However, when communicating on behalf of the Arctic Council, the Chair is to confine comments to factual information and agreed positions. When faced with inquiries on subjects without a common position, the Chair must emphasise that any communication is on behalf of the Chairmanship and not the Council.<sup>228</sup>

#### 4.6 DYNAMIC MEANS OF MULTI-LEVEL GOVERNANCE

Recognising that the Arctic remains politically stable, despite rapid environmental change does not imply complacency about the current regulation of economic activities in the region. Unlike those who see the adoption of a region-wide binding environmental protection treaty as the best way forward, I seek to show that the Arctic Council is not an effective forum to address broad issues such as climate change, marine pollution from land-based sources, shipping, fisheries management and petroleum activities.

The limited potential of Arctic institutions to handle governance challenges is evident in such areas as climate change and regional bioaccumulation of hazardous substances. A relatively young, soft-law institution with narrow membership, like the Arctic Council, can play at most a modest role in efforts to combat these essentially global problems.<sup>229</sup> For three decades now, mitigation of greenhouse gas emissions has been addressed under the UNFCCC<sup>230</sup> and since 2015 by the Paris Agreement.

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224 O. R. Young (2002), *supra*, at 13.

225 Koivurova (2010), *supra*; D. V. Zwaag, R. Huebert, S. Ferrara (2002), *supra*, at 177.

226 Partners might include the Indigenous Peoples Secretariat, the Executive Committee of the Northern Forum and Senior Arctic Officials of the Arctic Council, O. R. Young (2002), *supra*, at 18.

227 Arctic Council, Report on Communication and Outreach Guidelines, March 21, 2011, available online at <https://oaarchive.arctic-council.org/handle/11374/1054>; Arctic Council Communications and Outreach Guidelines, SAO Meeting 2020, available at: <https://oaarchive.arctic-council.org/handle/11374/2511>.

228 Arctic Council, Outreach and Communication Guidelines (2011), *supra*, at 1.

229 A.A.H. Hoel, Climate Change, in *International Cooperation and Arctic Governance: Regime Effectiveness and Northern Region Building 112* (O. S. Stokke and G. Hønneland eds., 2007).

230 A.A.H. Hoel (2007), *supra*, at 207.

Similar comments apply to other hazardous compounds, which are cold-trapped and bio accumulating in Arctic ecosystems, and threatening the health of Arctic residents. The Pole bound atmospheric and oceanic circulation systems, and rivers draining into the Arctic seas, transport a range of toxic substances that originate or volatilise further south – including heavy metals and POPs such as organ chlorine pesticides used in agriculture, industrial chemicals, and a range of combustion products. Regional institutions cannot deal seriously with these problems without engaging other international institutions that have broader participation.

Broader regimes are necessary also to deal effectively with the challenges stemming from the rise in Arctic maritime transport. While in some issue areas, such as marine pollution or sea-bed activities under national jurisdiction, UNCLOS encourages regional initiatives or even defines global minimum standards, the situation is quite the opposite for navigation. UNCLOS Article 211 sets maximum standards concerning what States may request of a vessel flagged by another State. Those regulatory ceilings become lower the further away from the coastline a vessel operates. In ports and internal waters, coastal States have the same monopoly on regulation and rule enforcement concerning all activities as they do on land: States ‘which establish particular requirements’ have only to ‘give due publicity to such requirements’ and communicate these to the ‘competent international organization’ – meaning the IMO. In their territorial seas, States are free to ‘adopt laws and regulations for the prevention, reduction and control of marine pollution from foreign vessels’ as long as such measures do not impede innocent passage or restrict vessel design equipment or manning. In the EEZ, however, scant leeway remains: coastal States can unilaterally only set rules ‘conforming to and giving effect to generally accepted international rules and standards established through the competent international organisation or general diplomatic conference’ – which again is the IMO. Should the coastal State consider those rules and standards inadequate for certain sensitive areas, it must seek approval from the IMO even for relatively modest interventions such as compulsory pilotage or requirements to use particular sea lanes to reduce the risks of grounding or collision. Any additional measures shall not require foreign vessels to observe design, construction, manning or equipment standards other than generally accepted international rules and standards. Thus, when States proposed in 1990 to negotiate a polar code specifying and harmonising construction, design, equipment and other requirements for vessel operations in partly ice-covered waters, they focused on the IMO.<sup>231</sup>

In contrast, circumpolar institutions for the governance of Arctic fisheries and petroleum resources are eclipsed not by broader regimes but by narrower ones. Conservation and use of fisheries resources are among the issues where UNCLOS encourages regional management regimes (Articles 63–64 and 116–119),

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231 L.W. Brigham (2000), *supra*.

but 'regionality' here refers to the set of States engaged in harvesting the same stock, based either on zonal attachment or on historical catches.<sup>232</sup> For stocks straddling the high seas and coastal-State zones, parties to the Fish Stocks Agreement<sup>233</sup> may not legally allow their fishers to operate in an area regulated by a regional regime without joining or cooperating with it (Article 8 of the Agreement).<sup>234</sup> However, stock that gradually changes its migratory pattern due to temperature changes and becomes increasingly available in Arctic waters is unlikely to be harvested by all Arctic States. Moreover, zonal attachment or historical catches might imply that certain non-Arctic States have legitimate interests in the stock

In all sectors likely to see rising economic activity, the Arctic Council is poorly equipped to play a decisive regulatory role. Broader institutions will continue to predominate in the international governance of maritime transport as well as the wide range of activities that generate greenhouse gases or toxic compounds affecting Arctic ecosystems. Narrower institutions, involving coastal States, or international arrangements involving subsets of them, such as the RFMOs, are better placed to effectively managing the rise of regional offshore petroleum activities or the greater availability of commercial fish stocks.

#### 4.7 CONCLUSION

The Arctic States have relatively few unsettled maritime boundary issues, manage the remaining issues in a cooperative manner, and articulate their Arctic aspirations in policy documents that emphasise the rule of law and the need for international cooperation. A legally binding, globally legal framework for governing economic uses of the region already exists, which allows differentiated responses to new challenges deriving from increasing economic activities. Those responses must involve other institutions aside from regional ones, like the Arctic Council. This is because many regional environmental problems originate outside the Arctic or involve actors beyond the jurisdictional reach of regional States. The fact that Arctic environmental challenges cannot be addressed without significant contributions from broader or global institutions also raises the question of how the Arctic Council should interact with the non-Arctic States that are already permanent observers in the Council.

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232 O.S. Stokke (2000) *Managing straddling stocks: the interplay of global and regional regimes*, 43(2–3) *Ocean Coast Manage* 205 (2000).

233 1995 Agreement for the implementation of the provisions of the United Nations Convention on the Law of the Sea of 10 Dec 1982 relating to the conservation and management of straddling fish stocks and highly migratory fish stocks, 2167 UNTS 3 (2001), entered in force December 11, 2001.

234 O.S. Stokke (ed.), *Governing high seas fisheries, The interplay of global and regional regimes*. Oxford University Press (2001).

Important governance functions stand to benefit from greater involvement of all interested States. These functions include: generating knowledge about regional risks and response options; achieving broadly applicable regulations that are sensitive to Arctic concerns; and mobilising resources and legal competence necessary for rule implementation. The provision of effective governance remains the best option to ensure political stability in the Arctic.

After almost three decades of existence, the Arctic Council has evolved from being just a 'study and talk' venue to a policy shaping and even law-making forum. This is despite being often criticised for its soft law status and structural limitations.<sup>235</sup> The Arctic Marine Shipping Assessment represented a significant shift with its seventeen recommendations leading to concrete follow-up actions at the global, regional and national levels.<sup>236</sup> The use of task forces to negotiate instrument texts under the auspices of the Council has become an innovation, with a SAR Agreement concluded in May 2011, and a further instrument on regional emergency preparedness and response under development. The Council negotiated and concluded an Oil Spill Response Agreement on May 2013 as an effort to progress the decision-making process.<sup>237</sup>

A sea of governance challenges still confronts the Arctic Council. Those challenges include: full implementation of existing commitments and recommendations; completing the Council's restructuring; addressing future ocean governance of areas beyond national jurisdictions; and strengthening the influence of Arctic perspectives in international fora. The Council continues to flexibly and incrementally evolve through task forces, assessments, reviews, expert groups and work-plans.<sup>238</sup> Many issues are yet to be addressed by the Council, including bio prospecting and geoengineering.<sup>239</sup> Harmonised national regulatory approaches have yet to be forged particularly in the area of oil and gas regulation. Whether or not the Council will be able to adequately stem the powerful tides of climate change and globalisation remains to be seen.

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235 T. Koivurova (2010), *supra*.

236 AMSA Report (2009), *supra*.

237 *Supra* note 202.

238 On the innovative and flexible nature of the Arctic Council with regulatory arrangements been developed as needed see O. R. Young, Whither the Arctic 2009? Further Developments, 45(2) *Polar Record* 179 (2009); and Young (2011), *supra*, at 333.

239 See B. Egede-Nissen, H. D. Venema, Desperate Times, Desperate Measures: Advancing the Geoengineering Debate at the Arctic Council, IISD (2009), available online at [http://www.iisd.org/sites/default/files/publications/desperate\\_times\\_desperate\\_measures.pdf](http://www.iisd.org/sites/default/files/publications/desperate_times_desperate_measures.pdf).



## 5.1 INTRODUCTION

The fragile Arctic environment is under growing stress and subject to various changes. Accelerated resource extraction, industrial expansion and distant polluting activities are the main factors that can put into jeopardy the ecological integrity of one of the world's greatest wilderness and unique areas. To protect the environment more effectively, the current regime –consisting mainly of soft law – should be expanded and strengthened. One of the options discussed is its transformation to a revitalised Arctic environmental regime. That means that it could potentially be modelled on the Antarctic treaty regime and subject to a legally binding treaty.

This Chapter discusses the current Arctic regional environmental legal regime, assesses the applicability of global treaties and soft law agreements to the Arctic, and discusses the need for a new legally binding agreement. Potential advantages of a treaty could definitely include more financial stability, a higher degree of State commitment to Arctic environmental protection and strengthened and harmonised environmental standards for the region.

Calls for an Arctic treaty have been made for many years. The southern polar region, with a similar environment and environmental stressors, is governed by a comprehensive and far-reaching environmental protection treaty system which is very conservative as it mainly prevents every activity in the area. However, there are key differences between the two poles in terms of geology, population, industrial activity, and national jurisdiction that can make the adoption of an Antarctic-style treaty extremely unlikely for the Arctic.

## 5.2 ARCTIC-ANTARCTICA: RELEVANCE OF AND DIFFERENCES BETWEEN THEIR ENVIRONMENTAL PERSPECTIVES

Antarctica has become the first area regulated by a closed system which can be characterized as a self-contained regime purely focused on the management of the environment. Development of this regime was possible due to the absence of an indigenous human population and land-based industrial and resource uses, so there was no need to balance conservation and economic

development.<sup>1</sup> In contrast, the Arctic's permanent population depends on economic activity, however there is not certainty that the wealth from resource extraction in the Arctic will be beneficial for local populations. Environmental degradation has also resulted from industrial use. Rather than replicating the Antarctic treaty regime, which preserves the continent as a "natural reserve, devoted to peace and science", a new Arctic regional agreement could reconcile indigenous rights,<sup>2</sup> societal needs, and economic activity, while ensuring that ecological integrity is maintained. Indigenous rights and Arctic economic development are issues of both local and international interest. The Arctic has the potential to become a different type of model regime, the testing ground for a new regional environmental agreement that takes into consideration the existence of permanent population and growing economic activities. Moreover, this Chapter analyses the adequacy of the current Arctic environmental legal regime. The Arctic Environmental Protection Strategy (AEPS), now encompassed by the Arctic Council, was never legally binding. This Chapter will consider the possibility of negotiating a sustainability treaty for the Arctic, with similarly high standards of environmental protection as those in the 1991 Protocol on Environmental Protection to the Antarctic Treaty.<sup>3</sup> An Arctic treaty could also encompass the sustainable development focus of the Arctic Council, and enshrine innovative legal approaches already in use, such as the unique role of indigenous peoples.

All land areas fall under the uncontested sovereignty of one of the eight Arctic States (Canada, Denmark/Greenland, Finland, Iceland, Sweden, Norway, Russia and the United States), national domestic laws contain the primary legal protection of the environment. Regional laws also regulate the Arctic environment as Denmark, Finland and Sweden are subject to European Union (EU) laws.<sup>4</sup>

Canada and the US are parties to the North American Agreement on Environmental Cooperation.<sup>5</sup> However, international environmental laws and principles play an increasing role in this legal regime. There are a number of international treaties that do offer protection for the Arctic environment, such as the Climate Change, Biodiversity and the Persistent Organic Pollutants

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1 Linda Nowlan, Arctic Legal Regime For Environmental Protection, IUCN Environmental Policy and Law Paper No.44, 2001, available at: <https://web.law.columbia.edu/sites/default/files/microsites/climate-change/files/Arctic-Resources/Sea-Ice-Refuge/IUCN.pdf>.

2 There will be analytical discussion on the role of the Indigenous People in the Arctic Region in the next chapter.

3 Protocol on Environmental Protection to the Antarctic Treaty, 1991, in G. Triggs, A. Riddell, Antarctica Legal and Environmental Challenges for the Future, BIICL (2007), 249-266.

4 Linda Nowlan *supra* note 2.

5 North American Agreement on Environmental Cooperation, Sept. 8, 1993, Canada/Mexico/United States, 32 I.L.M. 1480.; L.J. Allen, The North American Agreement on Environmental Cooperation: Has it Fulfilled Its Promises and Potential?: an Empirical Study of Policy, 23 Colorado Journal of International Environmental Law and Policy 121 (2012).

(POPs) Conventions.<sup>6</sup> Moreover, there are other regional bodies such as the Arctic Council, an intergovernmental forum formed by the President of Iceland in 1996 to address common Arctic concerns and to serve as an umbrella forum for Arctic stakeholders.<sup>7</sup>

While social equity and economic stability are essential elements of sustainability, this Chapter concentrates on the extent to which the Arctic environmental legal regime is adequate. Environmental protection has not traditionally been a primary focus of the legal regimes of the Arctic States. The current regional regime emerged from environmental concerns, prompted by catastrophes such as the Exxon Valdez oil spill and the Chernobyl nuclear accident, and by mounting scientific evidence that distant industrial practices were harming Arctic peoples and ecosystems.<sup>8</sup>

Finally, this Chapter examines whether the combined effect of global agreements and domestic environmental laws is sufficient to protect one of the world's last great wilderness areas. The Arctic States, bound together by their common borders on the world's most northern ocean, share common topography, resources, environment, peoples and concerns. Though there are increasingly close linkages between international/regional and domestic environmental legal regimes in the Arctic, a comprehensive legally binding legal structure is missing. A regional Arctic Environmental Protection or Sustainability Agreement could be a vehicle to fill gaps in the still incomplete Arctic legal regime, and may better serve to protect the region's unique characteristics. The design of a strengthened legal regime should be guided by the overlapping ecological and cultural values of residents of the Arctic. The increasing decision-making role of indigenous Arctic peoples should also be reflected in a revitalised regime.

## 5.3 THE CURRENT REGIONAL ARCTIC ENVIRONMENTAL LEGAL REGIME

### 5.3.1 The Arctic environment

The Arctic is a vast, a region with a population of approximately three and a half million people, of which approximately one-fifth are indigenous people.<sup>9</sup>

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6 Climate Change, Biodiversity and the Persistent Organic Pollutants (POPs) Conventions, United Nations, Treaty Series, vol. 2256, p. 119.

7 More information about the Arctic Circle can be found at: <http://www.arcticcircle.org/>.

8 Stephen Leahy, Exxon Valdez changed the oil industry forever – but new threats emerge, National Geographic, 22 March 2019, available at: <https://www.nationalgeographic.com/environment/article/oil-spills-30-years-after-exxon-valdez>.

9 The definition of the Arctic area used in this Chapter is the same as described in the Introductory Chapter; i.e. the definition used by the Working Groups of the Arctic Council: the boundary lies between 60°N and the Arctic Circle, with some modifications. In the North Atlantic, the southern boundary follows 62°N, and includes the Faroe Islands. To the west,

The Arctic is the largest remaining wilderness area in the northern hemisphere. With a land-mass exceeding 25 million km,<sup>2</sup> the Arctic is one of the world's largest geographical regions.<sup>10</sup> Russia owns the most of the Arctic's land-mass making Canada the second largest State in the area. All of Greenland and Iceland's land mass is located above the 60th parallel. The ice-covered Arctic Ocean is almost completely enclosed, with only four openings. About 20% of the Arctic Ocean is free of ice, even in summer, while it is expected to become fully ice-free by 2035.<sup>11</sup> The Arctic is dominated by extreme climatic conditions, and it plays a key role to the balance of the climate of our planet through the various circular streams that have the Arctic and the Antarctic as their referral points.<sup>12</sup>

The Arctic is the home of many unique marine and terrestrial species, such as narwhals, polar bears, and reindeer, and is a major source of life for migratory birds, marine mammals and various species of crabs and prawns. Arctic species congregate in huge numbers. The largest puffin colony in the world has more than one million nests on Talan Island in the Okhotsk Sea.<sup>13</sup> Three of the world's largest caribou herds have 500,000 animals or more: the Western Arctic herd in northwest Alaska, the George River herd in northern Quebec and the Taimyr Peninsula herd in Siberia.<sup>14</sup> The Arctic is an important area for scientific and environmental research, however, the seeming purity of the environment can be deceiving. Pollution from local and distant sources affects the region, catalogued in a comprehensive *State of the Arctic Environment Report* (SOAER) in 2007 and have been reaffirmed in various reports till the latest in 2021.<sup>15</sup> For example, health risks from the consumption of predatory marine and terrestrial mammals with high degrees of contaminants are significantly

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the Labrador and Greenland Seas are included. In the Bering Sea area, the southern boundary is the Aleutian chain. Hudson Bay and the White Sea are considered part of the Arctic for the purposes of the assessment. In the terrestrial environment, the southern boundary in each country is determined by that country, but lies between the Arctic Circle and 60°N. AMAP, Arctic Pollution Issues: A State of the Arctic Environment Report (1997) [hereafter SOAER].

10 IUCN Draft Framework Strategy and Action Plan for IUCN Work in the Circumpolar Arctic, February 2021, available at: [https://www.iucncongress2020.org/files/iucn\\_programme\\_2021\\_2024\\_0.pdf](https://www.iucncongress2020.org/files/iucn_programme_2021_2024_0.pdf).

11 Please see at: <https://www.cbsnews.com/news/arctic-ocean-climate-change-ice-free-15-years/>.

12 More information about the role of the Arctic on the climate of Earth can be found at: <http://www.greenfacts.org/en/arctic-climate-change/>.

13 Natural Resources Canada, Canadian Arctic Profiles, Species, available online at <http://collections.ic.gc.ca/arctic/english.htm>.

14 Beverly and Qamanirjuaq Caribou Management Board, Frequently Asked Questions about Caribou can be found online at <http://www.arctic-caribou.com/>.

15 The SOAER has been updated in 2021. The summary report and the scientific studies companion volume can be found at <http://www.amap.no>.

higher in Arctic than non-Arctic States and they have been reported and highlighted for more than a decade.<sup>16</sup>

### 5.3.2 Environmental challenges in the Arctic region

One of the major issues in the Arctic's environment is the deposition of contaminants into the Arctic ecozones through long-range transport in the atmosphere.<sup>17</sup> At the regional level important issues are emerging across various sectors including mining, tourism, military activities and exploration and exploitation of gas and oil.<sup>18</sup> Also the increasing ocean temperatures forms a huge concern as the impact of climate change on the Arctic and its wildlife and peoples is clear. Finally, radioactivity, persistent organic pollutants, acidification, oil pollution and heavy metals need to be addressed since they concern the vast majority of the Arctic stakeholders. The need for regulation to curb over-harvesting of natural resources such as fish and marine mammals has been already discussed in Chapter Three.<sup>19</sup>

Concerns about the Arctic environment increase in relevance due to heightened rates of resource extraction in the region.<sup>20</sup> Since 2000 a record number of new mines have been opened, such as diamond mines in Canada's Northwest Territories, or expanded, while the concessions of mines slated for closing have been extended, such as the Lake Myvatn diatomite mine in Iceland.<sup>21</sup> Timber harvests from boreal forests in the far North are expanded,

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16 SOAER, AMAP Report on Issues of Concern: Updated Information on Human Health, Persistent Organic Pollutants, Radioactivity, and Mercury in the Arctic, September (2010), online at: <https://oarchive.arctic-council.org/handle/11374/620/browse?type=subject&value=Human+health>.

17 Linda Nowlan, *supra* note 2.

18 Government of Canada, Challenges for Sustainable Development, in *The State of Canada's Environment*, Ottawa (1996); Eugene Rumer, Richard Sokolsky, and Paul Stronski, *Russia in the Arctic – A Critical Examination*, Carnegie Endowment for International Peace, 2021, available at: [https://carnegieendowment.org/files/Rumer\\_et\\_al\\_Russia\\_in\\_the\\_Arctic.pdf](https://carnegieendowment.org/files/Rumer_et_al_Russia_in_the_Arctic.pdf); On the implications of Arctic Tourism on the Arctic Environment please see: <https://www.arctic-council.org/news/as-arctic-marine-tourism-increases-how-can-we-ensure-its-sustainable/>.

19 ICJ, *Whaling in the Antarctic* (Australia v. Japan: New Zealand intervening), 2014 ICJ Rep. 226.

20 Multiple reports from Wilson Centre describes accurately the current state of play in the Arctic Ocean. Available at: <https://afghanistan.wilsoncenter.org/sites/default/files/media/documents/event/Krupnik-Arctic.pdf>; <https://afghanistan.wilsoncenter.org/sites/default/files/media/documents/event/Titley-Arctic.pdf>; <https://afghanistan.wilsoncenter.org/sites/default/files/media/documents/event/Jones-Arctic.pdf>.

21 A. Finnsen, Controversial Decision on Mining Lake Myvatn, 4.00 WWF Arctic Bulletin (2000).

which causes a fragmented habitat.<sup>22</sup> The overfishing in the North Pacific, North Atlantic and the Arctic Oceans (including Central Arctic Ocean) is a fact.<sup>23</sup> There are already proposals for new offshore oil and gas drilling (including new pipelines) and the nuclear industry in the Arctic is expanding, demonstrated by proposals to construct several floating nuclear power plants in eastern Siberia.<sup>24</sup> Russia's legislation alone, allowing the import of spent nuclear waste for storage and disposal, generated \$30 billion in revenue.<sup>25</sup>

#### 5.4 THE ABSENCE OF AN ENVIRONMENTAL LEGAL REGIME AND INITIATIVES FOR COOPERATION

Some domestic laws in the Arctic States provide a framework for environmental protection.<sup>26</sup> Moreover, global treaties and norms increasingly influence the content of domestic laws, providing the backdrop for domestic legal developments. Marine treaties have influenced the content of Arctic States' domestic environmental laws, and to date, the focus of the Arctic environmental legal regime has been on marine conservation. Bilateral agreements between individual Arctic States on issues, such as fisheries, wildlife and protection from pollution, are numerous.<sup>27</sup> This section describes the growth in Arctic cooperation initiatives, and the elements of the current "soft-law" Arctic environmental legal regime. The next sub-chapter discusses the global and regional legal framework that can be applicable to the Arctic.

##### 5.4.1 Legal overview

The legal regime applicable in the Arctic consists of a series of some "soft law" agreements, which started with the 1991 Declaration on Protection of the Arctic

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22 UNEP, *The Polar Regions*, Chapter 2, GEO, Nairobi (2000), Lena Hellmann, Alexander V. Kirdeyanov, Ulf Büntgen, *Effects of Boreal Timber Rafting on the Composition of Arctic Driftwood*, MDPI, 2016, available at: <https://www.mdpi.com/1999-4907/7/11/257/pdf>.

23 Further discussion on Arctic Fisheries is made on a systematic way In Chapter 3 of this Thesis.

24 Nilsen, *Floating Nuclear Plants in the Siberian Arctic?*, 4.00 WWF Arctic Bulletin (2000); Charles Digges, *Russia advances on plans for new floating nuclear plants*, 2021, available at: <https://bellona.org/news/nuclear-issues/2021-09-russia-advances-on-plans-for-new-floating-nuclear-plants>.

25 Whittell, *Russia to accept nuclear waste – for \$30 billion*, Vancouver Sun, Dec. 22, 2012, at A9c.

26 Rüdiger Wolfrum, *The Arctic in the Context of International Law*, 2009, available at: [https://www.zaoerv.de/69\\_2009/69\\_2009\\_3\\_a\\_533\\_544.pdf](https://www.zaoerv.de/69_2009/69_2009_3_a_533_544.pdf).

27 D. Rothwell, (1996), *supra*, 157; DL VanderZwaag, *Arctic*, Yearbook of International Environmental Law, 2019, available at: <https://academic.oup.com/yielaw/article/30/1/281/6323735>.

Environment and the Arctic Environmental Protection Strategy (AEPS).<sup>28</sup> The AEPS was absorbed into the work of the Arctic Council, which was created in 1996. It remains a valid Strategy for Working Groups of the Arctic Council and it describes the jurisdictional limits of the Council. The 1998 Regional Programme of Action for the Protection of the Arctic Marine Environment from Land-Based Activities and the 2000 Arctic Council Action Plan to Eliminate Pollution of the Arctic form the most important examples of soft law environmental agreements in the region.<sup>29</sup> The regime's governing body, the Arctic Council, cannot be characterized as an international organisation with legal personality, but it is perceived as a "high-level forum intended to provide a means for promoting cooperation among Arctic States in particular issues of sustainable development and environmental protection in the Arctic."<sup>30</sup>

The Arctic environmental legal regime has some problems that need to be resolved related to specific environmental issues, such as inadequate control of environmental impacts of mining and incomplete biodiversity protection, the lack of integration of indigenous peoples into the legal regime of most Arctic States, despite indigenous rights and land claims, and the sharing of benefits from resource activities with indigenous as well as local communities.<sup>31</sup> The regional regime appears to be unenforceable, lacking specific commitments, targets and timetables for action, and suffering from chronic under-funding.

#### 5.4.2 Growth in Arctic cooperation initiatives

The last 50 years numerous new Arctic governance initiatives have emerged. The Arctic Council seems to be the most important of these new initiatives. Each Member State is represented by Senior Arctic Officials (SAO) on the Council and this Senior Official is traditionally granted the legal status of an Ambassador. While the Declaration does not state who should represent the States at the biennial council meetings, Foreign Ministers usually lead State delegations.<sup>32</sup>

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28 30 ILM 624 (1991).

29 Linda Nowlan *supra* note 2; The details on the 1989 Regional Program, of Action for the Protection of the Arctic Marine Environment from Land Based Activities can be found here: <https://oarchive.arctic-council.org/handle/11374/872>; The details on the 2000 Arctic Council Action Plan to Eliminate Pollution of the Arctic form can be found here: <https://oarchive.arctic-council.org/handle/11374/429>.

30 Declaration on the Establishment of the Arctic Council, Ottawa, 1996, available online at <http://www.arcticcouncil.org/establ.asp>; A more analytical discussion on the Arctic Council and about the Arctic Governance is discussed in Chapter 4 of this Thesis.

31 The issues of indigenous population are discussed in the next chapter of this Thesis.

32 Linda Nowlan *supra* note.

A host of other organisations also exist to serve the region. These have proliferated since the late 1980s. Such initiatives include: region-wide inter-governmental regimes such as the Arctic Council and AEPS; sub-national region-wide regimes such as the Northern Forum and Standing Committee of Parliamentarians of the Arctic Region; sub-regional inter-governmental regimes such as the Nordic Council and Barents Euro-Arctic Region; indigenous organisations such as the Saami Council and Inuit Circumpolar Conference; or non-governmental organisations such as the International Arctic Science Committee.<sup>33</sup> A brief description of the major initiatives follows.<sup>34</sup>

*The Nordic Council*<sup>35</sup> – Established in 1952 to promote dialogue and joint action on regional issues, the Council brings together representatives from the parliaments and governments of the five Nordic States – Norway, Sweden, Finland, Denmark, Finland – and the three associated “homerule” territories of Greenland, the Faroe Islands and Aaland Islands.

*The Saami Council*<sup>36</sup> – This Council is the first trans-boundary organisation of Arctic native peoples. Saami minorities in the three Scandinavian countries were the original members, but Russian Saami are now also included. Except for the Russian representatives, Saami Council members are elected.

*The Inuit Circumpolar Conference (ICC)*<sup>37</sup> – This organisation unites Inuit peoples from Alaska, Canada, Greenland and Russia, particularly around resource development and self-determination issues. The ICC and the Saami Council are two of the founding “Permanent Participants” in the Arctic Council, a special category reserved for indigenous groups.

*The International Arctic Science Committee (IASC)*<sup>38</sup> – This Committee is a non-governmental organisation made up of representatives from national science organisations in the eight Arctic States and eight other countries with long-

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33 Oran R. Young, “The structure of Arctic cooperation: Solving problems/seizing opportunities. Paper prepared at the request of Finland in preparation for the Fourth Conference of Parliamentarians of the Arctic Region, Rovaniemi, 27-29 Aug 2000”; Heininen, “Circumpolar International Relations and Geopolitics,” 215.

34 For more information on these organizations, consult their respective websites. This summary description is adapted from a report by the Canadian Parliamentary Standing Committee on Foreign Affairs, Canada and the Circumpolar World: Meeting the Challenges of Cooperation in to the Twenty-First Century, 1997 (hereafter SCFAIT report).

35 More details on the Nordic Council available at: <https://www.norden.org/en/nordic-council>.

36 More details about the Saami Council available online at <http://www.saamicouncil.net/>.

37 More details about the Inuit Circumpolar Conference available online at <http://www.inuitcircumpolar.com/>.

38 More details about the International Arctic Science Committee available online at <http://www.iasc.info/>.

standing interests in Arctic research. IASC members do not act on behalf of governments. The Committee emphasises cooperation between Arctic scientists. It is similar to SCAR, the Scientific Committee for Antarctic Research.

*The Northern Forum*<sup>39</sup> – The Forum promotes exchanges among sub-national governments in the Northern regions on issues such as northern technologies and socio-economic development. It includes twenty-four sub-national or regional governments from ten countries. It does not span the circumpolar north: Nunavut, northern Quebec, Labrador, and Greenland are not members; whereas it does have members from China, Mongolia and Japan, with Korea as a national observer.

*The North Atlantic Marine Mammal Commission*<sup>40</sup> (NAMMCO) – The governments of Norway, Iceland, Greenland, and the Faroe Islands, with Canada, Russia, and Japan as observers, formed this organisation to promote the sustainable utilisation of living marine resources, particularly all cetaceans and pinnipeds.

*The Council of the Barents Euro-Arctic Region*<sup>41</sup> (BEAR) – Created in 1993, the Council brings together the five Nordic countries, the EU and Russia with the overarching aim of helping Russia to reintegrate within Europe, and specifically to work on common environmental and sustainable development challenges in the Barents Sea area. Canada and the United States are among several observer countries to this process.

*The Standing Committee of Parliamentarians of the Arctic Region*<sup>42</sup> (SCPAR) – This Committee includes representatives from the Nordic region, the other Arctic countries, the European Parliament, and the ICC and Saami parliaments.

## 5.5 ARCTIC ENVIRONMENTAL PROTECTION STRATEGY (AEPS)<sup>43</sup>

Initiatives on Arctic environmental cooperation was proposed seventy years ago, at the same time as the start of the Antarctic treaty regime but these initiatives did not prevail at that time due to the Cold War.<sup>44</sup> The Arctic States

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39 More details about the Northern Forum available online at <http://www.northernforum.org/en/>.

40 More details about the North Atlantic Marine Mammal Commission available online at <http://www.nammco.no/>.

41 More details about the Barents Euro-Arctic Region available online at <http://www.beac.st/en>.

42 More details about the Standing Committee of Parliamentarians of the Arctic Region available online at <http://www.arcticparl.org/>.

43 30 ILM 1, 624, (1991).

44 Linda Nowlan, *supra* note.

entered into negotiations to reach agreement on a joint approach to Arctic environmental protection as early as 1989. Impetus for the initial meeting came from several events. A famous speech by then Soviet Union Secretary General Mikhail Gorbachev in Murmansk in 1987 calling for greater Arctic cooperation and an Arctic “zone of peace” was both a sign of the end of the Cold War, and a designation of a new era for cooperation.<sup>45</sup> Paradoxically, despite the fact that the dissolution of the Soviet Union was one factor prompting formation of the AEPS, the economic changes since its dissolution have meant that Russia has been unable to implement many of its commitments under the AEPS.<sup>46</sup>

Moreover, the major environmental disasters in the region pointed out the need for a new environmental protection framework. The catastrophic nuclear accident in Chernobyl in 1986, the true consequences of which were only revealed in 1989, and the massive Exxon Valdez oil spill in Alaska in 1989 galvanised public resolve to protect the Arctic.<sup>47</sup> Evidence of environmental damage caused by activities in other parts of the Arctic was also accumulating such as smelter emissions on the Kola Peninsula which were harming Finland’s northern forests,<sup>48</sup> and increasingly high levels of contaminants which were detected in the traditional foods of indigenous peoples in the North, much higher than would be expected in a non-industrial region.<sup>49</sup> By the late 80’s, it was clear to the Arctic State representatives that they should deal with their common environmental problems. The Finnish government was responsible for convening the first meeting, which became known as the “Rovaniemi” process, named after the city in Finland where the meeting was held.<sup>50</sup> In 1991, after two years of negotiation, the parties signed a Declaration on Protection of the Arctic Environment, and adopted the Arctic Environmental Protection Strategy (AEPS).<sup>51</sup>

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45 D. Rothwell, (1999), *supra*, 229.

46 Russia’s Road to corruption, How Clinton Administration exported government instead of free enterprise and failed the Russian People, United States House of Representatives Report, 2001, available at: [https://fas.org/irp/congress/2000\\_rpt/russias-road.pdf](https://fas.org/irp/congress/2000_rpt/russias-road.pdf).

47 C. Neher, D. Patterson, Oil Spill in Northern Waters: Trial Outcomes and the Long-Term in Case of the Exxon Valdez, 5 Arctic Review on Law and Politics 38 (2014).

48 O.R. Young (1998), *supra*, 54.

49 Government of Canada, Commissioner for Environment and Sustainable Development, Making International Environmental Agreements Work: The Canadian Arctic Experience, Ottawa (1999).

50 For a complete description of the creation of the AEPS, see R. Young (1998), *supra*.

51 Northern lights Against Pops, Door Inuit Circumpolar Conference, McGill-Queens University press, p 194, e-book available at: [https://books.google.nl/books?id=n9jeVDPiJlMC&pg=PA194&lpg=PA194&dq=.+In+1991,+after+two+years+of+negotiation,+the+parties+signed+a+Declaration+on+Protection+of+the+Arctic+Environment,+and+adopted+the+Arctic+Environmental+Protection+Strategy+\(AEPS\).&source=bl&ots=1-LDaFKI-S&sig=uk4Gw\\_V5j6ewrftOqg13jXkwoU&hl=nl&sa=X&ved=0ahUKEwjKm6GZ06zXAhVH16QKHahHXBnEQ6AEILDAB#v=onepage&q=.%20In%201991%2C%20after%20two%20years%20of%20negotiation%2C%20the%20parties%20signed%20a%20Declaration%20on%20Protection%20of%20the%20Arctic%20Environment%2C%20and%20adopted%20the%20Arctic%20Environmental%20Pro](https://books.google.nl/books?id=n9jeVDPiJlMC&pg=PA194&lpg=PA194&dq=.+In+1991,+after+two+years+of+negotiation,+the+parties+signed+a+Declaration+on+Protection+of+the+Arctic+Environment,+and+adopted+the+Arctic+Environmental+Protection+Strategy+(AEPS).&source=bl&ots=1-LDaFKI-S&sig=uk4Gw_V5j6ewrftOqg13jXkwoU&hl=nl&sa=X&ved=0ahUKEwjKm6GZ06zXAhVH16QKHahHXBnEQ6AEILDAB#v=onepage&q=.%20In%201991%2C%20after%20two%20years%20of%20negotiation%2C%20the%20parties%20signed%20a%20Declaration%20on%20Protection%20of%20the%20Arctic%20Environment%2C%20and%20adopted%20the%20Arctic%20Environmental%20Pro)

The AEPS does not define the Arctic area, though this lack of definition did not seem to cause any problems at that time. While formally agreed to between States in written form, it is not legally a treaty,<sup>52</sup> as the parties did not accept for the AEPS to impose binding legal obligations upon them.<sup>53</sup> The AEPS objectives include among others: the protection of the unique Arctic ecosystems, including indigenous population; to provide for the protection, enhancement and restoration of environmental quality and the sustainable utilisation of natural resources, including their use by local populations and indigenous peoples in the Arctic; to recognise and to the extent possible, seek to accommodate the traditional and cultural needs, values and practices of the indigenous peoples, as determined by themselves, related to the protection of the Arctic environment; to review regularly the state of the Arctic environment; and to identify, reduce, and as a final goal, eliminate pollution.<sup>54</sup>

Since it was the first time that such an agreement was on the table, it was no surprise that the AEPS was not able to address some of the major causes of Arctic environmental problems, such as climate change (which was not so imminent at that time) and ozone depletion. These issues were already being addressed in other fora. The AEPS delineated the environmental issues, canvassed the existing legal regime and proposed the six most important priorities for action: persistent organic contaminants, oil pollution, heavy metals, noise, radioactivity, and acidification.<sup>55</sup> Of the six environmental pollutants identified as being Arctic-wide, all but one (noise) was trans-boundary.<sup>56</sup> To assess the environmental impact of these six pollutants, the Arctic States established an Arctic Monitoring and Assessment Program (AMAP), and three other working group programs; Conservation of Arctic Flora and Fauna (CAFF); Protection of the Arctic Marine Environment (PAME); and Emergency Preparedness and Response (EPPR) Program – all of them under the umbrella of the Arctic Council. Their main accomplishments are summarized in the next section of this subchapter. The AEPS marked the beginning of the willingness of States to move towards a new regime, which is still under discussion and continues to evolve. The Ministers met at four Ministerial Conferences before the programs of the AEPS were integrated into Arctic Council Working Groups in 1997.<sup>57</sup>

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tection%20Strategy%20(AEPS).&f=false.

52 VCLT, Art. 2 (1) (a) defines a treaty as: an international agreement concluded between States in written form and governed by international law, whether embodied in a single instrument or in two or more related instruments and whatever its particular designation.

53 D. Rothwell (1996), *supra*, 239 – 241.

54 AEPS, *supra*.

55 *Ibid*.

56 AEPS, *supra*, paras 3.1-3.6 at 1, 635-43.

57 R. Young (1998), *supra*, 54; M Ciemiezek, The Recent Arctic Council Assessments: Influential Tools in Policy-Making in the Council and Beyond?, 2017, The Yearbook of Polar Law online, available at: [https://brill.com/view/journals/yplo/8/1/article-p187\\_11.xml?language=en](https://brill.com/view/journals/yplo/8/1/article-p187_11.xml?language=en); Juan Azcárate et al, Strategic environmental assessment and monitoring: Arctic key gaps and bridging pathways, 2013, available at: <https://iopscience.iop.org/article/10>.

### 5.5.1 Evaluation of the effectiveness of AEPS

There is no consensus on the usefulness of the AEPS and increased State commitment to take action to protect the Arctic environment. However, it has been called an “unambitious regime,” that adds little to the existing environmental monitoring programs of the Arctic States.<sup>58</sup> The AEPS action plan failed to establish concrete targets, reliable and specific timetables, and it generated only some national commitments, such as to implement the best available technology to control releases of heavy metals. Another NGO criticism focused on the piecemeal nature of its efforts, and its failure to link the Arctic to global issues, which has also been the case to Paris negotiations as well, since not even almost 30 years later the Arctic has left outside of the global agreement on the Paris negotiations.

## 5.6 THE ARCTIC COUNCIL<sup>59</sup>

The Arctic Council was established under the auspices of the AEPS because States saw the need to expand the strategy beyond purely environmental issues. An independent Arctic Council Panel was formed in Canada. Its 1991 report called for a council which would make the circumpolar region “a domain of enhanced civility – an area in which aboriginal peoples enjoy their full rights, and where the governments that speak for southern majorities accord progressively greater respect to the natural environment, to one another, and in particular, to aboriginal people.”<sup>60</sup> The initial proposal in 1991 envisioned a treaty to create the Council, a draft of which was also published in 1991.<sup>61</sup> Leadership in creating the Council came from Canada, which hosted SAO meetings in the North in the early 1990s. In 1996, the Ottawa Declaration was signed.<sup>62</sup> Contentious issues in the negotiations leading up to the Declaration centred on the role for indigenous organisations, and the inclusion of sustainable development goals. The Declaration creating the Council states

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1088/1748-9326/8/4/044033.

58 D. Rothwell (1996), *supra*, 389; Tõnis Idarand, Arctic Policy of the United States: Ill-prepared for the Growing Competition?, 2021, Nordic-Baltic Connectivity with Asia via the Arctic: Assessing opportunities and risks, chapter 11, available at: [https://icds.ee/wp-content/uploads/2021/09/ICDS\\_EFPI\\_Book\\_Nordic-Baltic\\_Connectivity\\_with-Asia\\_via\\_the\\_Arctic\\_Gaens\\_Juris\\_Raik\\_September\\_2021.pdf](https://icds.ee/wp-content/uploads/2021/09/ICDS_EFPI_Book_Nordic-Baltic_Connectivity_with-Asia_via_the_Arctic_Gaens_Juris_Raik_September_2021.pdf).

59 Analytical discussion on the Arctic Council is made on Chapter 4. It is important to be made a short reference at this point since the Arctic Council was established in order to conduct activities directly related with the protection of the environment (excluding the management of living and non-living resources).

60 Arctic Council Panel, To Establish an International Arctic Council: A Framework Report, Northern Perspectives (1991).

61 D. Pharand, Proposal for an Arctic Council Treaty, Northern Perspectives (1991).

62 Declaration on the Establishment of the Arctic Council, para. 1 (a), 35 ILM 1387 (1996).

that the Council will look in particular at issues of sustainable development and environmental protection in the Arctic.

The Declaration on the Establishment of the Arctic Council states that the Council is established as a high-level forum to provide a means for promoting cooperation, coordination and interaction among the Arctic States, with the involvement of the Arctic indigenous communities and other Arctic inhabitants on common Arctic issues, excluding matters related to military security. Moreover, the Council oversees and coordinates the programs established under the AEPS on the AMAP, CAFF, PAME, and EPPR. It also adopts terms of reference for and oversees and coordinates a sustainable development program; while also disseminating information, encouraging education and promoting interest in Arctic-related issues.<sup>63</sup>

## 5.7 GLOBAL ENVIRONMENTAL TREATIES APPLICABLE IN THE ARCTIC

Arctic environmental problems intersect with global problems in many ways as many threats to the Arctic environment originate outside the region. Treaties and other soft law agreements that address distant sources of pollution are consequently a critical part of the Arctic legal framework. Global treaties that apply to the rest of the world also apply to the activities within the region, such as the protection of biological diversity. The disproportionate impact of distant polluting activities on the Arctic demonstrates the need for global action, perhaps spurring States to act on a new treaty governing the regional issues on a holistic way. Persistent organic pollutants, greenhouse gas emissions causing climate change and ozone depleting substances are all generated primarily in industrial countries far from the Arctic, yet all have serious negative impacts on the Arctic environment and they shall be an issue of concern and regulation.

In some cases, global treaties incorporate provisions that are extremely relevant on the Arctic. Article 234 UNCLOS was specifically designed for the Polar Regions giving coastal States the right to adopt and enforce non-discriminatory laws for the prevention and control of marine pollution from vessels in ice-covered areas where, among other, pollution of the marine environment could cause major harm to or irreversible disturbance of the ecological balance.<sup>64</sup> The IMO's International Polar Navigation Code creates a unified code of rules for ships navigating in both Polar Regions, building upon existing treaties administered by the IMO, such as MARPOL, and associated safety and

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63 *Ibid.*; Sorokina, T.Y. (2022). Pollution and Monitoring in the Arctic. In: Finger, M., Rekvig, G. (eds) Global Arctic. Springer, Cham. [https://doi.org/10.1007/978-3-030-81253-9\\_12](https://doi.org/10.1007/978-3-030-81253-9_12).

64 Stanley Fields, Article 234 of the United Nations Convention on the Law of the Sea: The overlooked Linchpin for Achieving Safety and Security in the US Arctic?, 7 Harvard National Security Journal, 2016.

training treaties.<sup>65</sup> Protocols under the LRTAP Convention also include specific references to the issues that are of concern with respect to the Arctic environment.<sup>66</sup> In other cases, local or regional Arctic legal arrangements embody workable versions of the concepts found in global Conventions, such as the provisions in the 1992 *Convention on Biological Diversity* (Biodiversity Convention) regarding traditional ecological knowledge, and the special role of indigenous peoples.<sup>67</sup>

### 5.7.1 Implementation of the global treaties in the Arctic

Based on the AEPS, the Arctic States were responsible to determine the extent of environmental problems in the North and to examine whether existing international cooperative arrangements adequately address these problems.<sup>68</sup> One aspect of this work was the responsibility on behalf of the Arctic States to identify the existing global agreements and their applicability to the Arctic environmental legal regime on a number of occasions. At the first preparatory meeting for the AEPS in 1989, Ministers agreed to examine both the state of the Arctic environment and to consider the existing legal instruments for the protection of that environment. Prior to the creation of the AEPS in 1991, an overview of these agreements was carried out.<sup>69</sup> This report identified 26 global conventions which could be relevant and applicable for the protection of the Arctic environment, and they have decided to divide them into four groups: atmosphere, marine, wildlife and other, such as trans-boundary hazardous waste.<sup>70</sup>

After identifying six environmental problems and priorities, the AEPS (section 4) examined the effectiveness of the existing international mechanisms to handle each one of these problems. The legal regime was found inadequate and irrelevant in five out of six cases, with only the case of radioactivity being the one that was the exception. The AMAP, was established to deal with all these six environmental priorities. The other three Working Groups were also linked with the international environmental legal regimes. PAME's primary responsibility was the use and application of the terms of UNCLOS in order to improve Arctic marine environmental protection (section 7). On the other

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65 L. Brigham, *The Emerging International Polar Navigation Code*, in *Protecting the Polar Marine Environment— Law and Policy for Pollution Prevention* 244 (D. Vidas ed. 2000); The Polar Code entered into force on the 1<sup>st</sup> of January at 2017, more information available at Chapter 3 of This Thesis.

66 More detailed discussion on these treaty bodies has been made in Chapter 2 of this Thesis.

67 1992 Convention on Biological Diversity United Nations, Treaty Series, vol. 1760, p. 79.

68 Linda Nowlan, *supra* note 2.

69 List of Major International Instruments and Policy declarations pertaining to the Arctic Environment, presented at the Ministerial meeting, Rovaniemi, Finland (1991).

70 *Ibid.*

hand, the EPPR group was assigned the responsibility to improve emergency prevention, preparedness and response (section 8) and CAFF's mandate was to facilitate cooperation on the protection of Arctic flora and fauna under the existing global legal arrangements (section 9).

### 5.7.2 Agreements for the Protection of marine environment

The vast majority of international conventions dealing with the protection of the marine environment can be relevant and applicable to some extent in the Arctic Ocean. These treaties include among others: the 1973 International Convention for the Prevention of Pollution from Ships and MARPOL;<sup>71</sup> the 1972 Convention on the Prevention of Marine Pollution by dumping of waste and other matter, (the London Convention) particularly its 1996 Protocol;<sup>72</sup> and UNCLOS.<sup>73</sup> UNCLOS is not examined in this Chapter, since it was previously addressed in the first part of this Thesis.

*International Regulation of Ship Source Pollution.* The London Convention is of particular use in the Arctic environment, since the Arctic could be used as a dumping ground for hazardous wastes.<sup>74</sup> The volume of radioactive waste dumped into the Arctic Ocean by the Soviet Union was twice as high as that of all previously known dumping worldwide.<sup>75</sup> The potential contamination hazards associated with approximately 130 decommissioned Soviet nuclear submarines, most of which remain afloat with spent nuclear fuel aboard, are additional problems.<sup>76</sup> Proposed new acceptance of nuclear waste for disposal by Russia, as well as Japanese proposals to transport highly radioactive nuclear wastes from Europe to Japan via the Arctic using Russia's nuclear powered ice-breakers demonstrate the need for increased attention to dumping and navigation.<sup>77</sup> The London Convention regulates dumping of waste at sea.

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71 ILM, Vol. 12, 1973, 1319.

72 ILM, Vol. 36, 1997, 1.

73 A number of maritime treaties deal with emergencies, maritime accidents, training and certification of ship crew and officers, and navigation. These treaties are not addressed in this chapter.

74 D.R. Rothwell, *Global Environmental Protection Instruments*, in *Protecting the Polar Marine Environment– Law and Policy for Pollution Prevention* 57 (D. Vidas ed. 2000), at 64.

75 O.S. Stokke, *Radioactive Waste in the Barents and Kara Seas: Russian Implementation of the Global Dumping Regime*, in *Protecting the Polar Marine Environment– Law and Policy for Pollution Prevention* 200 (D. Vidas ed. 2000).

76 D.L.V. Zwaag, *Land-based Marine Pollution and the Arctic*, in *Protecting the Polar Marine Environment– Law and Policy for Pollution Prevention* 175 (D. Vidas ed. 2000), at 178.

77 Some more information on Russia's nuclear waste plans on the Arctic with the development of new ice-breaker vessels capable of conducting this activity can be found at the following Barents Observer publication: <https://thebarentsobserver.com/en/security/2017/04/breaking-ice-loads-nuclear-waste>.

In 1993, a moratorium on the dumping of radioactive substances was adopted within the framework of the Convention. The Convention was substantially amended by a 1996 protocol, which employs a “reverse listing” approach: all dumping is prohibited except those materials listed in Annex 1 of the Protocol.<sup>78</sup>

*MARPOL*. IMO’s marine environment committee defines areas that require special protection from maritime activities, including special areas (SAs) under Annexes to *MARPOL* and *PSSAs*.<sup>79</sup> A number of restrictions on activities in these shipping areas have been designed under those regimes. Antarctica has already been using this designation however no such provisions have been implemented in the Arctic yet, due to the Arctic Council’s Inuvik 1996 Ministerial decision which explicitly stated that there should be no additional legal instruments for the protection of the marine environment, and that States should concentrate on ratification and implementation of existing legal instruments.<sup>80</sup> However, coastal States have every possibility to adopt stricter standards for ice-covered areas pursuant to Article 234 of *UNCLOS*, which made the use of these additional IMO designations not necessary for the Arctic. Canada, for example, strictly regulates vessel source pollution in its Arctic waters, requiring ships to meet specified standards for vessel construction, navigation and operation.<sup>81</sup>

The parties to *MARPOL* have taken the responsibility to act on the direction of prevention of the pollution of the marine environment by the discharge of harmful substances or effluents.<sup>82</sup> Harmful substances are defined to include any substance, which if introduced into the sea, is liable to create hazards to human health, harm living resources and marine life and damage amenities or interfere with other legitimate uses of the sea. *MARPOL* is a framework convention regulating different types of pollutants in Annexes.<sup>83</sup> The general impression of the operation of *MARPOL* is that is a successful convention

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78 ILM, vol. 36, 1997. The Protocol makes limited exceptions for cases of emergency.

79 More about the list of the special areas, emission control areas and particular sensitive sea areas can be found at following IMO document: [https://www.gard.no/Content/26411326/IMO%20MEPC1-Circ778-Rev3\\_Special%20Areas,%20ECAs%20and%20PSSAs%20under%20MARPOL.pdf](https://www.gard.no/Content/26411326/IMO%20MEPC1-Circ778-Rev3_Special%20Areas,%20ECAs%20and%20PSSAs%20under%20MARPOL.pdf).

80 Please see at: [http://library.arcticportal.org/1272/1/The\\_Inuvik\\_Declaration.pdf](http://library.arcticportal.org/1272/1/The_Inuvik_Declaration.pdf).

81 Arctic Waters Pollution Prevention Act, S.C. 1970, c-68.

82 Please see the following analysis of 2021 by the International Maritime Law Institute: <https://imli.org/wp-content/uploads/2021/03/Kazi-Arifuzzaman.pdf>.

83 The annexes are:

- 1 the prevention of pollution by oil (Annex I);
- 2 the control of pollution by noxious liquid substances in bulk (Annex II);
- 3 the prevention of pollution by harmful substances in package forms (Annex III);
- 4 the prevention of pollution by sewage from ships (Annex IV)
- 5 the prevention of pollution by garbage from ships (Annex V); and
- 6 the prevention of air pollution from ships (Annex VI).

for various reasons and primarily because ship-generated pollution has fallen since it was adopted from approximately 35% of global marine pollution sources in the early 1970's to approximately 10% by the early 1990's.<sup>84</sup>

*Control of land-based marine pollution.* Land-based pollution is one form that was mainly under regulated with respect to marine pollution.<sup>85</sup> Experts tend to believe that at least the 80% of the pollution in the oceans originates from land-based activities, including municipal, industrial and agricultural wastes and run-offs as well as atmospheric depositions.<sup>86</sup> This 80% estimation seems unlikely in the Arctic region because of the relatively low population inhabiting the area and the lack of land based industrial activities in the most of the coast lines surrounding the Arctic. Nonetheless, States seems to tend to establish multiple land-based sources resulting from urban areas, mining wastes, oil and gas operations, nuclear activities, industrial complexes such as smelters, pulp and paper mills.<sup>87</sup> AMAP and PAME have been assigned by AEPS with the power and responsibility to deal with land-based marine pollution.<sup>88</sup>

Article 207 of UNCLOS is dealing with this issue by establishing the development of international regulations to reduce land-based pollution. Moreover soft law is contributing to his issue through the agreement of the Global Program of Action for the Protection of the Marine Environment from Land-Based Activities (GPA) which was concluded in 1995.<sup>89</sup> The GPA calls upon States to develop national plans to address land-based sources of pollution entering the marine environment.<sup>90</sup> In 1998, the Arctic Council Ministers adopted PAME's regional program of action (RPA) for the protection of the Arctic marine environment from land-based activities. The goals for the regional program of action are: to protect human health; to prevent and reduce degradation of the marine environment and coastal areas; remediate contaminated areas; to support conservation and sustainable use of marine resources; maintain biodiversity; and to maintain cultural values. The RPA notes nine source categories of pollution which are priorities for regional action, and sets management objectives. For example, one management objective requires Arctic States to "develop and adopt Arctic-wide environmental guidelines on opening,

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84 D. Rothwell, (2000), *supra*, 60.

85 Delia Paul, Protecting the Marine Environment From Land-based Activities, 2021, available at: <https://www.iisd.org/system/files/2021-01/still-one-earth-GPA.pdf>.

86 UNEP, Global Program of Action (GPA) for the Protection of the Marine Environment from Land-Based Activities, available online at: <https://www.unep.org/explore-topics/oceans-seas/what-we-do/working-regional-seas/partners/global-plan-action-gpa>.

87 For more information on potential sources of land-based activities to marine pollution can be found in D.L.V. Zwaag, (D. Vidas ed. 2000), *supra*, 178.

88 Béatrice Schütte, Marine Pollution in the Arctic Region: What Future for Civil liability? - The need for a Comprehensive liability scheme, 2019, available at: <https://halshs.archives-ouvertes.fr/halshs-02398359/document>.

89 UNEP-GPA, *supra*.

90 *Ibid.*

operating and closing mines in the Arctic coastal zone. Mining is defined as the extraction, smelting and concentration of ore."<sup>91</sup>

### 5.7.3 Agreements for the protection of the atmosphere

Global treaties on atmospheric protection play a significant role in the environmental protection of the Arctic area. One aspect of the climate change agreements is their concern for ecosystem health, and to constrain hydrocarbon resource development. Toxic chemicals produced and consumed elsewhere disproportionately migrate to and concentrate in the Arctic region. The POPs convention has a specific reference to protect the Arctic peoples.<sup>92</sup> The ozone treaty regime seeks to reduce the depletion of the ozone layer, most apparent in the holes over the Polar Regions. The international environmental agreements on the atmosphere all have the potential to positively affect the Arctic environment. The major international treaty on transboundary air pollution is the LRTAP and associated Protocols.<sup>93</sup> Negotiated by the UN Economic Commission for Europe, the Convention does not apply to States outside Europe and North America.

#### 5.7.3.1 *The 1979 Geneva Convention on Long-range Transboundary Air Pollution*

The LRTAP was initially drafted in response to scientific evidence demonstrating acid rain in Europe. Signed in 1979, and entering into force in 1983,<sup>94</sup> the LRTAP was the first internationally legally binding framework agreement outlining general principles for regional co-operation on trans-boundary air pollution abatement. LRTAP and its Protocols has been ratified by all eight Arctic States except the United States which has accepted it. The Arctic is not mentioned in the Convention but three of its Protocols specifically refer to the Arctic. First, the 1994 Oslo Protocol on Further Reduction of Sulphur

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91 Arctic Council, PAME, Regional Programmes of Action for the Protection of Arctic Marine Environment from Land-Based Activities, Minister of Public Works and Government Services Canada, 1999, Available on the Arctic Council website; Baker, B. (2013). "Chapter 3. The Developing Regional Regime for the Marine Arctic". In *The Law of the Sea and the Polar Regions*. Leiden, The Netherlands: Brill | Nijhoff. doi: [https://doi.org/10.1163/9789004255210\\_00](https://doi.org/10.1163/9789004255210_00); Steiner, N., & L VanderZwaag, D. (2021). "Ocean acidification and the Arctic: regional scientific and governance responses". In *Research Handbook on Ocean Acidification Law and Policy*. Cheltenham, UK: Edward Elgar Publishing. doi: <https://doi.org/10.4337/9781789900149.00019>.

92 More information about POPs Convention can be found at: <http://www.pops.int/>.

93 All information on LRTAP and its Protocols available online at <http://www.unece.org/env/lrtap>.

94 The relevant data can be found at the UN relevant website available at: [https://treaties.un.org/Pages/ViewDetails.aspx?src=IND&mtdsg\\_no=XXVII-1&chapter=27&clang=en](https://treaties.un.org/Pages/ViewDetails.aspx?src=IND&mtdsg_no=XXVII-1&chapter=27&clang=en).

Emissions entered into force in 1998<sup>95</sup> and sets long-term targets for the reduction of sulphur emissions. Parties to the Protocol have different emission reduction obligations. The Preamble contains the following paragraph: “*Mindful* that measures to control emissions of sulphur and other air pollutants would also contribute to the protection of the sensitive Arctic environment.”<sup>96</sup> Second, the 1998 Aarhus Protocol on Heavy Metals, is aimed primarily at controlling cadmium, lead and mercury emissions.<sup>97</sup> The Protocol also aims to reduce emissions from industrial sources, combustion processes and waste incineration. Parties must apply specified limit values to emissions from stationary sources and the Protocol contains suggestions for best available techniques (BAT) for these sources. Parties are also required to phase out leaded petrol. In addition, the Protocol lists management measures for products containing mercury. The Preamble contains the following paragraph: “*Mindful* that measures to control emissions of heavy metals would also contribute to the protection of the environment and human health in areas outside the UN/ECE region, including the Arctic and international waters.”<sup>98</sup>

Third, the 1998 Aarhus Protocol on POPs<sup>99</sup> is aimed at the control, reduction or elimination of discharges, emissions and losses of sixteen substances (eleven pesticides, two industrial chemicals and three by-products/contaminants). The Protocol bans the production and use of eight substances (aldrin, chlordane, chlordecone, dieldrin, endrin, hexabromobiphenyl, mirex and toxaphene) and specifies elimination of four other substances at a later stage (DDT, heptachlor, hexachlorobenzene, polychlorinated biphenyls). The Protocol also restricts the use of DDT, HCH (including lindane) and polychlorinated biphenyls. Provisions are included for destruction or disposal of the wastes of banned products. Moreover, the Protocol obliges Parties to reduce their emissions of polycyclic aromatic hydrocarbons, dioxins/furans and hexachlorobenzene below their 1990 levels (or an alternate year between 1985 and 1995). Specific emission limits are established for municipal, medical

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95 Canada, Norway and Sweden have ratified it. Denmark (not applying to the Faeroe Islands and Greenland) has approved it. Finland has accepted it. The Russian Federation has signed it. Neither Iceland nor the USA has signed it.

96 *Supra*.

97 Canada (with declaration upon ratification), Norway (with declaration upon ratification) and Sweden have ratified it. Finland has accepted it (with declaration upon ratification). Denmark, Iceland and the USA have signed it. The Russian Federation has not signed it.

98 LRTAP, *supra*.

99 Canada (with declaration upon ratification), Norway (with declaration upon ratification) and Sweden have ratified it. Denmark, Finland, Iceland and the USA have signed it. The Russian Federation has not signed it.

and hazardous waste incinerators. The Preamble contains three paragraphs that refer to the Arctic.<sup>100</sup>

The Heavy Metals Protocol and the POPs Protocol are both aimed at pollution abatement in the Arctic.<sup>101</sup> Although both Protocols include significant restrictions, they do not impose any obligations for specific percentage reductions in annual emissions. Approximately half the substances targeted in the POPs Protocol are not subject to immediate elimination.<sup>102</sup>

### 5.7.3.2 Ozone treaties

In the mid-1970s, scientists raised concerns that the Earth's stratospheric ozone layer could be at risk of depletion from the release of CFCs and other anthropogenic substances. In 1981, the UNEP Governing Council established the Ad Hoc Working Group of Legal and Technical Experts for the Elaboration of a Global Framework Convention for the Protection of the Ozone Layer. Four years later, the Vienna Convention for the Protection of the Ozone Layer was adopted through which Parties agreed to take "appropriate measures" to address the actual or potential harm to the ozone layer by human activities.<sup>103</sup> The Convention, primarily encouraging co-operation in research, monitoring and data exchange, did not specify what appropriate measures are, nor did it specify substances that cause ozone depletion.

The Convention did, however, provide for future protocols. It was the first time that States committed to addressing a global environmental problem before damage was actually shown. Shortly after the adoption of the Convention, the first proof of ozone depletion over the Antarctic was established. Negotiations on specific controls eventually led to the signing in 1987 of the Montreal Protocol on Substances that Deplete the Ozone Layer,<sup>104</sup> which entered into force in 1989. This Protocol's final objective is the elimination of ozone-depleting substances. As an interim measure, it required developed countries to reduce by 50% the production and consumption of 1986 levels

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100 "Recognizing that emissions of many persistent organic pollutants are transported across international boundaries and are deposited in Europe, North America and the Arctic, far from their site of origin, and that the atmosphere is the dominant medium of transport, Acknowledging that the Arctic ecosystems and especially its indigenous people, who subsist on Arctic fish and mammals, are particularly at risk because of the biomagnification of persistent organic pollutants, Mindful that measures to control emissions of persistent organic pollutants would also contribute to the protection of the environment and human health in areas outside the United Nations Economic Commission for Europe's region, including the Arctic and international waters."

101 D.L.V. Zwaag, *International Commons*, 9 YBiel Law 272 (1998).

102 *Ibid.*

103 Online available at <http://ozone.unep.org/en/treaties-and-decisions/vienna-convention-protection-ozone-layer>.

104 Online available at <http://www.iisd.ca/linkages/download/asc/enb1912e.txt>. <http://www.unep.org/ozone/vienna.htm>.

of CFCs by 1999 and to freeze the production and consumption of halons at 1986 levels. Although the Protocol did not establish comprehensive obligations for all ozone-depleting substances, it was designed to be flexible so that its provisions can be strengthened as more scientific evidence is discovered.<sup>105</sup>

Criticisms of the Protocol include that its amendments have not been quickly ratified, new ozone-depleting substances have been introduced into trade, and trade in CFC-based products has increased. In September 2000, the Antarctic ozone hole covered the largest area ever recorded, but the “stubbornly critical state of the ozone layer” did not translate into State action at the Meetings of the Parties.<sup>106</sup> The Arctic is not mentioned in either the Convention or the Protocol but all eight circumpolar States are parties to the Convention and the Protocol.

#### 5.7.4 International agreements on climate change

Scientific evidence showing the latest detrimental effects of climate change in the Arctic has been presented at climate change meetings.<sup>107</sup> Alarmingly, the 2014 report from the Intergovernmental Panel on Climate Change said that if current emissions trends continue, scientists are unable to rule out the possibility that the Arctic Ocean may become totally ice-free as a result of climate change, a prediction that is still the main scenario for the future of the Arctic Ocean.<sup>108</sup>

The UN Framework Convention on Climate Change (UNFCCC) entered into force on 21 March 1994.<sup>109</sup> Prompted by scientists’ warnings, the UNFCCC was developed in much the same way as the Montreal Protocol on Substances that Deplete the Ozone Layer.<sup>110</sup> The primary objective of the Convention is the “stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system” (Article 2). The UNFCCC establishes a framework for action to control or reduce greenhouse gas emissions. Parties are to be guided by

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105 Online available at <http://www.iisd.ca/linkages/download/asc/enb1912e.txt>. [http://www.unep.org/ozone/mont\\_prt.htm](http://www.unep.org/ozone/mont_prt.htm).

106 Extracted from an analysis of MOP-12 in the Earth Negotiations Bulletin, available online at <http://www.iisd.ca/linkages/download/asc/enb1912e.txt>.

107 More details about the discussion in UNFCCC preparatory meetings, available online at <http://newsroom.unfccc.int/>.

108 UNEP, Significant Changes Likely in The Arctic from Climate Change, Nairobi/Arendal, Feb.19, 2014, available online at <http://www.grida.no/inf/news/news01/index.htm>; Alejandra Borunda, Arctic summer sea ice could disappear as early as 2035, 2020, Nature, available at: <https://www.nationalgeographic.com/science/article/arctic-summer-sea-ice-could-be-gone-by-2035>.

109 Available online at <http://www.globelaw.com/Climate/fcc.htm>.

110 J. Vogler, *The Global Commons: Environmental and Technological Governance*, John Wiley & Sons (2<sup>nd</sup> ed., 2000), 136.

the precautionary principle in anticipating, preventing or minimising the causes of climate change (Article 3.3).

In 1997, the Kyoto Protocol was adopted, and entered into force in 2005.<sup>111</sup> Under the Kyoto Protocol, industrialised countries are required to meet specific targets for greenhouse gas emissions reductions. Negotiations broke down in November 2000 at the Sixth Conference of the Parties, and the future of the Protocol is unclear despite the fact that the second commitment period started in 2013 with very weak commitments from Annex 1 parties.<sup>112</sup>

The Paris Agreement on Climate Change has been signed by all countries of the world, with the United States returning to it under Biden Administration. There was an imminent interest on behalf of the Arctic States to participate on the negotiations prior to the Paris Conference and they have tried to upscale the Arctic interests on the Agenda of the proposed-at that time-Paris Accord.<sup>113</sup> Moreover, the Arctic countries have given increasing attention to the threat of climate change in the region and especially the Nordic countries adopted a joint declaration that underlined the severe implications in the Arctic and called for an ambitious agreement at the conference in Paris.<sup>114</sup> Russia declaree that it would take measures to mitigate greenhouse gas emissions in the industry sector in the coming years.

Yet, despite the increasing awareness in the Arctic states, the region has received very little attention in the international climate negotiations. The negotiated draft agreement for the COP22 did not mention the Arctic and, rather than being addressed in the adaptation and mitigation commitments, the region primarily figures as scientific proof of the ongoing climate change.<sup>115</sup>

The absence of references to the region in the negotiated texts is explained by the very nature of the agreement. Firstly, the global scope prevents the agreement from referring to specific regions and secondly, the differentiation between developing and developed states has up until now meant that the international adaptation commitments are reserved for developing countries, whereas the Arctic states (which are all developed States) are expected to address adaptation needs in their domestic policies. Moreover, the Arctic Council has taken on a key role for addressing Arctic issues.

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111 The Kyoto Protocol available online at <http://unfccc.int/resource/docs/convkp/kpeng.pdf>.

112 Available online at <http://www.iisd.ca/climate/index.html>.

113 Please see more on the contribution of the Arctic Council to the Paris Agreement negotiations on the following report by the UNFCCC Director of Strategy of that time, Ambassador Halldór Thorgeirsson available at: <https://unfccc.int/news/arctic-council-contribution-to-the-impact-of-the-paris-agreement>.

114 Rebecka Snefugli Sondell, Arctic regions neglected in climate negotiations, *The Barents Observer*, 2016, available at: <https://thebarentsobserver.com/ru/node/152>.

115 Sébastien Duyck, What Role for the Arctic in the UN Paris Climate Conference (COP-21)?, *Arctic Yearbook*, 2015, available at: <https://arcticyearbook.com/arctic-yearbook/2015/2015-briefing-notes/157-what-role-for-the-arctic-in-the-un-paris-climate-conference-cop-21>.

The Arctic is not only absent in the legal texts but the representation of Arctic stakeholders is also very limited in the climate negotiations. While the Arctic States are highlighting the climatic vulnerability of the region, they rarely ever mention the Arctic in their negotiating positions. The lack of Arctic input is further amplified as the Arctic Council is not an accredited observer to the UNFCCC and some of its members have objected to any participation in negotiation process of the Paris Agreement.<sup>116</sup>

Indigenous people in the Arctic have been recognized as having a central role in the regional environmental governance and participate in the international climate negotiations, however indigenous groups have struggled to gain the same level of confidence as scientists when communicating their message.<sup>117</sup>

#### 5.7.5 Biodiversity: Protection of species and ecosystems

The Arctic region possesses a unique environment with extraordinary biological diversity the preservation of which should be a top environmental priority as human activities have a direct negative impact on the Arctic's relatively simple ecosystems and biological diversity.<sup>118</sup> The Biodiversity Convention was the first treaty to address conservation and protection of ecosystems on a global scale. Management regimes previously existed to protect single Arctic species such as: northern fur seals (1911 North Pacific Sealing Convention with four State members); polar bears (1973 Agreement on the Conservation of Polar Bear with five State members); and caribou (1987 Agreement on the Conservation of the Porcupine Caribou Herd between Canada and the United States) and they appeared to be ineffective and not efficient to deal with the complexity and totality of the issue.

Perhaps the most important in this group of treaties is the 1946 International Convention for the Regulation of Whaling,<sup>119</sup> due to the large numbers of whale species in the Arctic, the commercial significance of whaling to States such as Iceland and Norway, and the importance of whaling to indigenous peoples throughout the region. Fish and marine mammals are the most common foods, and caribou is the most common land food for peoples of the North.<sup>120</sup> Trade in wildlife species, governed by the Convention on International Trade in Endangered Species of Wild Fauna and Flora,<sup>121</sup> is

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116 *supra* note 116.

117 *Ibid.*

118 UNEP, *The Polar Regions* (2000), *supra*.

119 D. Rothwell, (1996), *supra*, 212.

120 SOAER, *Peoples of the North*.

121 1973 Convention on International Trade in Endangered Species of Wild Fauna and Flora, adopted on 3 March 1973, entered into force 1 July 1975, 993 UNTS 243.

a problem in the Arctic, as traditional subsistence use of wildlife declines and the need for economic returns grows.

#### 5.7.5.1 *Consumptive use of wild species*

The wild species hunt is the single most common feature of natural resource use cutting across all the regions and peoples of the Arctic.<sup>122</sup> It is also one of the most controversial activities, as the anti-sealing and anti-whaling lobbies demonstrate. Yet sustainable use is argued to have potential in the Arctic as a tool for both biodiversity conservation and economic gain. If done with the goal of creating conservation benefits, commercial consumptive use could be of value to Arctic communities, not only for economic benefits, but also as a way to preserve traditional lifestyles and cultural values while safeguarding the environment. Sustainable use programs can serve as practical economic incentives to conserve natural habitats when there is a high degree of local participation and local participants derive an equitable share of benefits from that use.<sup>123</sup> Opponents of consumptive use, however, are numerous as many people worldwide oppose whaling and sealing.

#### 5.7.5.2 *Wildlife trade*

The international wildlife trade, worth billions of dollars annually, has caused massive declines in the numbers of many species of animals and plants. The scale of over-exploitation for trade aroused such concern for the survival of species that the Convention on International Trade in Endangered Species (CITES)<sup>124</sup> was concluded in 1973 to protect wildlife from this threat. CITES established a world-wide system of controls on international trade in threatened wildlife and wildlife products by requiring the issue of government permits.

The most endangered species are listed in Appendix I and include all species threatened with extinction which are or may be affected by trade. Arctic species in this category include all whales covered by the International Whaling Commission (IWC) whaling moratorium. Norway has formally objected to both the IWC moratorium and the CITES trade ban. Norway's decision to resume commercial whaling was based on evidence that the stock of minke whales was abundant and that whales could be harvested on a sustainable basis

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122 WWF, Guidelines for Consumptive Use of Arctic Species, available online at <http://www.ngo.grida.no/wwfap/ccu>.

123 IUCN, Draft Sustainable Use of Wild Species – A Guide for Decision-Makers, Sustainable Use Initiative (2000), available online at [www.iucn.org](http://www.iucn.org).

124 More details about the way that the CITES works available online at <https://www.cites.org/>

without risk of extinction.<sup>125</sup> Norway has now unilaterally decided to resume export of an unlimited amount of meat and blubber from North Atlantic minke whales, to Japan, Iceland, and other States on the basis that trade is a logical consequence of sustainable resource management.<sup>126</sup>

Other species at serious risk are listed in Appendix II, which includes species which, although not currently threatened with extinction, may become so unless trade is subject to strict regulation. Arctic species on Appendix II include polar bears and narwhals. Appendix III lists all species which any party identifies as being subject to regulation within its jurisdiction for the purpose of preventing or restricting exploitation. For example, Canada has listed the walrus as an Appendix III species.<sup>127</sup>

### 5.7.5.3 Whales and marine mammals

Whaling is a traditional occupation in the Arctic, dating back as far as 4000 years.<sup>128</sup> In 1946, the International Convention for the Regulation of Whaling (ICRW) was adopted, to be administered by the IWC. The IWC banned commercial whaling in 1982, by establishing a catch limit of zero for all commercial whaling, but under the Convention's controversial exceptions allowing scientific research and aboriginal subsistence, whaling still occurs. Catch limits for aboriginal subsistence whaling are relatively small: in 2014, the catch limits for bowhead whales, Eastern North Pacific gray whales, West Greenland fin whales, West and East Greenland minke whales totalled about 300.<sup>129</sup> The IWC is open to membership by any interested State, but initially it was expected that only countries with whaling industries would participate. However, many non-whaling States joined and currently wield considerable influence over the proceedings.

Some States that still engage in coastal whaling created the North Atlantic Marine Mammals Commission (NAMMCO). According to government representatives, this organisation was born out of dissatisfaction with the IWC's zero-catch quota, lack of IWC competence to deal with small cetaceans and the need

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125 Government of Norway, "Norwegian minke whaling", available online at: <https://www.regjeringen.no/en/topics/food-fisheries-and-agriculture/fishing-and-aquaculture/kval-og-sel/whaling/id2001553/>; T. Bjørndal, J. Conrad, On the resumption of the Norwegian minke whale hunt, in *Whaling in the North Atlantic – Economic and Political Perspectives* (Petursdottir ed., 1997).

126 Government of Norway, Export of Norwegian Whale Products, available online at <https://awionline.org/press-releases/norway-defies-international-trade-ban-exports-tons-whale-products-japan>.

127 Please see the relevant information here: <https://cites.org/eng/gallery/species/mammal/walrus.html>.

128 D. Robinson, *International Dimensions of Global Change: Arctic Applications* (1997), available online at [www.arcticcircle.uconn.edu](http://www.arcticcircle.uconn.edu).

129 International Whaling Commission Data on the aboriginals in the Arctic, available online at <https://iwc.int/catches>.

to deal with other marine mammals, such as seals.<sup>130</sup> The NAMMCO Agreement, which was signed in 1992 by Norway, Iceland, Greenland and the Faroe Islands, provides a mechanism for cooperation concerning the conservation and management of all species of cetaceans (whales and dolphins) and pinnipeds (seals and walrus) in the region, many of which were not covered before by such an international agreement.<sup>131</sup> NAMMCO is hosted by Norway, which remains a member of the IWC, but has lodged objections to the commercial whaling ban, and continues to set national catch limits for minke whales. A Global Plan of Action for the Conservation, Management and Utilization of Marine Mammals has also been developed by UNEP, FAO, IWC and the IUCN.<sup>132</sup>

#### 5.7.5.4 Polar bears

The global population of polar bears is estimated to number between 22,000 and 31,000 bears.<sup>133</sup> Over half of these are found in Canada, while the remainder is found in Russia, Greenland, the United States and Norway.<sup>134</sup> The Agreement on the Conservation of Polar Bears and Their Habitats was signed in 1973, during the height of the cold war tension, by Canada, the United States, Denmark, Norway and the former Union of Soviet Socialist Republics.<sup>135</sup>

The Agreement prohibits the hunting and killing of polar bears, except for cases of bona-fide scientific purposes, conservation purposes, preventing serious disturbances of the management of other living resources, and by indigenous people using traditional methods of hunting.<sup>136</sup> Two of the signatory States, Norway and Russia, have completely banned polar bear hunting, while the remaining States allow limited aboriginal hunts. In practice, very few polar bears are hunted even with these exceptions. Aircraft and large motorised vehicles may not be used for the taking of polar bears. Parties are required to take appropriate action to “protect the eco-system of which polar bears are a part, with special attention to habitat component such as denning and feeding sites and migration patterns.” To meet this obligation, some Arctic

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130 D.D. Caron, *The International Whaling Commission and the North Atlantic Marine Mammal Commission: The Institutional Risks of Coercion in Consensual Structures*, 89 *Am. J. Int'l L.* 154 (1995).

131 NAMMCO, available online at <http://www.nammco.no/Default.htm>.

132 UNEP, *The Polar Regions* (2000), *supra*.

133 These data is from 2021 extracted by WWF website. More information available at: <https://polarbears-science.com/2021/10/31/global-population-size-estimates-for-polar-bears-clash-with-extinction-predictions/>.

134 *Making International and Environmental Agreements Work: the Canadian Arctic Experience*, 1999 report of the Commissioner of the Environment and Sustainable Development, Chapter 6, Exhibit 6.3 – Polar Bear Facts.

135 13 *ILM* 13 (1974).

136 *Arctic Polar Bear Agreement*, Art. III.

States have created protected areas for polar bears such as in the North and East Greenland National Park and the Melville Bugt Game Preserve. The three largest Polar Bear denning areas are all protected at Wrangel Island (Russia), on King Karl's Land at Svalbard (Norway), and in western Hudson Bay (Canada).

#### 5.7.5.5 *Treaties on wildlife and world heritage*

The CAFF Strategic Plan for the Conservation of Arctic Biological Diversity<sup>137</sup> recognises that most of the Arctic territory will remain outside protected areas. Several international agreements relating to protected areas are relevant to the Arctic, for example, all Arctic States are parties to the Ramsar Convention on Wetlands of International Importance especially as Waterfowl Habitat (Ramsar Convention).<sup>138</sup> All States, except Iceland, are also parties to the World Heritage Convention, and all Arctic States except the United States are parties to the Biodiversity Convention. Only two Arctic States, Norway and Sweden, are parties to the Convention on the Conservation of Migratory Species or Wild Animals (the Bonn Convention).

The Ramsar Convention, signed in Ramsar, Iran, in 1971,<sup>139</sup> is an inter-governmental treaty which provides the framework for national action and international cooperation for the conservation and wise use of wetlands and their resources. There are presently 122 Contracting Parties to the Convention, with 1034 wetland sites, totalling 78.2 million hectares, designated for inclusion in the Ramsar List of Wetlands of International Importance. The Ramsar Convention requires a party to designate suitable wetlands within its territory for inclusion in a List of Wetlands of International Importance.

Ramsar sites have been designated in the Arctic by most of the Arctic States. In Canada, there are five Ramsar sites in the Arctic: Dewey Soper Migratory Bird Sanctuary, McConnell River Migratory Bird Sanctuary, Polar Bear Pass National Wildlife Area, Queen Maud Gulf Migratory Bird Sanctuary, and Rasmussen Lowland.<sup>140</sup>

The World Heritage Convention establishes a system of collective protection for cultural and natural heritage of outstanding universal value. Under this system, the Parties are to designate cultural and natural heritage within their territories and to take measures for its protection, preservation and presentation. The Convention defines natural or cultural sites which can be considered for inscription on the World Heritage List, and sets out the duties of State parties in identifying, protecting and preserving potential sites. Parties are

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137 Please see more information at: <https://www.caff.is/strategies-series/62-strategic-plan-for-the-conservation-of-arctic-biological-diversity>.

138 Ramsar Convention UNTS 996 p245; ILM 11 p963.

139 *Ibid.*

140 A full list of sites may be found on the Ramsar Convention, *supra*.

encouraged to integrate the protection of the cultural and natural heritage into regional planning programs.

#### 5.7.5.6 International arrangements on resource extraction and waste disposal

Resource extraction laws are becoming increasingly important for Arctic environmental protection as the diamond rush replaces the moribund gold mining industry, and as onshore and offshore oil and gas exploration flourish. Each State's domestic legal regime governs mining and hydrocarbon development. Regional issues arise, for example, with pipeline proposals that cross national boundaries, offshore oil and gas development outside national jurisdictional limits, and differential benefits flowing to local communities and indigenous peoples from resource extraction projects. Regional guidelines on resource extraction are few in number. Pollution prevention and abatement guidelines compiled by the World Bank may apply in the Arctic as evidence of widely accepted global standards on particular management methods, pollution control technologies, and industry sector guidelines.<sup>141</sup>

With few exceptions, the Arctic States have generally not entered into cooperative management regimes for non-living resources.<sup>142</sup> Some authors believe there is no need to jointly regulate resources in areas where sovereignty is settled.<sup>143</sup> However, treaties or guidelines on hazardous waste movement, oil and gas, and mining are all relevant to the Arctic.<sup>144</sup> 5.7.5.7 Basel Convention – Trans-boundary Hazardous Waste<sup>145</sup>

The 1989 Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal entered into force in 1992.<sup>146</sup> One of the treaty's guiding principles is that hazardous wastes should be dealt with

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141 World Bank, *Pollution Prevention and Abatement Handbook* (1998); A more updated document has been produced at 2018 by the World Bank but it functions alongside with the *Pollution Prevention and Abatement Handbook* of 1998 and is not replacing it. The latter document is available at: <https://documents1.worldbank.org/curated/en/112401530216856982/ESF-Guidance-Note-3-Resource-Efficiency-and-Pollution-Prevention-and-Management-English.pdf>.

142 Hong, N. (2021). "Chapter 16 Non-Arctic States' Role in the High North: Participating in Arctic Governance through Cooperation". In *Marine Biodiversity of Areas beyond National Jurisdiction*. Leiden, The Netherlands: Brill/Nijhoff. doi: [https://doi.org/10.1163/9789004422438\\_017](https://doi.org/10.1163/9789004422438_017).

143 *Ibid.*; D. Rothwell (1996), *supra*, 342.

144 Linda Nowlan *supra* note 2.

145 The Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal available at: United Nations, Treaty Series, vol. 1673, p. 57.

146 The relevant information can be found at UNEP website, available at: <https://www.unep.org/resources/report/basel-convention-control-transboundary-movements-hazardous-wastes>.

as close to where they are produced as possible.<sup>147</sup> It creates a system of advanced informed consent when hazardous wastes are imported and exported. Each shipment of hazardous waste must be accompanied by a movement document from the point of departure to the point of disposal. Hazardous waste shipments made without such documents are illegal. In addition, there are outright bans on the export of these wastes to certain countries. Trans-boundary movements can take place, however, if the exporting State is not capable of managing or disposing of the hazardous waste in an environmentally sound manner.<sup>148</sup>

This issue is relevant to the Arctic because of Russian proposals to accept significant imports of hazardous waste for economic gain have been accepted and Russia was conducting relevant activities at least till the end of 2021.<sup>149</sup> Significant volumes of industrial waste generated in Arctic areas, such as Siberia and the Kola Peninsula, and the potential for such wastes to be transported through Arctic waters, also makes this Convention relevant.<sup>150</sup> By contrast, the export of hazardous waste is prohibited to the Antarctic Treaty Area, by Article 4.6 of the Basel Convention.<sup>151</sup>

### 5.7.6 Natural resources and mining

The Arctic region may contain some of the world's largest petroleum reserves, located both on land and on the continental shelf.<sup>152</sup> Domestic legal regimes regulate oil and gas extraction on land but trans-boundary areas that could be impacted by oil and gas development remain controversial. Proposals have been made in the United States to permit oil and gas drilling in the Arctic National Wildlife Refuge, home to 129,000 caribou, 300,000 snow geese and an uncounted number of polar bears.<sup>153</sup> The area is a calving ground for a

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147 J. van der Kolk, *Global Chemicals Policy*, Editor(s): Philip Wexler, *Encyclopedia of Toxicology* (Third Edition), Academic Press, 2014, Pages 732-735, <https://doi.org/10.1016/B978-0-12-386454-3.00677-1>.

148 The text of the treaty and explanatory Guides can be found on the website at <http://www.unep.ch/basel/>.

149 Giles Whittell, "Russia to accept nuclear waste – for \$30 billion," *Vancouver Sun*, Dec. 22, 2010, A9c.; A bid discussion has been conducted within the Basel Governance initiative where all the aspects of this illegal activity have been discussed. Please see more information on the following link available at: <https://baselgovernance.org/news/illegal-waste-trade-whats-driving-multi-billion-dollar-transnational-crime-and-what-could-stop>.

150 D. Rothwell (1996), *supra*, 214.

151 *supra* note 151.

152 More information can be found at the US Energy Information Administration available at: <https://www.eia.gov/todayinenergy/detail.php?id=4650>.

153 The international media and NGOs have covered extensively that issue. Some examples can be found on the following links:

National Geographic: <https://www.nationalgeographic.com/environment/article/oil-prospecting-may-begin-in-alaska-refuge-this-winter>

caribou herd that criss-crosses Alaska and Yukon and is also sacred ground for aboriginal groups. It might also contain vast amounts of oil beneath its ice, snow and tundra so the oil industry wants to drill at what wildlife experts call the refuge's "biological heart," an area that has been closed to oil operations since the refuge was established in 1960.<sup>154</sup> Offshore oil development is another environmental issue in the Arctic: the first offshore oil project in the Arctic Ocean, Northstar, is under development by BP Amoco, and is under attack by Greenpeace International.

The particularly sensitive nature of the Arctic environment prompted several Arctic Council Working Groups to cooperate on the preparation of Arctic Offshore Oil and Gas Guidelines.<sup>155</sup> PAME, EPPR and AMAP consulted with representatives of other governments, NGOs, industry, indigenous people, and the scientific community to prepare the Guidelines. The Guidelines assume that Arctic petroleum activities will be conducted in compliance with applicable international law. The Guidelines should help both industry and the Arctic nations' central and regional authorities to plan and develop oil and gas activities. Though the guidelines are non-binding, they encourage the adoption of the highest standards currently available; in particular, they are not intended to prevent States from setting stricter standards, where appropriate.<sup>156</sup>

No global legally binding agreements concerning mining currently exist, but NGOs and government representatives are discussing the need for regional guidelines to protect the Arctic environment from the harmful effects of mining.<sup>157</sup> Global initiatives on mining are proliferating. One important initiative, the Mining Minerals and Sustainable Development (MMSD) project, has the objective of "identifying how mining and minerals can best contribute to the global transition to sustainable development."<sup>158</sup> A two-year project which began in 2000 and concluded in 2003, MMSD was designed to produce concrete results during that period and to create structures capable of being carried forward thereafter.<sup>159</sup> One result from this project was the develop-

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BBC: <https://www.bbc.com/news/world-us-canada-53819727>

WWF: <https://www.worldwildlife.org/stories/5-species-that-stand-to-lose-the-most-if-the-us-allows-drilling-in-the-arctic-refuge>.

154 Information available online at <http://www.anwr.org>; <http://arcticcircle.vconn.edu/ANWR> and <http://www.arcticcaribou.com>.

155 The Arctic Environmental Protection Strategy, Arctic Offshore Oil and Gas Guidelines, June 13, 1997, available online at <http://www.grida.no/pame/FRreports.htm>. A number domestic guidelines have been developed based on this Strategy including the update of the guidelines themselves. The differences among the texts are not very significant. All of them can be found at: <https://pame.is/document-library/resource-exploration-and-development/arctic-offshore-oil-and-gas-guidelines>.

156 *Ibid.*

157 Emma Wilson, *What is Benefit Sharing? Respecting Indigenous Rights and Addressing Inequities in Arctic Resource Projects*, MDPI, 2019, available at: <https://www.mdpi.com/2079-9276/8/2/74/pdf>.

158 From the MMSD website at <http://www.iied.org/mmsd/index.html>.

159 *Ibid.*

ment of recommendations on new regulatory regimes for mining at the global or regional level. Another initiative concerned voluntary guidelines to protect human rights in security operations linked to international mining and energy projects.<sup>160</sup> The voluntary guidelines formed the culmination of discussions between on the one hand, the US and the UK governments, and on the other hand, BP, Royal Dutch/Shell, Rio Tinto, Texaco, Chevron and Freeport MacMoran, working with Amnesty International, Human Rights Watch, the Prince of Wales Business Leaders' Forum, International Alert and Business for Social Responsibility.

### 5.7.7 Environmental Impact Assessment (EIA)

EIAs can help avoid or minimise negative impacts from resource and other developments. All Arctic States have adopted domestic EIA laws. Many Arctic countries have also signed the Convention on EIA in a Transboundary Context (UNECE), also known as the Espoo Convention.<sup>161</sup> This Convention obliges States to conduct EIAs for trans-boundary impacts. Subsequently the Arctic Council prepared a set of Arctic EIA Guidelines that are more stringent than the Espoo Convention, encouraging a broader range of projects for inclusion than the developments listed in Appendix I of the Convention.<sup>162</sup> The Guidelines specifically do not replace or overrule existing procedures or guidelines adopted by international, national or provisional laws, land claim agreements or other regulations. Developed to address common Arctic features such as climate, ecosystems and socio-cultural attributes, the Guidelines were finalised and adopted in 1997.<sup>163</sup>

The Guidelines raise issues unique to the Arctic, such as permafrost, and provide assistance on factors such as traditional knowledge and public participation. The use of the precautionary principle is strongly encouraged. The Guidelines list areas demanding particular EIA attention, including sites of great sensitivity or unique geomorphology and areas of spiritual, cultural and other socioeconomic value, as well as areas important for traditional resource use.

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160 Congo-Online listserv, 15 January 2001.

161 30 I.L.M. 800 (1991).

162 More details about Espoo Convention and its protocols, United Nations, Treaty Series, vol. 1989, p. 309.

163 Guidelines available online at <http://www.grida.no/aria/eiaguide.pdf>.

### 5.7.8 Concluding remarks on the implementation of the existing global treaties related to environmental protection

Many global agreements are applicable in the Arctic as well as in other places in the world. The most imminent Arctic environmental issues, such as the impact of climate change and pollution coming from the multilevel human activity, can only be resolved through global, multilateral approaches since these problems are not Arctic problems exclusively. The participation of Arctic States, civil society organisations, and the Arctic Council in these global regimes is critical to raise the Arctic dimension of the problems, and to propose workable Arctic solutions. Common criticisms of global environmental treaties, such as overlap, duplication, and lack of coordination are also relevant from the Arctic viewpoint.

Global treaties differ with regard to their regulation of non-State actor participation. Harmonising these rules would assist the efforts of groups who want to participate in this complex maze of international meetings. The special role given to indigenous peoples in the emerging Arctic legal regime does not exist elsewhere in the global environmental treaty system. Consideration of how best to incorporate indigenous participation into these regimes could be a topic for the Arctic Council. Some global treaties could be further tailored to address Arctic environmental issues.

Global treaties could also add a layer of additional protection and management to certain sites. For example, the World Heritage Convention could be used to designate more regional sites of particular ecological significance, and achieve some measure of additional protection. For example, protection of the calving grounds of the Porcupine Caribou Herd in the United States and Canada has been proposed.<sup>164</sup> The Ramsar Convention could be used increasingly in the Arctic to promote conservation of these biologically threatened areas. Additional research is likely to identify even more possible ways that existing international environmental agreements could be used to address the environmental problems of the Arctic.

## 5.8 NEED FOR A REGIONAL ENVIRONMENTAL ARCTIC AGREEMENT

Change in the North is accelerating and it can be easily understood even by an external observer to the contemporary situation of the Area. Economic activity is flourishing on the Arctic as demonstrated by the diamond heat in the northern Canada as well as the proposals for nuclear power plants in Russia. Oil companies around the planet are aiming to site at least one natural gas pipeline in the Arctic Ocean, opting either through the Alaska Highway,

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<sup>164</sup> N. Banks, T. Fenge, Testimony to SCFAIT, cited in SCFAIT Report, Canada and the Circumpolar World, Chapter 9, at 7.

or the Mackenzie valley route.<sup>165</sup> The melting of the ice as a major impact of the rapidly evolving climate change has produced navigable waters impacting on the increase of the available sea routes in the Arctic Ocean as discussed in Chapter 2 of this Thesis.<sup>166</sup> Global NGOs, such as Greenpeace and the World Wildlife Fund, are increasing attention on the North examining the impact of human activities within the Arctic waters.<sup>167</sup> Moreover national American organisations are also expanding programs in the North<sup>168</sup> and the United Nations is elevating its interest through UNEP's GRID-Arendal office operating as the regional focal point for Arctic environmental information within UNEP. The UN also conducts Global Environment Facility financing projects in the Arctic with a whole range of activities varying from an integrated ecosystem approach to conserve the largest wild reindeer population in Eurasia to a project considering the significance of aquatic food chains as pathways of exposure for indigenous peoples.<sup>169</sup>

### 5.8.1 Effectiveness of the current regional environmental legal regime

The level of environmental protection in the region will remain unsatisfactory as long as individual Arctic States continue to classify their environmental priorities at the lower end of their national interest. An example of such disregard of the environment is Russia's abolishment of its environment and forestry committees and the United States' withdrawal from the Paris Agreement and its proposal to open up the Arctic National Wildlife Refuge to oil and gas drilling.<sup>170</sup>

It has already been demonstrated in previous parts of this Chapter that there are numerous gaps in the Arctic environmental legal regime especially when compared to the preventive regime that governs the Antarctic. There are many indications that show that the Arctic environment is not yet ade-

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165 Proposals for the pipelines are reported in (2000) *Enviroline*, vol. 12:1, 3. The Mackenzie Valley route was rejected by the Canadian government in the late 1970s following the Berger inquiry, whose report *Northern Frontier, Northern Homeland* (1977), comprehensively examined the issue of development in the North and its impact on indigenous peoples.

166 For more detailed discussion on that respect see Chapter 2 on navigational management of the Arctic.

167 See the Greenpeace International Project available online at [www.greenpeace.org](http://www.greenpeace.org) and the WWF Arctic Program available online at <http://www.ngo.grida.no/wwfap/>.

168 See Stephanie Pfirman *et al*; *ARCTIC OPENING: Opportunity and Risk in the High North*, Lloyd's, available at: [http://library.arcticportal.org/1671/1/Arctic\\_Opening%2C\\_opportunity\\_and\\_risks\\_in\\_the\\_High\\_North.pdf](http://library.arcticportal.org/1671/1/Arctic_Opening%2C_opportunity_and_risks_in_the_High_North.pdf).

169 M. T. El-Ashry (Chief Executive Officer and Chairman Global Environment Facility), *Financing Sustainable Development: GEF and the "Northern Dimension"* Remarks, Rovaniemi, Finland, August 29, 2000.

170 Please see the 2019 Comment from the Climate Action Tracker available at: [https://climateactiontracker.org/documents/650/CAT\\_2019-1101\\_EffectOfTrumpOfficialPAWithdrawl.pdf](https://climateactiontracker.org/documents/650/CAT_2019-1101_EffectOfTrumpOfficialPAWithdrawl.pdf).

quately protected such as the melting of ice from greenhouse gases produced mainly in areas far away as well as the declining populations of some charismatic polar species.

The vast majority of Arctic Council Working Groups focus on pollution. AMAP's comprehensive State of the Arctic Environment report, followed up by its report on the Arctic environment and human health addresses air, water and land-based pollutants. Other comprehensive plans include the Arctic Plan to eliminate all sources of pollution (ACAP) and the Regional Program of Action to reduce land-based sources of marine pollution. Under the auspices of the Arctic Council new guidelines have been produced: the Arctic EIA Guidelines, the Arctic Guide for Emergency Prevention, Preparedness and Response, and the Arctic Offshore Oil and Gas Guidelines followed by an Agreement on Responses of Oil Spills.<sup>171</sup> Targeted campaigns, such as the campaign to eliminate PCBs in the Russian Arctic is another aspect of the activity undertaken by the Arctic Council.<sup>172</sup>

The major pollution sources still remain untouched and without effective management by the global and regional Arctic regime. The pollution by contamination from past military and nuclear activities still remains, and has not been singled out for action by the global community or the relevant regional body. Military activities are specifically exempt from the Arctic Council's mandate; however, the Council has supported some efforts to clean up PCBs from former military installations in Russia.<sup>173</sup>

The legal regime seems to be even weaker when considering the protection of species and spaces and the rich biodiversity of the Arctic. The Biodiversity Convention is a framework Convention which include the minimum standard of concrete obligations for the contracting parties. More issue-specific treaties, such as CITES, are useful since they offer an additional level of protection for species at risk such as walrus and polar bears.<sup>174</sup> Conservation for sensitive wetland habitats and world heritage sites takes place under the auspices of Ramsar<sup>175</sup> and World Heritage Conventions, even if these two agreements

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171 Please see at: <https://oarchive.arctic-council.org/handle/11374/529>.

172 All the above-mentioned initiatives alongside with their update can be found at the website of the Arctic Council and its Working Groups. One of the consequences of the 2014 invasion of Russia in Crimea was that the cooperation on the Environmental Protection at the Arctic Ocean has been frozen and it took many years to the Arctic States return to the status quo ante where all the Arctic State were willing to establish some minimum degree of collaboration. The current situation in Ukraine is highly likely to lead to the same outcome on that respect too.

173 Landrigan, P.J., Stegeman, J.J., Fleming, L.E., Allemand, D., Anderson, D.M., Backer, L.C., Brucker-Davis, F., Chevalier, N., Corra, L., Czerucka, D., Bottein, M.D., Demeneix, B., Depledge, M., Deheyn, D.D., Dorman, C.J., Fénichel, P., Fisher, S., Gaill, F., Galgani, F., Gaze, W.H., ... Rampal, P. (2020). Human Health and Ocean Pollution. *Annals of global health*, 86(1), 151. <https://doi.org/10.5334/aogh.2831>.

174 Both these species have been listed in Appendices to CITES.

175 See *supra*.

could impose more concrete obligations and they could be widely applied in the Arctic region. Some species are protected individually with the Polar Bear Agreement which is an example of a successful simple wildlife treaty, however some reports show that part of the bears' critical habitat remains unprotected.<sup>176</sup> Some herds of caribou are legally protected, such as the Porcupine Caribou Herd, through a bilateral United States-Canada agreement,<sup>177</sup> while the future of some others, such as the Bathurst Caribou Herd, is uncertain due to unknown impacts of the Ekati diamond mine on the herd's migratory route and still other groups, such as Peary Caribou, are in serious decline.<sup>178</sup>

### 5.8.2 Regional Arctic environmental protection agreement

Various proposals have been made to consolidate the Arctic legal regime into one or more region-wide agreements.<sup>179</sup> The initial Arctic Council proposal was accompanied by a draft framework treaty. The draft referred to its objective "to promote the use of the Arctic Region for peaceful purposes" in the list of the purposes of the Council, mirroring the Antarctic treaty wording.<sup>180</sup>

There is no common understanding yet on the need for a treaty designed exclusively for the Arctic, though many people including conservation organisations, scientists, government representatives and academic experts have expressed support of a new instrument. People that disagree with the idea of a new agreement claim that ongoing efforts to solve Arctic problems would be crippled by a "grand but generally unrealistic vision of a comprehensive, region-wide governance system for the circumpolar world."<sup>181</sup>

Another issue is the format that such an agreement has to take. In this respect, Arctic regional agreement has been vigorously debated but it has always been clear that it could not be similar to the Madrid Protocol about the Antarctic because the intent is not to make the Arctic a nature reserve by prohibiting all kinds of activities but to allow for sustainable development. Therefore, a regional agreement on the basis of the structure of the Biodiversity

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176 CAFF Habitat Conservation Report No. 5 – Gaps in Habitat Protection in the Circumpolar Arctic – A Preliminary Analysis, 1996.

177 Canada-US Agreement on the Porcupine Herd, 1987. This Agreement may be in jeopardy due to increased calls to start oil and gas drilling on the US portion of habitat.

178 Canadian Wildlife Service, Committee on the Status of Endangered Wildlife in Canada and Northwest Territories government, available online at: <https://www.canada.ca/en/environment-climate-change/campaigns/50-years-environmental-action/eccc-timeline/canadian-wildlife-service-nature-conservation.html>.

179 Zhao Long, Arctic Governance Challenges and Opportunities, Council on Foreign Relations, 2018, available at: <https://www.cfr.org/report/arctic-governance>.

180 D. Pharand (1991), *supra*.

181 R. Young, (2000), *supra*, at 15.

Convention with its three focus points (conservation, sustainable use and sharing of benefits), could be a good model to initiate the discussion.

Various ideas have been proposed in this respect such as: a single comprehensive environmental agreement addressing both land and vessel based pollution, contingency planning and biodiversity protection; a convention on Arctic land-based sources of pollution; a broader sustainable development and environmental protection convention covering both marine and terrestrial areas;<sup>182</sup> a Protocol to other Conventions, i.e. an Arctic Protocol under the Biodiversity Convention; and an Arctic Ocean Regional Sea regime under the UNEP Regional Seas Program. UNEP has taken preliminary steps to establish a Regional Action Plan for Protecting the Arctic Marine Environment with the eight Arctic States. An Action Plan may be more feasible than a fully-fledged agreement, and could stimulate activities by the Arctic States to more efficiently protect the environment. This list of options is not exhaustive, and further work to identify the full range of legal options and the pros and cons of each option would be required to evaluate which course to pursue.

The main arguments for and against a treaty are discussed below. The arguments for a new legally binding treaty seem to be more convincing, considering the value of the Arctic, the seriousness of the environmental threats, and the lack of a comprehensive framework through which to address these threats.

### 5.8.3 Advantages of an Arctic environmental treaty

The main advantage of a treaty would be that a specific set of obligations would be imposed on States relating to various issues including the protection of the environment through the enforcement of targets, timetables, and scheduled dues. The challenge in that respect is to the enforceability of this agreement since may conflicting interests need to be balanced and which would undeniably attract more serious attention from States around the world. A binding treaty could also be a good indication of a higher level of political commitment towards this region. This could definitely have a serious impact in the functions of Arctic Council and the role that does have to play among the Arctic Stakeholders

A treaty would raise the political profile of Arctic issues and encourage the Arctic States to take the environment more seriously. It would also allow other States to engage with the Arctic more actively, for example, China, Japan, Korea, the EU and its Member States.<sup>183</sup> The creation of a secretariat with

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182 D.L.V. Zwaag (2000), *supra*.

183 Some of those States have already declared themselves as Arctic Stakeholders requesting and obtaining attendee status in the Arctic Council which gives them the opportunity to participate in the discussion on the future of the Arctic.

personnel, offices, and a budget could advance the Arctic environmental protection agenda more readily than the current voluntary, rotating chairs of the Arctic Council. Some financial and technological aspects which are now missing from the Council's agenda can be added and implemented and the adoption of this type of provision, common in modern environmental treaties, may induce compliance by those States that require assistance for clean-up. There is a need to consolidate the current huge range of specific arrangements, and to add missing elements such as dispute settlement mechanisms; benefit sharing; the incorporation of the precautionary principle and other significant legal principles; and the resolution of conflicts and overlaps through the inclusion of the principle of subsidiarity.

Much of the substance of a framework agreement is already in place through the practice of the Arctic States, enshrines the mandates of the five Working Groups, adds innovative features designed to address the particular needs of the Arctic, and gives the whole arrangement a sustainable development focus. The change from the AEPS to Arctic Council happened in a relatively short time frame. As the pace of change accelerates in the Arctic, converting the Arctic Council agreement into a more comprehensive treaty may be warranted.

#### 5.8.4 Disadvantages of an Arctic environmental protection treaty

The main argument against a new treaty is that the current soft law arrangement is relatively new so it is too early to evaluate whether it needs to be supplemented by an enforceable treaty.<sup>184</sup> Arctic States are unlikely to want to invest time and energy into a treaty at this stage mainly because of bilateral or international problems they deal with on situations on other places of the planet and the significant level of conflict that they deal with global issues in the Security Council. The Arctic Council Groups are carrying out detailed plans of action implemented nationally (e.g. AMAP and national contaminant programs) but the holistic aspect is missing. Another argument is that a treaty would not add much, as the action plans that would be set in place under a treaty are already established. There is also the risk of "treaty congestion" and "treaty fatigue" due to the rapidly expanding number of global environmental and other treaties. Soft law can be useful in an area without a long history of international cooperation,<sup>185</sup> like the Arctic. Soft law requires neither formal procedures of ratification, nor the passage of domestic implementing legislation. Treaty making may also involve serious constitutional

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184 Nolan *supra* note 2.

185 Dr Kumaravadivel Guruparan, Dr Jennifer Zerk, Influence of soft law grows in international governance, experts opinioo, Chatham House, available at: <https://www.chathamhouse.org/2021/06/influence-soft-law-grows-international-governance>.

or legislative barriers. Negotiating soft law instruments is usually quicker, and provisions in these agreements take effect immediately.<sup>186</sup>

Another argument is that non-ratified treaties and/or treaties that are not yet in force may produce even weaker commitments than a soft law regime. Declarations are not legally binding, so States may be more willing to include substantive commitments and to conclude faster agreements using this unofficial form rather than a treaty. Governments may also be more willing to take innovative approaches when the end result will not be legally binding since they feel more comfortable with less attribution to their action and to unofficial negotiations rather than using obligations delineated officially by a treaty. States are more likely to include loopholes in legally binding agreements to limit their exposure to new or expanded commitments since intended vagueness would better serve their interests rather than absolute clarity on every detail.<sup>187</sup> Other arguments against development of a treaty include the idea that the time and expense of formal treaty negotiations could act as a barrier to the continuation of soft law development; that a formal new organisation, such as a treaty secretariat, could be expensive to operate; that a comprehensive regime can be difficult to obtain support for, and consequently difficult to implement. The best example of this phenomenon is UNCLOS, which took eleven years from negotiation to entering into force, and is still not implemented worldwide; and lastly, many international treaties already take the special needs of the Arctic into account such as the POPs treaty. Pursuing Arctic-specific goals in existing global regimes may be faster, less expensive, and more effective for the environment.

With the ongoing war in Ukraine, which shows no signs of de-escalation, the abovementioned discussion may seem like a non-priority. However, when peace will be re-established and diplomatic relations return to normal, this discussion will emerge again as priority since the environmental problems will become even more pertinent and demanding than before.

## 5.9 PRELIMINARY CONCLUSION

There are many potential topics for a regional Arctic agreement to protect the environment and promote sustainability. The Antarctic has a well-developed regime and fifty years of experience to draw upon when designing an invigorated Arctic regime. Innovative features to meet the unique needs of Arctic residents are also proliferating, and should be incorporated into a strengthened legal regime. A treaty could play a valuable role in promoting Arctic sustainability. Whether or not a legally binding treaty is negotiated soon, the Arctic

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186 A. Kiss, *Commentary and Conclusions*, in *Commitment and Compliance* 239 (D. Shelton, ed., 2000).

187 O.R. Young (2000), *supra*, at 18.

Council should move to promote and strengthen the innovative features that are already part of the Arctic regime, and continue to work to preserve the unique features of the Arctic region.



## 6.1 INTRODUCTION

Indigenous peoples are disproportionately affected by the impact of climate change.<sup>1</sup> The nature and intensity of the effects of climate change on indigenous peoples are defined by their geographic location and relative reliance on the natural environment and its resources for livelihood, culture and spirituality.<sup>2</sup> Their capacity to address climate change hinges on their relative exposure to shifting environmental conditions as well as on available knowledge, material and technical resources.<sup>3</sup> This capacity is defined at the institutional level by the legal framework governing access to land and natural resources, governance structures and participation in decision-making processes relevant to climate change mitigation and adaptation.<sup>4</sup>

The area of the Arctic region is about 14.5 million km<sup>2</sup>. It includes the ice-covered Arctic Ocean and the surrounding land covering all of Greenland and Spitsbergen, and the northern parts of Alaska, Canada, Norway, and Russia.<sup>5</sup> In addition, the northern parts of Finland and Sweden in the north of the Arctic Circle belong to the Arctic region.<sup>6</sup> Some of the land parts of the Arctic, such

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1 See R. Tsosie, *Indigenous People and Environmental Justice: the Impact of Climate Change*, 78 U. Colo. L. Rev. 1625, 1633 (2007); L. Westra, *Environmental Justice and the Right of Indigenous Peoples International and Domestic Law Perspectives*. Earthscan (2007), 8, 20.

2 J. M. Hanna (ed.), *Native Communities and Climate Change: Protecting Tribal Resources as Part of National Climate Policy*, University of Colorado, Natural Resources Law Center & Western Water Assessment (2007), 5; M. Macchi, et al., *Indigenous and Traditional Peoples and Climate Change*, IUCN (2008), available online at: <https://policycommons.net/artifacts/1369021/indigenous-and-traditional-peoples-and-climate-change/1983196/>.

3 J. D. Ford, T. Pearce, F. Duerden et al., *Climate Change Policy Responses for Canada's Inuit Population: The Importance of and opportunities for Adaptation*, 20 *Global Env'tl. Change* 177 (2010), at 181–3.

4 *Ibid.* See also S. Thériault, *Indigenous Peoples and Climate Change Policies: A Comparative Assessment of Indigenous Governance Models in Local Climate Change Law*. *Environmental Regulation in Cities and Other Localities* 243 (B. J. Richardson ed., 2012); R. Tsosie, *Climate Change, Sustainability and Globalization: Charting the Future of Indigenous Environmental Self-Determination*, 4 *Env'tl. & Energy L. & Pol'y J.* 188 (2009), at 210–14.

5 *Polar Discovery*, available online at <http://polar.discovery.who.edu/arctic/geography.html>.

6 There is no generally accepted definition of the Arctic. The AMAP defined the Arctic marine area as north of the Arctic Circle (66°32'N), north of 62°N in Asia, and 60°N in North America, including the northern parts of Finland and Sweden; see *Arctic Transform, Intro-*

as Greenland, are covered with ice sheets whereas others, such as Alaska, have lush tundra. These areas have large mammals, such as caribou, bear, wolf, and fox, and many varieties of plants. In summer, migratory birds and other wildlife come to the Arctic to raise their young.<sup>7</sup> The Arctic is inhabited by significant numbers of indigenous and coastal communities. There are over 40 ethnic groups who have inhabited the region for thousands of years.<sup>8</sup> Out of the total population of 4 million people, 10 % are indigenous peoples.<sup>9</sup> They include the Inupiat and Yup'ik Eskimos, Alutiiq and Athabascans in Alaska; the Kalaallit and Inughuit in Greenland; the Sami in northern Fennoscandia; and the so-called northern minorities in Russia, who include the Chukchi, Evens, Evenks, Nenets, Mivkhi, Sami, Sakhas, and Khants.<sup>10</sup> Each of these groups has its own culture, language, history, and traditional ways of life. The traditional activities of the Arctic indigenous peoples include reindeer herding, subsistence hunting, sheep farming and fishing.<sup>11</sup>

Despite the variations in the means of livelihood, cultural practices and language, all groups share something in common. Most of the indigenous communities have already undergone substantial changes due to globalisation, the Western way of life, state policies, and the introduction of mixed economy.<sup>12</sup> Today the activities of the Arctic indigenous peoples include, among others, commercial salmon canning, timber production, and oil-related businesses. Many indigenous groups, nevertheless, still mostly rely on the natural resources of the traditional lands on which they live.<sup>13</sup> Their connection to traditional activities embraces their economic and cultural survival. Nevertheless, technology, industrial development, immigration, and tourism are causing large-scale social change and adversely affecting the Arctic environment. As a result, for the indigenous peoples, the survival of their traditional

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duction to the Background Papers, available online at <http://arctic-transform.org/download/Intro.pdf>.

7 See Polar Discovery, *supra*.

8 Arctic Indigenous peoples, available online at <http://www.arcticcentre.org/?Deptid=24486>.

9 M.L. Parry *et al.*, *Climate Change 2007: Impacts, Adaptation and Vulnerability*, Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change, Cambridge University Press, (2007) 657.

10 M. Nuttal, *Protecting the Arctic Indigenous Peoples and Cultural Survival*, Harwood: Routledge, (2002), 2.

11 *Ibid.*

12 Elena Gladun, Soili Nysten-Haarala, Svetlana Tulaeva, *Indigenous Economies in the Arctic: To thrive or to survive*, 14<sup>th</sup> of July 2021, ELEMENTA Science of the Anthropocene, available at: <https://online.ucpress.edu/elementa/article/9/1/00088/116748/Indigenous-economies-in-the-ArcticTo-thrive-or-to>.

13 *Ibid.*

culture and livelihood, and indeed identity, has become a significant challenge.<sup>14</sup>

In Canada, the ability of indigenous communities to tackle the impacts of climate change vary considerably according to geography, culture, economy and their particular colonial legacies across the country.<sup>15</sup> For instance, Northern indigenous communities, including the Inuit, Inuvialuit, Gwich'in and Dene, are coping with the acute environmental, social and geopolitical effects of climate change, which already exert considerable pressure on their culture, economies and infrastructures.<sup>16</sup> In other parts of the country, such as in the coastal regions of British Columbia, increased water temperature, greater winter rainfalls and changes to the physical nature of the aquatic habitat and water quality are threatening the vitality of salmon populations, which are key to the culture, spirituality and economies of many local indigenous communities.<sup>17</sup> In addition to being differently situated in terms of climate change impacts, the capacity for indigenous communities to address climate change may vary depending on the specific legal framework governing their territorial rights, especially their rights to access, use and control their ancestral lands and natural resources, and to participate meaningfully in territorial and environmental governance.<sup>18</sup>

This Chapter examines the role of territorial rights of indigenous peoples, as defined in land claims agreements, in enhancing or hindering their capacity to address climate change through mitigation and/or adaptation measures.<sup>19</sup> Section 35 of the Constitution Act, 1982, recognises 'existing aboriginal and treaty rights' – including 'rights that now exist by way of land claims agree-

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14 See for detailed discussions, K. Hossain, The Human Rights Committee on Traditional Cultural Rights: the Case of the Arctic Indigenous Peoples, in *Global and Local Encounters Norms, Identities and Representations in Formation*, Renvall Institute Publication 25 (T. Veintie, P. Kristiina Virtanen eds., 2009), at 29–30. See also M. Nuttal, *supra*, 2.

15 D. S. Lemmen *et al.*, *From Impacts to Adaptation: Canada in a Changing Climate*, Government of Canada (2007), available online at: <https://publications.gc.ca/site/eng/320166/publication.html>.

16 K. Koutouki, N. Lyons, Canadian Inuit Speak to Climate Change: Inuit Perceptions on the Adaptability of Land Claims Agreements to Accommodate Environmental Change, 27 *Wis. Int'l L.J.* 516 (2009–10) at 531–8; S. F. Trainor *et al.*, Arctic Climate Impacts: Environmental Injustice in Canada and the United States', 12 *Local Env't* 627 (2007).

17 J. M. Hanna, *supra*, 7–8. The US Pacific Northwest Tribes' relationship with salmon is also found in British Columbia coastal communities, see D. C. Harris, *Fish, Law, and Colonialism: The Legal Capture of Salmon in British Columbia*, University of Toronto Press (2001).

18 Center for Indigenous and Environmental Research (CIER) and University of British Columbia (UBC), *Climate Change and Adaptive Capacity in Aboriginal Communities South of 60<sup>th</sup> Assessment Report*, March 31 (2011), available online at <http://www.cier.ca/information-and-resources/publications-and-products.aspx?id=2056>, at 10.

19 K. Koutouki, N. Lyons, *supra*, addressed this topic. This article, largely based on field research conducted in three regions of Northern Canada, focuses on Inuit perceptions on climate change and their land claims agreements. The present chapter instead proposes a strictly formal analysis of land claims agreements in the context of climate change.

ments or may be so acquired' – of the Aboriginal peoples of Canada.<sup>20</sup> In addition to aboriginal and treaty rights, the legal status of indigenous people is defined in statutory law. For instance, the Indian Act<sup>21</sup> and its related statutes and regulations define the land rights of First Nations communities living on reservations, as well as the structure and powers of Indian Band Councils.<sup>22</sup>

Land claims agreements, also known as 'modern treaties,' have been negotiated between indigenous peoples and the Canadian Government since the adoption of a federal policy to that effect in 1973.<sup>23</sup> The precise content of these agreements varies according to the respective needs and aspirations of the parties and the power relationships at play during the negotiations. Most land claims agreements contain provisions regarding: the ownership, use and management of lands, waters and natural resources (for example, fish and wildlife); environmental protection and environmental impact assessment; economic development; and self-governance and participation in public governance structures.<sup>24</sup>

This Chapter analyses the aspects of those agreements that are relevant to climate change using as a primary case study the land claims agreement concluded between the Nunatsiavut (Labrador) Inuit, the province of Newfoundland (Northern Labrador) and Canada (LILCA).<sup>25</sup> The first part of the Chapter explains the indigenous land claims negotiations process in Canada. The second and third parts examine land claims agreements from two perspectives: their relative flexibility and capacity to evolve in order to foster indi-

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20 Constitution Act 1982, RSC (1985), Appendix II, No. 44, ss. 35(1), (3). According to s. 35(2), the Aboriginal peoples of Canada are the Indians, the Metis, and the Inuit.

21 Indian Act of 1876, RSC c. I-5 (1985).

22 Indian Band Councils are the governing structures created by the Indian Act. The expression 'First Nations' is widely used to designate the indigenous peoples of Canada subjected to the regime of the Indian Act. The Metis and the Inuit are not governed by the Indian Act. For an examination of the role and limits of the governance structures established by the Indian Act in mitigating and adapting to climate change, see Thériault, *supra*.

23 This policy has been modified several times. For the current policy, see Indian and Inuit Affairs Program, Federal Policy for the Settlement of Native Claims (Department of Indian and Northern Affairs Canada 1998).

24 For a more detailed description of each land claims agreement, see Aboriginal Affairs & Northern Development Canada, General Briefing Note on Canada's Self-Government & Land Claims Policies & the Status of Negotiations – Jan. 2012, available online at [http://www.aadnc-aandc.gc.ca/DAM/DAM-INTER-HQ/STAGING/texte-text/al\\_ldc\\_ccl\\_gbnjan2012\\_1324327698586\\_eng.pdf](http://www.aadnc-aandc.gc.ca/DAM/DAM-INTER-HQ/STAGING/texte-text/al_ldc_ccl_gbnjan2012_1324327698586_eng.pdf); CIER and UBC (2011), *supra*. Canada has been negotiating self-government agreements since the adoption of a policy to that effect in 1995: Minister of Indian Affairs and Northern Development, Aboriginal Self-Government, Public Works & Government Services Canada (1995).

25 2005 Labrador Inuit Land Claims Agreement (LILCA) online available at [http://www.exec.gov.nl.ca/exec/igas/land\\_claims/agreement.htm](http://www.exec.gov.nl.ca/exec/igas/land_claims/agreement.htm). The region of Nunatsiavut is located in the northern tip of Labrador, in the province of Newfoundland. There are approximately 5,300 Nunatsiavut Inuit, the majority of whom live in the communities of Nain, Hopedale, Portville, Makkovik, and Rigolet.

genous communities' adaptation to climate change, and the possibilities provided by these agreements for indigenous groups to participate meaningfully in the governance of climate change. The Chapter concludes that while land claims agreements, especially the most recent ones, such as the Nunatsiavut Inuit agreement, provide indigenous peoples with multiple tools to address climate change, they lack the flexibility Inuit communities need to adapt to rapidly shifting environmental conditions. While land claims agreements contain arrangements to guarantee indigenous peoples' participation in the governance of their lands and natural resources, either through self-governance or co-management institutions, they still do not participate meaningfully in aspects of decision-making relevant to addressing climate change. Lastly, this Chapter examines the consequences of globalisation in the Arctic Ocean as well as issues of protection on Human Rights under contemporary international law.

## 6.2 DEFINING INDIGENOUS PEOPLES

The term 'indigenous people' is not defined in any international instrument, not even in the Declaration on the Rights of the Indigenous Peoples. The term, however, can be found in the debates of the 1989 International Labour Organization (ILO) Convention concerning Indigenous and Tribal Peoples in Independent Countries, which entered into force on 5 September 1991.<sup>26</sup> No definition was finally invoked in the convention. Article I(1) of the Organization of American States (OAS)<sup>27</sup>'s declaration on the rights of indigenous peoples provides that the declaration applies to 'indigenous peoples' as well as peoples whose social, cultural, and economic conditions distinguish them from other sections of the national community, and whose status is regulated wholly or partly by their own customs or traditions or by special laws or regulations.<sup>28</sup>

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26 Article 1 of the ILO Convention no. 169, 1650 U.N.T.S. 383, states:

1. This Convention applies to: a) Tribal peoples in independent countries whose social, cultural and economic conditions distinguish them from other sections of the national community, and whose status is regulated wholly or partially by their own customs or traditions or by special laws or regulations; b) Peoples in independent countries who are regarded as indigenous on account of their descent from the populations which inhabited the country, or a geographical region to which the country belongs, at the time of conquest or colonization or the establishment of present State boundaries and who, irrespective of their legal status, retain some or all of their own social, economic, cultural and political institutions. 2. Self-identification as indigenous or tribal shall be regarded as a fundamental criterion for determining the groups to which the provisions of this Convention apply. See Convention (no. 169) concerning Indigenous and Tribal Peoples in Independent Countries (1989). Available online at <http://www.unhchr.ch/html/menu3/b/62.htm>.

27 Please see at: <https://www.oas.org/en/sare/documents/DecAmIND.pdf>.

28 Proposed American Declaration on the Rights of the Indigenous Peoples [hereinafter Proposed American Declaration], Approved on 26 February 1997, available online at <http://www.cidh.oas.org/Indigenous.htm>.

The clearest definition of 'indigenous peoples' has been put forward by Jose R. Martinez Cobo, the Special Rapporteur of the Sub-Commission on Prevention of Discrimination and Protection of Minorities:

Indigenous communities, peoples and nationals are those which, having a historical continuity with pre-invasion and precolonial societies that developed on their territories, consider themselves distinct from other sectors of the societies now prevailing on those territories, or parts of them. They form at present non-dominant sectors of society and are determined to preserve, develop and transmit to future generations their ancestral territories, and their ethnic identity, as the basis of their continued existence as peoples, in accordance with their own cultural patterns, social institutions and legal system.<sup>29</sup>

In addition, two other definitions are important. Special rapporteur Francesco Capotorti of the Sub-Commission on Prevention of Discrimination and Protection of Minorities, suggested the following: 'A group, numerically inferior to the rest of the population of a State, in a non-dominant position, whose members being nationals of the State – possess ethnic, religious or linguistic characteristics differing from those of the rest of the population and show, if only implicitly, a sense of solidarity, directed towards preserving their culture, traditions, religion or language.'<sup>30</sup> Another definition is provided by Jules Deschenes, Special Rapporteur to the Commission on Human Rights (Resolution 1984/62):

"A group of citizens of a State, constituting a numerical minority and in a non-dominant position in that State, endowed with ethnic, religious or linguistic characteristics which differ from those of the majority of the population, having a sense

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29 Permanent Forum on Indigenous Issues, The Concept of Indigenous Peoples, A background paper, UN Doc. PFII/2004WS.1/3 (2004), available online at <http://www.un.org/esa/socdev/unpfii/documents/PFII%202004%20WS.1%203%20Definition.doc>; See also, Sub-Commission on the Promotion and Protection of Human Rights, Study of the Problem of Discrimination against Indigenous populations, UN Doc. E/CN.4/Sub.2/1986/7/Add.4 at para 379 (1986). The Cobo definition further continues to mean historical continuity as consisting of the presence of one or more of the following factors: a) occupation of ancestral lands, or at least of part of them; b) common ancestry with the original occupants of these lands; c) culture in general, or in specific manifestations (such as religion, living under a tribal system, membership of an indigenous community, dress, means of livelihood, lifestyle, etc.); d) language (whether used as the only language, as mother tongue, as the habitual means of communication at home or in the family, or as the main, preferred, habitual, general, or normal language); e) residence on certain parts of the country, or in certain regions of the world; f) other relevant factors. On an individual basis, an indigenous person is one who belongs to these indigenous populations through self-identification as indigenous (group consciousness) and is recognized and accepted by these populations as one of its members (acceptance by the group). This preserves for these communities the sovereign right and power to decide who belongs to them, without external interference.

30 Sub-Commission on the Promotion and Protection of Human Rights, Study on the Rights of Persons belonging to Ethnic, Religious and Linguistic Minorities, UN Doc. E/CN.4/Sub.2/384/Rev.1 (1979).

of solidarity with one other, motivated, if only implicitly, by a collective will to survive and whose aim is to achieve equality with the majority in fact and in law ...<sup>31</sup>

From these discussions, an understanding can be derived as to who indigenous peoples are, although they are not clearly defined. Despite the lack of formal definition there has been a steady evolution in the normative development towards a greater recognition of the rights of indigenous peoples, starting with the adoption of the Declaration on the Rights of the Indigenous Peoples. Today it is possible to clearly identify indigenous peoples, even in the absence of any formal definition.

### 6.2.1 Right to culture under Article 27

The ICCPR was adopted in 1966 and entered into force on the 23<sup>rd</sup> of March 1976.<sup>32</sup> The international political movement to improve the standards of protection for the world's indigenous peoples had not yet gained momentum. Consequently, there was no reference to 'indigenous people' in the ICCPR. Yet, the ICCPR adopted Article 27, which also applies to indigenous peoples. The Article reads as follows:

In those States in which ethnic, religious or linguistic minorities exist, persons belonging to such minorities shall not be denied the right, in community with the other members of their group, to enjoy their own culture, to profess and practice their own religion, or to use their own language.<sup>33</sup>

Culture manifests, among the other things, a different identity and dignity through traditional practices, which indigenous peoples, among the other minorities, possess strongly.<sup>34</sup> In the first in the evolution of indigenous rights

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31 Sub-Commission on the Promotion and Protection of Human Rights, Proposal Concerning a Definition of the Term 'Minority', UN Doc. E/ CN4./Sub.2/985/31 (1985). For a general treatment, see E. Gayim, *The Concept of Minority in International Law: A Critical Study of the Vital Elements*, 27 *Juridica Lapponica Arctic Centre* 14 (2001).

32 International Covenant on Civil and Political Rights. Treaty Series, 999, 171. Bibliography: United Nations (General Assembly).

33 Article 27 ICCPR, *supra* note 27.

34 Indigenous peoples are also in many instances classified as both minority and indigenous at the same time, although indigenous rights as developed by the inter-governmental organization is far more extensive, stronger and detailed than minority rights. See R. MacKay, *The Rights of Indigenous Peoples in International Law*, Berkeley (1998), available also online at [http://www.omced.org/cases/case\\_McKay.pdf](http://www.omced.org/cases/case_McKay.pdf). See also B. Robbins, E. Stamatopoulou, *Reflections on Culture and Cultural Rights*, 2(3) *The South Atlantic Quarterly* 430 (2004), where the authors state that indigenous peoples are claiming, among others, the protection for their tangible and intangible cultural heritage and traditional knowledge – for example, the assertion of intellectual property rights to dances, songs, stories, and

under the ICCPR, their rights were specified by the HRC as part of protecting minority culture where they form the minority. Clearly, the HRC viewed that traditional livelihoods were at the heart of protecting the culture of indigenous peoples. This view was earlier adopted by the HRC in 1988 in the *Kitok* case, where the HRC upheld the rights of persons, in community with others, to engage in economic and social activities that are part of the culture of the community to which they belong.<sup>35</sup>

The right to enjoy one's culture within the meaning of Article 27 of the ICCPR has further been clarified by the General Comment, which is intended to systematise the Committee's interpretation of specific provisions or aspects of the Covenant, adopted by the HRC on Article 27 in 1994.<sup>36</sup> The HRC observed that culture manifests itself in many forms, including a particular way of life associated with the use of land resources, especially in the case of indigenous peoples. That right may include such traditional activities as fishing or hunting, and the right to live in reserves protected by law. The enjoyment of these rights may require positive legal measures of protection and measures to ensure the effective participation of members of minority communities in decisions that affect them.<sup>37</sup> Article 27 restricts the State in

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so on as their cultural rights. Under this heading the indigenous peoples are claiming intellectual property rights over knowledge of any kind that concerns them, knowledge that over the decades has been commercially exploited and occasionally even patented by the private sector.

35 See Human Rights Committee [hereinafter HRCttee], *Kitok v. Sweden*, Com. no. 197/1985, II HRCttee Official Rec. 442 (1987/1988), at para. 9.2: 'The regulation of an economic activity is normally a matter for the State alone. However, where that activity is an essential element in the culture of an ethnic community, its application to an individual may fall under Article 27.' See also the *Lubicon Lake Band* case, *Chief of the Lubicon Lake Band v. Canada*, Com. No. 167/1984, decided in 1990, where the HRCttee found a violation of Article 27 by Canada because it had permitted various economic activities endangering the traditional hunting and fishing by the band. The band invoked Article 1 of the ICCPR that their right under the said article was violated by the state party, but the Human Rights Committee viewed that it was not possible to examine self-determination under Article 1. However, the committee agreed to examine the communication based on Article 27. The wording of Article 1 of the Optional Protocol makes it clear that it is only individuals who can resort to this procedure.

36 HRCttee, General Comment no. 23, 50th Session, (1994), UN Doc. HRI/ GEN/1/Rev.3, at para. 7 (1994).

37 *Ibid.*; See also the following paragraphs:

3.2. The enjoyment of the rights to which article 27 relates does not prejudice the sovereignty and territorial integrity of a State party. At the same time, one or other aspect of the rights of individuals protected under that article – for example, to enjoy a particular culture – may consist in a way of life which is closely associated with territory and use of its resources. This may particularly be true of members of indigenous communities constituting a minority.

6.1. Although Article 27 is expressed in negative terms, that article, nevertheless, does recognize the existence of a 'right' and requires that it shall not be denied. Consequently, a State party is under an obligation to ensure that the existence and the exercise of this right are protected against their denial or violation. Positive measures of protection are,

its use of traditional land on which indigenous people live and with which their traditional livelihoods are associated. The restrictions may be found in two communications before the HRC, in which the Sami people accused Finland of having interfered with reindeer herding. The Committee, in the first *Länsman* case decided in 1994, developed a two-part test, the first aspect being procedural (consultation) and the second material (economic sustainability).<sup>38</sup> According to the first part of the test, indigenous peoples need to be meaningfully consulted before the State may permit interference with their traditional livelihood. Second, Article 27 prohibits States not to endanger the practicing of traditional livelihood to the extent that it would lose its capacity to sustain the members of the community.<sup>39</sup> In the second *Länsman* case decided in 1996, the HRC underlined that when assessing what amounts to a denial of culture, States need to take into account the cumulative effect of activities interfering with the livelihood when assessing whether Article 27 may be breached.<sup>40</sup> The committee also made it clear that the economic well-being of the majority is not a legitimate justification for interfering with the culture of minorities (margin of appreciation) but that it is the sustainability of the indigenous livelihood that is protected by Article 27.

The HRC also took a clear stance on what livelihoods count as part of the culture of indigenous peoples and therefore fall within the scope of Article 27. The HRC stated that the right to enjoy one's culture cannot be determined *in abstracto* but has to be placed in context. The committee observed that Article 27 does not only protect *traditional* means of livelihood of national minorities, as indicated in the State party's submission. The method of traditional practices may have developed over the years, which may now include modern technology. The HRC confirmed that the use of modern technology does not prevent indigenous peoples from invoking Article 27.<sup>41</sup> Hence, modern ways of practicing traditional livelihoods are also protected by Article 27. This view was further clarified by the *Apirana Mahuika* case decided in 2000, where the committee regarded commercial and non-commercial fishing by Maoris – even Maoris' becoming major shareholders in a modern fishing company – as protected by Article 27.<sup>42</sup>

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therefore, required not only against the acts of the State party itself, whether through its legislative, judicial or administrative authorities, but also against the acts of other persons within the State party.

38 HRCtee *I. Länsman et al. v. Finland*, Com. no. 511/1992, UN Doc. CCPR/C/57/1 at paras 74–85 (1994).

39 *Ibid.*, para. 9.5–9.8.

40 HRCtee, *J. Länsman et al. v. Finland*, Com. No. 671/1995, U.N. Doc. CCPR/C/58/D/671/1995 at para. 10.7 (1996). This kind of approach was adopted already in the *Lubicon Lake Band* case.

41 HRCtee, *I. Länsman et al. v. Finland*, *supra*, at para 9.3.

42 HRCtee, *Apirana Mahuika et al. v. New Zealand*, Com. no. 547/1993, UN Doc. A/56/40 (Vol. II): 11–29 at para 9.4 (2000).

## 6.2.2 Subsistence rights under Article 1(2)

Indigenous peoples often argue for their status as ‘peoples’, and thereby demand the right to self-determination as fundamental. This issue has generated a great deal of debate both in terms of meaning and scope. There is a huge amount of literature on this issue. The question of whether indigenous peoples constitute ‘peoples’ who can claim the right to self-determination under Article 1 of the covenant, although important, is not, however, relevant in the context of this Chapter. In its interpretation of Article 1 of the covenant, the HRC advocates the idea that indigenous peoples are ‘peoples’ in the sense of resource management of the traditional land on which they live. This accords them the right to internal self-governance as ‘peoples’,<sup>43</sup> since ‘[i]n no case may a people be deprived of its own means of subsistence’.<sup>44</sup> The idea was reiterated in the Declaration on Rights of Indigenous Peoples.<sup>45</sup> The declaration has interpreted internal self-governance with respect to indigenous peoples’ traditional and cultural belongings,<sup>46</sup> so that they can maintain and develop their political, economic, and social systems or institutions in order to enjoy their own means of subsistence and development.<sup>47</sup> Also, the right to practise and revitalise their cultural traditions and customs, which includes

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43 Today, it is well established that a people can exercise their self-determination through political participation both as groups and/or individual, for instance, by gaining membership in the state delegation to international treaty participation, if the matters are of interest to the people. See also Committee on Elimination of Racial Discrimination (CERD), General Recommendation XXIII, 51<sup>st</sup> Session, UN Doc. A/52/18 (1997), Annex. V, where CERD called on the governments to recognize and protect the rights of indigenous peoples to own, develop, control and use their common lands, territories and resources. CERD also stressed that members of indigenous peoples have equal rights in respect of effective participation in public life and that no decisions directly relating to their rights and interests are taken without their informed consent.

44 ICCPR Art. 1(2).

45 United Nations. (2011). United Nations Declaration on the Rights of Indigenous Peoples, available at: [https://www.un.org/development/desa/indigenouspeoples/wp-content/uploads/sites/19/2018/11/UNDRIP\\_E\\_web.pdf](https://www.un.org/development/desa/indigenouspeoples/wp-content/uploads/sites/19/2018/11/UNDRIP_E_web.pdf).

46 Article 3 of the Proposed American Declaration states that indigenous peoples have right to self-determination, but up to the extent to which they freely determine their political status and freely pursue their economic, social and cultural development. Also Proposed American Declaration, Article 4 cautiously proclaims that the exercise of self-determination is limited to autonomy or self-government in matters relating to their internal and local affairs, as well as ways and means for financing their autonomous function. See S. Joseph, Human Rights and the WTO: Issues for the Pacific 40 VUWLR 351 (2009), available online at <http://www.nzlii.org/nz/journals/VUWLawRw/2009/18.pdf>, Operative Part, para 3.

47 See Proposed American Declaration, Art.20 (1). See also Proposed American Declaration, Art.26, which proclaims that indigenous peoples have the right to own, use, develop, and control the lands, territories, and resources that they possess by reason of traditional ownership or other traditional occupation or use and those otherwise acquired. See *ibid*.

the right to maintain, protect, and develop the past, present, and future manifestations of their cultures, has been clearly stated in the Declaration.<sup>48</sup>

In reading the right to enjoy one's culture as a minority under Article 27 alongside the right to self-governance of the resources belong to 'peoples' under Article 1(2) of the ICCPR, a cultural manifestation of self-determination can be found. This includes a particular way of life associated with indigenous peoples. This view has also been acknowledged by national governments. For example, Canada acknowledges indigenous peoples' inherent right to govern themselves in relation to matters that are internal to their communities and integral to their unique cultures, identities, traditions, languages, and institutions, with respect to their special relationship with their land and resources.<sup>49</sup> The foundation for these rights is found in both customary and treaty laws. Indigenous people are, therefore, protected by law to enjoy the right to natural and cultural resources through traditional activities, and to maintain the traditional way of life including traditional commercial activities. As far as Article 1 of the ICCPR is concerned, the effective participation of indigenous people has to be ensured in any decision-making that affects them.<sup>50</sup>

### 6.3 LAND CLAIMS IN CANADA: AN OVERVIEW

In 1973, the Supreme Court of Canada handed down its landmark decision in *Calder v Attorney-General of British Columbia*.<sup>51</sup> A majority of judges affirmed the existence of Aboriginal title at common law where such title had not been extinguished by treaty or other legal means. Following this, the Federal Government adopted its policy regarding the negotiation and settlement of outstanding indigenous land claims.<sup>52</sup> As of June 2015, 24 agreements have been concluded, covering most of Canada's Northern regions and including three indigenous nations in British Columbia.<sup>53</sup>

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48 See Proposed American Declaration, Art. 11.

49 Government of Canada, The Government of Canada's Approach to Implementation of the Inherent Right and the Negotiation of Aboriginal Self-Government, available online at [http://www.ainc-inac.gc.ca/pr/pub/sg/plcy\\_e.html](http://www.ainc-inac.gc.ca/pr/pub/sg/plcy_e.html).

50 HRCtee, General Comment no. 23, *supra*, para 7.

51 [1973] SCR 313 (Can.).

52 See Department of Indian and Northern Affairs Canada, *supra*. In 1973, most indigenous peoples in Northern Canada, the Atlantic Provinces, Quebec, and British Columbia could still potentially claim Aboriginal rights in their ancestral lands and natural resources.

53 The last update (from 2021) can be found available at: <https://www.rcaanc-cirnac.gc.ca/eng/1629394337445/1629394435193>; The land claims process has so far been more successful in the northern regions of Canada than in the more southern regions, where the lands claimed are inhabited by a non-indigenous majority and subjected to an increased number of competing uses. C. Alcantara, Explaining Aboriginal Treaty Negotiation Outcomes in Canada: The Cases of the Inuit and the Innu in Labrador, 40 Canadian J. Pol. Sci. 185 (2007), at 204.

These agreements ultimately seek to replace 'undefined aboriginal rights with a new set of specific treaty rights' in order to provide 'certainty' over land rights.<sup>54</sup> In order to achieve legal certainty, Canada has traditionally required that indigenous peoples surrender their aboriginal rights to land and natural resources in exchange for clearly defined rights and benefits.<sup>55</sup> However, since 1986, in response to criticism voiced by indigenous groups and commentators against the 'extinguishment' policy, the Federal Government has sought to achieve the goal of 'certainty' through legal mechanisms that do not require total extinguishment of aboriginal rights.<sup>56</sup> For instance, some of the land claims agreements concluded since 1986 have replaced 'the language of cession, release and surrender' by clauses providing that aboriginal rights are 'modified' in the agreement. This latter comprises a final and exhaustive definition of the rights and conditions for their exercise.<sup>57</sup>

At the core of all land claims agreements lay indigenous land rights and harvesting rights. These agreements provide indigenous people with the exclusive right to occupy certain tracts of land, generally limited to settlements and their immediate surroundings. These are completed by hunting, fishing and gathering rights on extensive territories corresponding to their traditional lands. For instance, the Nunatsiavut Inuit, upon concluding the LILCA in 2005, secured their ownership over 15,800 km<sup>2</sup> of land in Northern Labrador (the 'Labrador Inuit Lands').<sup>58</sup> In addition to land rights, the Nunatsiavut land claims agreement recognises extensive fishing, hunting and gathering rights

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54 *Ibid.*, at 185. This objective is framed in the Federal Policy for the Settlement of Native Claims in the following terms: '[Land claims settlements are meant to] provide clear, certain and long-lasting definition of rights to land and resources.', Department of Indian and Northern Affairs Canada Indian and Inuit Affairs Program, Federal Policy for the Settlement of Native Claims 5 (1993).

55 Treaty clauses aimed at extinguishing Aboriginal rights over land and natural resources are found in the treaties concluded between Canada and indigenous peoples during the period 1850–1921. For example, Treaty no. 8, concluded in 1899, which covers a vast territory (324,900 sq. miles) overlapping Alberta, Saskatchewan, British Columbia, and the Northwest Territories, includes a clause stating that 'the said Indians DO HEREBY CEDE, RELEASE, SURRENDER AND YIELD UP to the Government of the Dominion of Canada, for Her Majesty the Queen and Her successors forever, all their rights, titles and privileges whatsoever, to the lands included within the following limits.'

56 A. C. Hamilton, *Canada and Aboriginal Peoples: A New Partnership*, Minister of Indian Affairs and Northern Development (1995); Royal Commission on Aboriginal Peoples, *Treaty-Making in the Spirit of Coexistence: An Alternative to Extinguishment*, Minister of Supply and Services Canada (1995).

57 M. C. Hurley, *Settling Comprehensive Land Claims*, Library of Parliament (2009), available online at: <https://caid.ca/AboSelGov2009.pdf> This issue will be discussed more thoroughly in the next section of this chapter.

58 LILCA, *supra*, Chapter 4.

to the Nunatsiavut Inuit over their traditional territories, covering over 120,000 km<sup>2</sup> of land and ocean area (the 'Settlement Area').<sup>59</sup>

Furthermore, land claims agreements provide opportunities for aboriginal participation in decision-making processes that may affect their rights, especially in regard to the management of land and natural resources. These agreements have created 'co-management' boards regarding environmental impact assessment and more generally the governance of wildlife, water, land and protected areas.<sup>60</sup> The boards are generally comprised of an equal number of representatives from the concerned governmental authorities and indigenous groups. Their role is mainly advisory, as the State, in most cases, possesses ultimate decision-making authority.<sup>61</sup>

Since 1995, the Federal Government has been negotiating self-government agreements with indigenous groups, either aside from, or part of, broader land claims negotiations.<sup>62</sup> Self-government arrangements differ significantly regarding their form, the sources of their powers and the extent of their jurisdiction. For example, the Federal Government and the Nunavut Inuit have agreed on achieving self-government through the creation of a new Canadian territory called 'Nunavut', which came into existence on 1 April 1999.<sup>63</sup> The jurisdiction of the territory is outlined in a federal statute.<sup>64</sup> The Nunavut Government is not formally an 'Inuit' institution of self-government, since all residents of Nunavut (indigenous or otherwise) may be elected to public office and vote during elections. That said, the Nunavut Inuit have *de facto* control over the government, as they represent over 85 per cent of the territorial population.<sup>65</sup> The Nunatsiavut Inuit and the Nisga'a negotiated the creation of their self-government institutions as part of their land claims settlement. The structure, functioning and powers of these governments are defined by the land claims agreement. These governments, unlike the Nunavut govern-

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59 *Ibid.*, Chapters 12–13. The whole settlement area where Inuit can exercise their hunting and fishing rights consists of 72,520 km<sup>2</sup> of land and an additional 48,690 km<sup>2</sup> of ocean area.

60 The term 'co-management' refers to the arrangements by which power and responsibility for the management of a specific territory or natural resource are shared between the government and local resource users. See generally D. Armitage, F. Berkes, N. Doubleday, *Adaptive Co-Management, Collaboration, Learning, and Multi-Level Governance*, UBC Press (2007), 3.

61 See, for example, T. Rodon, *En partenariat avec l'Etat. Les expériences de cogestion des Autochtones du Canada*, Presses de l'Université Laval (2003), 149–77.

62 Christopher Alcantara and Adrienne Davidson, *Negotiating Aboriginal Self-Government Agreements in Canada: An Analysis of the Inuvialuit Experience*, *Canadian Journal of Political Science / Revue canadienne de science politique* Vol. 48, No. 3 (September 2015 septembre), pp. 553–575.

63 The Nunavut Act, SC 1993, Chapter 28.

64 *Ibid.*

65 A. Légaré, *Canada's Experiment with Aboriginal Self-Determination in Nunavut: From Vision to Illusion*, 15 *Int'l Journal on Minority & Group Rights* 335 (2008), at 347.

ment, are shaped along 'ethnic' lines, as political participation and voting rights are restricted by ethnicity or descent.<sup>66</sup>

The extent to which climate change was factored into the negotiation and shaping of land claims and self-government agreements has yet to be researched. However, considering the silence of land claims agreements regarding climate change and its potential impacts on indigenous rights, it seems fair to assume that when considered – if considered at all – the needs of indigenous communities in relation to climate change mitigation and adaptation played at best a marginal role in land claims negotiations. Therefore, although land claims agreements may indirectly provide indigenous communities with useful tools to respond to climate change, they may also hamper indigenous climate change action in unforeseen manners.

The imperative of climate change adaptation requires land claims agreements, among other factors, to: (1) be flexible enough to be modified to adapt to new needs and challenges induced by climate change; and (2) guarantee indigenous people a meaningful role in climate change governance at the local, regional, national and global levels.<sup>67</sup> This Chapter will consider land claims agreements between Canada and indigenous peoples, relying primarily on LILCA, with regard to these two factors.

#### 6.4 RECONCILING CERTAINTY AND FLEXIBILITY IN TIMES OF CLIMATE CHANGE

Achieving 'certainty' regarding rights and obligations is the paramount objective of land claims agreements, both from the State and indigenous perspective.<sup>68</sup> As mentioned previously, 'certainty' has historically been achieved by requiring that indigenous parties to a treaty or land claims agreement to cede, surrender and release to the State all their remaining rights over lands and natural resources in exchange for the rights and benefits provided by the treaty.<sup>69</sup>

If 'certainty' is a shared goal by all parties to land claims negotiations, indigenous peoples vehemently oppose the extinguishment of their rights as a means to achieve this objective. Achieving 'certainty' in this manner severs their unique relationships and responsibilities to the land and 'identif[ies] the

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66 LILCA, *supra*, Chapter 17; 1999 Nisga'a Final Agreement available online at <http://www.nkn.ca/files/u28/nis-eng.pdf>, Chapter 11.

67 These issues did not emerge with the onset of climate change. However, the rapidly changing climatic conditions make them more acutely relevant and urgent.

68 L. Dufraimont, *Continuity and Modification of Aboriginal Rights in the Nisga'a Treaty*, 35 UBC L. Rev. 455 (2001–2), at 480. The author defines 'certainty' as 'clear agreement on the extent of the rights of each party, backed up by guarantees that those rights will be respected'. *Ibid.*, at 481.

69 *Ibid.*, at 495.

Crown as the source of all existing Aboriginal rights'.<sup>70</sup> Hence, indigenous people demand that 'certainty' be achieved through mechanisms that affirm, rather than eliminate, their aboriginal rights.<sup>71</sup> Moreover, without repudiating 'certainty' as an objective for land claims agreements, indigenous peoples require that such agreements be conceived as constitutional documents meant to govern the evolving relationships between the parties in the long term, rather than as legal documents settling definitively and exhaustively outstanding indigenous land claims.<sup>72</sup>

Since its comprehensive land claims policy was modified in 1986, the Federal Government has agreed, in some land claims negotiations, to experiment with alternative arrangements intended to provide for 'certainty' without requiring the blanket extinguishment of aboriginal rights.<sup>73</sup> For example, the LILCA, which constitutes 'the full and final settlement of the aboriginal rights' of Labrador Inuit in Canada,<sup>74</sup> confirms the existence of the Labrador Inuit aboriginal rights 'in and to Labrador Inuit Lands', although extinguishing their rights to sub-surface resources and in all other lands in Canada.<sup>75</sup> The existing rights, however, are 'modified, and continue as modified, as set out in the Agreement'.<sup>76</sup> Moreover, for greater 'certainty', the Nunatsiavut Inuit agreed in LILCA to cede and release to the government of Canada and the Province any aboriginal right in Labrador Inuit Lands that may be recognised by a court of last resort 'to the extent that the aboriginal right is other than, or different in attributes or geographical extent from, the rights of Inuit as set out in the Agreement'.<sup>77</sup>

Finally, LILCA is meant to be the Nunatsiavut Inuit's *full* and *final* settlement. Hence, while confirming that the agreement may be amended consensually,<sup>78</sup> it does not contain binding mechanisms providing for its periodic review. Accordingly, the parties' capacity to demand that a land claims agreement be modified in order, for instance, to account for an aboriginal right newly

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70 *Ibid.*, at 496. See also M. L. Stevenson, *Visions of Certainty: Challenging Assumptions*, Law Commission of Canada & British Columbia Treaty Commission, *Speaking Truth to Power: A Treaty Forum*, Minister of Public Works and Government Services Canada (2000), at 115; M. Saint-Hilaire, *La proposition d'entente de principe avec les Innus: vers une nouvelle génération de traité?*, 44 *Les Cahiers de Droit* 395 (2003), at 402–3.

71 Dufraimont, *supra*, at 497; Saint-Hilaire, *supra*, at 405–12.

72 Stevenson, *supra*, at 121.

73 Saint-Hilaire, *supra*, at 407.

74 LILCA, *supra*, Art.2.11.1 (a).

75 *Ibid.*, Arts. 2.11.2, 2.11.3.

76 *Ibid.*, Art.2.11.4.

77 *Ibid.*, Art.2.11.5. These clauses constitute a modified version of those found in the 1999 Nisga'a Final Agreement, *supra* (see Dufraimont, *supra*). According to some commentators, those alternative clauses, while at first glance less offensive to indigenous peoples, have the same result as the traditional extinguishment clauses; see, for example, Saint-Hilaire, *supra*, at 415–18; Stevenson, *supra*, at 114.

78 LILCA, *supra*, Art.2.16.1.

recognised by a court of justice, or for significant changes in the parties' situation, hinges to a large extent on the quality of the relationships between the actors, as well as on the competing interests at stake and their relative weight at the negotiation table.<sup>79</sup>

The 'need to be flexible in order to allow the relationship to grow and evolve with time',<sup>80</sup> while also providing for 'certainty', is widely acknowledged. This imperative has now become even more pressing since the impacts of climate change may render some of the rights provided by land claims agreements less relevant – if not obsolete – in regard to emerging needs and challenges induced by shifting environmental conditions. For example, in the Canadian North, melting ice and changing snow conditions may restrict access to some territories for harvesting activities, thus reducing the total area where the rights guaranteed by the land claims agreements can be effectively exercised. Moreover, in response to climate change, the trajectory of some migratory species hunted by a group of Inuit may shift to territories that are not covered by their land claims agreement. Land claims agreements, however, do not expressly provide for the potential replacement of lands which can no longer be accessed, due to shifting environmental conditions, for exercising harvesting rights, nor for the renegotiation of the territorial boundaries where harvesting rights can be exercised in the event of a radical change in the migratory pattern of some animal species where harvesting rights can be exercised in the event of a radical change in the migratory pattern of some animal species.

Land claims agreements may be amended to respond to climate change by securing the consent of all parties.<sup>81</sup> However, without mechanisms aimed at outlining the circumstances and conditions at which the parties *should* renegotiate the agreement and at levelling the power relationships between the parties through equitable renegotiation procedures, amending land claims agreements could impose a daunting burden on indigenous groups, especially in situations where their interests regarding climate change adaptation compete with other powerful interests (for example, where potential replacement lands are subject to mining or oil and gas interests).<sup>82</sup>

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79 For a critique of land claims agreements not providing for periodic review mechanisms, see Saint-Hilaire, *supra*, at 403.

80 Stevenson, *supra*, at 121.

81 For example, as of this writing, the James Bay and Northern Quebec Agreement available online at <http://www.gcc.ca/pdf/LEG000000006.pdf>, has been modified 21 times since it was concluded in 1975. In a qualitative study conducted in Inuit communities in the Inuvialuit region, Nunavut and Nunavik, researchers Konstantia Koutouki and Natasha Lyons found that 'Inuit perceive their land claims agreements not as rigid legal documents with predefined constraints, but as active and flexible documents that are subject to ongoing negotiations and alterations'. Koutouki, Lyons, *supra*, at 531.

82 For a discussion of the power relationships between the State and indigenous peoples in the context of land claims agreements negotiations, see Alcantara, *supra*, at 188.

Beyond finding alternative models to the complete extinguishment of Aboriginal rights to achieve 'certainty', the land claims agreements' flexibility could be enhanced through equitable periodic review mechanisms and dispute resolution processes designed to ensure that these agreements can evolve through time.<sup>83</sup> Such mechanisms would foster the reconciliation of land claims agreements with indigenous visions of treaty-making as an ongoing dialogue creating 'a permanent living relationship' of a constitutional nature between co-existing nations.<sup>84</sup>

The only land claims agreement to have included a periodic review mechanism is the agreement-in-principle concluded between the Canadian Government, the province of Quebec and the Innu First Nations of Mamuitun and Nutashkuan.<sup>85</sup> This agreement-in-principle first 'recognize[s], affirm[s] and continue[s]' the aboriginal rights of the Innu communities party to the agreement, provided that these rights 'shall have the effects and shall be exercised in the manner provided for in the Treaty..'.<sup>86</sup> For greater certainty, the agreement specifies that 'the effects and manner in which the aboriginal rights of these First Nations are exercised other than those set out in the Treaty shall be suspended'.<sup>87</sup>

Although the agreement is meant to 'be of an indefinite duration', it provides, in addition to confirming the possibility for mutually agreed upon amendment,<sup>88</sup> that the agreement shall be subjected to periodic reviews during which 'the Parties shall determine whether the Treaty should be amended to take into account new circumstances which have significant effects on its provisions'.<sup>89</sup> The review process could permit the updating of the agreement in order for the concerned indigenous groups to benefit from 'any constitu-

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83 As affirmed in Justices LeBel and Deschamps's dissenting opinion in *Beckman v Little Salmon/Carmacks First Nation*, [2010] 3 SCR 103 (Can.), at para 111 (the majority judgment does not comment on this point): 'Nor does legal certainty imply that an equitable review mechanism cannot be provided for in a treaty'.

84 J.S.Y. Henderson, *Empowering Treaty Federalism*, 58 *Saskatchewan L. Rev.* 241(1994), at 248–9.

85 Agreement-in-Principle of General Nature Between the First Nations of Mamuitun and Nutashkuan, the Government of Quebec and the Government of Canada (hereinafter 'Mamuitun and Nutashkuan Agreement-in-Principle'), available online at: <https://www.rcaanc-cirnac.gc.ca/eng/1100100031951/1539797054964>. This agreement-in-principle was concluded 31 March 2004. Agreements-in-principle are documents outlining the major elements of the final treaty to be negotiated. The negotiations between the State and the First nations of Mamuitun and Nutashkuan are suspended indefinitely. Hence, the provisions of the agreement in-principle have yet to become legally binding between the parties. For a detailed analysis of this agreement, see Saint-Hilaire, *supra*, at 418–25.

86 Mamuitun and Nutashkuan Agreement-in-Principle, *supra*, Art.3.3.1.

87 *Ibid.*, Art.3.3.4.

88 *Ibid.*, Arts. 17.1.1–17.1.4.

89 *Ibid.*, Arts.3.3.10, 17.2.2. The first two periodic reviews should take place during the seventh and the seventeenth year following the coming into force of the agreement. Thereafter, the reviews shall take place every 20 years.

tional amendment related to the aboriginal peoples', or from 'current or future international conventions regarding aboriginal peoples' that have been ratified and implemented by Canada.<sup>90</sup> It could also allow treaty amendment to integrate aboriginal rights newly recognised by a court of law of appellate jurisdiction, but only in regard to 'a matter which the provisions of the Treaty are not truly designed to settle'.<sup>91</sup>

In the latter case, if the parties are unable to reach an agreement regarding the incorporation in the treaty of the newly recognised aboriginal right, one of the parties could submit the dispute to the arbitration procedure set out in the agreement.<sup>92</sup> The arbitrator, chosen by the parties from the list that they have previously established, would resolve the issue according to equity, and without being bound by strict rules regarding proof and procedure.<sup>93</sup> The arbitration award would be final and bind the parties.<sup>94</sup> The arbitration procedure, however, would not be applicable to any other disputes resulting from the periodic review process, for instance, regarding the incorporation in the agreement of constitutional amendments or international conventions pertaining to indigenous peoples.<sup>95</sup>

This agreement-in-principle provides a solid basis to conceive more flexible and dynamic land claims agreements, thus enhancing the capacity of indigenous groups to adapt to fast changing environmental conditions. Developing a detailed scheme for a periodic review procedure aimed at fostering indigenous peoples' ability to adapt to climate change would exceed the scope of this chapter. Periodic review processes in land claims agreements could expressly provide for the treaty to be reviewed at determinate intervals to account for climate change impacts that are impairing the rights and obligations of the parties, including indigenous communities' land and harvesting rights. In order for such process to preserve 'certainty' regarding the rights and obligations of the parties, however, the specific circumstances justifying the review would need to be precisely outlined in the agreement. To settle any dispute that may arise regarding such an amendment in a timely, equitable and cost-effective manner, the agreement should include dispute resolution mechanisms tailored to minimise power imbalances between the parties. These mechanisms should cover the appointment of the arbitrator, the rules and

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90 *Ibid.*, Arts. 3.3.11, 3.3.12, 17.2.7.

91 *Ibid.*, Art. 3.3.13.

92 *Ibid.*, Arts. 15.2.1, 15.5.1.

93 *Ibid.*, Arts. 15.3.1, 15.5.5.

94 *Ibid.*, Art.15.5.6.

95 *Ibid.*, Art.15.2.1. This provision specifies that the dispute resolution procedures provided for in the agreement apply to 'the settlement of any dispute which arises in the application and interpretation of the Treaty'. It would not apply to disputes related to the amendment and periodic review process. Saint-Hilaire, *supra*, at 424.

principles binding on the arbitrator concerning the procedure and substance of the dispute, and the enforceability of the award.<sup>96</sup>

#### 6.5 PROMOTING MEANINGFUL PARTICIPATION OF INDIGENOUS COMMUNITIES IN CLIMATE CHANGE GOVERNANCE

Indigenous peoples are often depicted as being 'vulnerable' to or 'victims' of climate change. These epithets play an obvious political role. They reflect the fact that indigenous peoples are disproportionately affected by the impacts of climate change, while also being widely marginalised from climate-related decision-making processes.<sup>97</sup> This reality, however, should not obscure the active role that indigenous peoples could play, and in some cases already play, in mitigating and adapting to climate change. Accordingly, many commentators emphasise the importance of fostering indigenous peoples' participation in the governance of climate change, not only with a view to refining the state of knowledge regarding the impacts of climate change, but also in designing policies, programs and actions for climate change mitigation and adaptation that are tailored to the specific circumstances of the affected communities.<sup>98</sup>

Indigenous participation in climate change governance can be assessed at multiple levels, from local to global decision-making processes. At the local and regional levels, indigenous peoples' capacity to control access and uses of their ancestral lands and resources could foster their capacity to adapt to climate change. For instance, such control could enable indigenous groups to protect land and resources that are essential to their culture, way of life and economies against industrial development, or to adopt norms in matters related to hunting, fishing, gathering and agricultural activities that would enhance their ability to adapt to changing environmental conditions in culturally acceptable ways. Moreover, indigenous people could play a role in mitigating climate change, for instance by imposing strict greenhouse gas emissions levels on economic development projects on their ancestral lands (for example, mining and hydrocarbons projects), by managing forestry, or by adopting 'green' building codes. At the national and global levels, indigenous people could be involved in transforming the politics of climate change, notably in attempting, along with other actors such as the small insular countries, to reshape the dominant understanding of climate change from an essentially

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96 Saint-Hilaire, *supra*, at 405.

97 M. Limon, Human Rights and Climate Change: Constructing a Case for Political Action, 33 *Harv. Envt'l L. Rev.* 440 (2009), at 451; H. M. Osofsky, Inuit Petition as a Bridge – Beyond Dialectics of Climate Change and Indigenous People's Rights, 31 *Am. Indian L. Rev.* 675, (2007), at 689–91; Tsosie, *supra*, at 1627–8, 1631–2.

98 Hanna, *supra*, at 1; Thériault, *supra*; Tsosie, *supra*, at 199–200.

techno-scientific and economic issue to an issue regarding primarily human and indigenous fundamental rights.<sup>99</sup>

In Canada, the capacity of indigenous people to address climate change through their own governance institutions varies considerably, depending on the model of governance they inherited or negotiated through their particular colonial legacies.<sup>100</sup> Since 1995, the Canadian government has concluded self-government agreements with several indigenous groups. These agreements, while providing indigenous people with increased powers over their communities, lands and natural resources, are not without their shortcomings in terms of climate change action, as illustrated by the Nunatsiavut self-government agreement.

The Inuit from Nunatsiavut negotiated a self-government agreement as part of their broader land claims negotiations.<sup>101</sup> The Nunatsiavut governance system is structured by regional governmental institutions and five local governments representing each Inuit community. The regional government is comprised of a President, an Executive Council and a Legislative Assembly.<sup>102</sup> Only Nunatsiavut Inuit are eligible to hold public office in the regional government and vote during elections. The Legislative Assembly is elected to 'represent the Labrador Inuit and to ensure government of Nunatsiavut by the Labrador Inuit under the Labrador Inuit Constitution'.<sup>103</sup> The local governments are headed by a council formed by an *AngajukKak* (who acts as the mayor) and elected councillors.<sup>104</sup>

Both levels of governments possess extensive powers to enact laws on subject matters relevant to addressing climate change. In particular, the Nunatsiavut regional government 'may make laws in relation to the protection of the environment in Labrador Inuit Lands and in Inuit Communities'.<sup>105</sup> In the exercise of this power, the Nunatsiavut Assembly adopted the Nunatsiavut Environmental Protection Act in February 2011, which aims to 'maintain an environment that is capable of sustaining the health of the Inuit' and to 'ensure

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99 Limon, *supra*, at 451. For a precedent of indigenous peoples' – for instance, the Inuit's – influence in shaping the agenda of international environmental negotiations, see D. L. Downie, T. Fenge (eds), *Northern Lights Against POPs: Combating Toxic Threats in the Arctic*, McGill-Queen's University Press (2003).

100 On the different models of indigenous governance in Canada, see Y. D. Belanger (ed.), *Aboriginal Self-Government in Canada: Current Trends and Issues*, Purich, Saskatoon (2008).

101 The Nunatsiavut self-government was created by LILCA, *supra*, Chapter 17. This chapter is completed by the Labrador Inuit Constitution adopted under the authority of the Agreement, available online at <http://www.nunatsiavut.com/index.php/en/constitution>.

102 Labrador Inuit Constitution, *supra*, Art.3.1.2.

103 *Ibid.*, Art.4.1.3.

104 *Ibid.*, Art.10.4. The AngajukKak of each community also sit at the Nunatsiavut Legislative Assembly, *ibid.*, at Art.4.1.4; LILCA, *supra*, Art. 17.1.1.

105 LILCA, *supra*, Art.17.11.1. See also Art.11.3.3 (environmental assessment procedure).

good management of the environment and its natural resources in accordance with Inuit knowledge, culture and values'.<sup>106</sup>

In order to achieve these goals, the statute contains provisions regarding water and land protection, environmental authorisations and environmental impact assessment procedures without explicitly addressing climate change.<sup>107</sup> However, it provides the Nunatsiavut government and its Minister of Lands and Natural Resources with extensive powers to develop regulations regarding the imposition of standards for environmental quality, the establishment of emission limits and the reduction of climate impact.<sup>108</sup>

In addition to the Nunatsiavut Environmental Protection Act, the Labrador Inuit Charter of Rights and Responsibilities<sup>109</sup> recognises the right of every Labrador Inuk:<sup>110</sup>

“To an environment that is not harmful to his or her health or well-being and to have the environment protected for the benefits of present and future generations through reasonable Inuit laws and other measures that: (a) prevent pollution and ecological degradation; (b) promote conservation; (c) secure ecologically sustainable development and use of renewable and non-renewable resources while promoting justifiable economic and social development of Labrador Inuit.”

In accordance with the Labrador Inuit Constitution, this environmental right can be enforced by the Nunatsiavut Assembly and, ultimately, by the Inuit Court.<sup>111</sup>

Beside environmental protection, the Nunatsiavut government may adopt laws regarding the administration, control and management of Inuit-owned lands, the exercise of Inuit wildlife harvesting rights and Inuit 'environmental health'.<sup>112</sup> Furthermore, Inuit local governments may make by-laws regarding the prevention and remediation of erosion, zoning and the regulation of buildings.<sup>113</sup> These powers could be exercised in order to impose energy efficiency standards on buildings or to mitigate the effects of erosion on coastal communities. These have become more acute with global warming and the resulting intensification of storms and permafrost melting.<sup>114</sup>

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106 2010-07 Bill to Provide Protection of the Environment in Labrador Inuit Lands and the Inuit Communities, and to Provide for the Environmental Assessment of Initiatives on Labrador Inuit Lands, Art.1.3.

107 *Ibid.*, Arts.3.5.1, 3.5.2, 3.7.1–3.7.6, 4.1–4.18.

108 *Ibid.*, Art.133. To the author's knowledge, such regulations have yet to be adopted.

109 Labrador Inuit Constitution, *supra*, Chapter 2.

110 The term 'Inuk' is used to designate an individual who is Inuit.

111 Labrador Inuit Constitution, *supra*, Art.2.3.3. About the Inuit Court, see LILCA, *supra*, Part 17.31, and Labrador Inuit Constitution, *supra*, Part 9.2.

112 LILCA, *supra*, Arts. 4.4.4, 10.12.1, 12.7.1, 12.7.2, 17.13.1 (a).

113 *Ibid.*, Arts. 17.41.3(b), 17.41.3(c). In the event of a conflict between Inuit local governments' by-laws and a federal or provincial law, the latter prevails. Art.17.41.4.

114 ACIA (2004), *supra*, 93–7.

Finally, beyond the powers of their self-governing institutions, the Nunatsiavut Inuit participate actively in decision-making processes regarding wildlife, plants, lands, the ocean, national parks and protected areas in the entire settlement area through the consultation mechanisms and co-management institutions established by LILCA.<sup>115</sup> However, ultimate decision-making authority generally rests with State authorities, who can accept or reject in part or as a whole recommendations made by co-management boards or the Nunatsiavut government.<sup>116</sup> If conducted in good faith and with the sincere will to integrate Inuit knowledge, values and needs into decision-making processes, co-management could foster the capacity of Inuit communities to adapt to climate change. This would enable the intimate experience of Inuit with their shifting environment to be factored into laws and policies.<sup>117</sup>

Overall, upon concluding the LILCA, the Nunatsiavut Inuit acquired significant powers that could be mobilised to tackle climate change. These powers are bound by important limits that may constrain their capacity to address effectively climate change impacts on their communities. Among those limits, the jurisdiction of the Nunatsiavut government to impose restrictions on greenhouse gas emissions extends only to Inuit-owned lands in Nunatsiavut, rather than to the entire region.<sup>118</sup> Moreover, in the event of a conflict between an Inuit law and a provincial or federal law regarding an environmental matter, the latter will prevail.<sup>119</sup> Inuit environmental laws, furthermore, do not apply to undertakings that were in existence when they came into force.<sup>120</sup>

The Nunatsiavut Inuit also exercise limited control over economic development projects promoted by the State and industries outside Inuit-owned lands

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115 LILCA, *supra*, Chapter 5 (water management); Chapter 6 (ocean management); Chapter 9 (national parks and protected areas); Chapter 11 (environmental assessment); Chapter 12 (wildlife and plants); Chapter 13 (fisheries). The settlement area covers more than 120,000 km<sup>2</sup> of lands. By contrast, the legislative powers of the Nunatsiavut government only extend to Inuit-owned lands, which covers an area of approximately 15,800 km<sup>2</sup>.

116 For example, LILCA, *supra*, Art.10.6.1 (approval of the land use plan); 12.9.4–12.9.7 (approval of the Torngat Wildlife and Plants Co-management Board's decision); 13.11.8 (approval of the Torngat Joint Fisheries Board's recommendations).

117 D. Armitage, F. Berkes, A. Dale *et al.*, Co-Management and the Co-Production of Knowledge: Learning to Adapt in Canada's Arctic, 21 *Global Environ. Change* 995 (2011), at 996. According to many commentators, however, co-management processes are often fraught with tensions, particularly with regard to the integration of indigenous knowledge and preferences to decision-making processes, especially where competing interests of resource users are at stake; see, for example, P. Nadasdy, *Hunters and Bureaucrats. Power, Knowledge, and Aboriginal-State Relations in the Southwest Yukon*, UBC Press (2003); M. G. Stevenson, *The Possibility of Difference: Re-Thinking Co-Management*, 65 *Human Organization* 167 (2006); G. White, *Cultures in Collision: Traditional Knowledge and Euro-Canadian Governance Processes in Northern Land-Claim Boards*, 59 *Arctic* 401 (2006).

118 LILCA, *supra*, Art.17.11.1, see remark at fn 78.

119 LILCA, *supra*, Arts. 11.3.4, 17.11.13.

120 LILCA, *supra*, Art.17.11.2.

but on lands that may still be significant for Inuit harvesting activities or for other cultural and symbolic reasons. With the increased interest of investors for exploitation of natural resources in the North, which will be rendered more accessible following permafrost and ice melting (for example, minerals, oil and gas), industrial development could eventually exert significant pressure on Inuit culture and economies.<sup>121</sup> Like other recent land claims agreements, the LILCA provides for Inuit participation in the economic benefits resulting from economic development activities in the settlement area.<sup>122</sup> These provisions could foster the capacity of Nunatsiavut Inuit to access material and technical resources necessary to address climate change, or to invest in 'green' development projects on their territories.<sup>123</sup> However, Inuit strategies for climate adaptation, notably in regard to local food production, could be thwarted by incompatible economic development projects imposed on them by the State and economic actors.

The Inuit's capacity to adapt their food economies to climate change could be hampered by rigid biodiversity conservation initiatives ill-adapted to their needs.<sup>124</sup> Although the Nunatsiavut Inuit have a voice in wildlife management through self-government and co-management arrangements, in case of conflicts between the Inuit and the State, the State conservation measure prevails.<sup>125</sup> Indeed, it is widely acknowledged that Inuit adaptation to climate change hinges on effective measures aimed at protecting the biota threatened by climate change.<sup>126</sup> Such measures, if conceived and implemented without taking into account Inuit needs in terms of climate adaptation, may hamper their ability to address climate change. Conservation measures may potentially result in depriving the Inuit of much needed food sources without, in return, giving them access to equivalent replacement resources (for instance, an increased access to alternative wildlife resources).<sup>127</sup>

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121 L. Johnson, *The Fearful Symmetry of Arctic Climate Change: Accumulation by Degradation*, 28 *Env't & Planning* 828 (2010).

122 LILCA, *supra*, Chapters 7, 14.

123 LILCA, *supra*, Chapter 7. See also Arts. 6.7.1–6.7.16 (impacts and benefits agreements for major economic development project in the ocean zone covered by LILCA) and Art.9.2.2 (impacts and benefits agreements related to the establishment or enlargement of national parks).

124 S. Thériault, *The Food Security of the Inuit in Times of Change: Alleviating the Tension Between Conserving Biodiversity and Access to Food*, 2 *J. Hum. Rts. & the Env't* 136 (2011).

125 LILCA, *supra*, Arts.12.7.4, 12.7.5, 12.9.4, 12.9.5.

126 See, for example, G. Duhaime *et al.*, *Sustainable Food Security in the Canadian Arctic: An Integrated Synthesis and Action Plan*, in *Arctic Food Security* 73 (G. Duhaime and N. Bernard eds., 2008).

127 Thériault (2011), *supra*, at 137–8. For an example of a resource management conflict between the State and the Inuit that has the effect of compromising both Inuit food economies and resource conservation objectives, see M. Tyrrell, *Sentient Beings and Wildlife Resources: Inuit, Beluga Whales and Management Regimes in the Canadian Arctic*, 35 *Hum. Ecology* 575 (2007).

Finally, the Inuit, like other indigenous groups, have so far been largely marginalised in national and international decision-making processes related to climate policies.<sup>128</sup> Despite the well-known and disproportionate impacts of climate change on their communities, they have not been consulted prior to the adoption of federal policies on climate change. A discussion of the potential modalities of indigenous participation in national and international climate change policy-making processes would exceed the scope of this chapter. Considering the acuteness of the actual and likely effects of climate change on aboriginal and treaty rights protected by the Canadian constitution,<sup>129</sup> the Canadian government may have breached its constitutional duty to consult, if not to reasonably accommodate, indigenous peoples before making decisions regarding its climate policies at the national and international levels.<sup>130</sup>

## 6.6 GLOBALISATION IN THE ARCTIC ACCELERATED BY CLIMATE CHANGE

Globalisation results in increasing industrialisation and other anthropogenic activities, leading to economic development that causes increased emission of greenhouse gases. The emission of greenhouse gases contributes to global warming. Due to global warming, the overall climate of the world is changing rapidly. In the Arctic, the general warming is likely to be faster, with temperature increases likely to range between 2°C and 9°C by 2100.<sup>131</sup> During the winter, the warming could be three to four times greater than global averages.<sup>132</sup> These results will be visible in the Arctic, with higher temperatures, a rise in sea level, melting of sea ice and glaciers, and increased precipitation

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128 T. Koivurova, L. Heinämäki, *The Participation of Indigenous Peoples in International Norm-Making in the Arctic*, 42 *Polar Record* 101 (2006), at 102; *Tsosie*, *supra*, at 195–208.

129 More specifically *Constitution Act, 1982*, *supra*, s. 35.

130 This duty has been affirmed by the Supreme Court of Canada in many decisions, including *Haida Nation v British Columbia* (Minister of Forest), [2004] 3 SCR 73 (Can.); *Mikisew Cree First Nation v Canada* (Minister of Canadian Heritage), [2005] 3 SCR 388 (Can.); *Beckman v Little Salmon/Carmacks First Nation*, [2010] 3 SCR 103 (Can.). As affirmed by the Supreme Court in *Haida Nation*, '[t]he foundation of the duty in the Crown's honour and the goal of reconciliation suggest that the duty arises when the Crown has knowledge, real or constructive, of the potential existence of the Aboriginal right or title and contemplates conduct that might adversely affect it'. para 35. In order to establish a breach to the government's duty to consult, it would be necessary to establish a link between Canada's omission to tackle effectively climate change and impairment to an aboriginal or treaty rights. The proof of such link could be daunting. See e.g. Limon, *supra*, at 457.

131 See T. Koivurova *et al.*, *Background Paper Indigenous Peoples in the Arctic*, Arctic Transform 5 (2008), available at: <https://www.arctic-transform.eu/download/IndigPeoBP.pdf>; IPCC latest report of 2022 verifies these predictions and its analysis can be found at: <https://www.carbonbrief.org/in-depth-qa-the-ipccs-sixth-assessment-on-how-climate-change-impacts-the-world>.

132 J. McIver, *The Arctic*, in *Indigenous Peoples, the Environment and Law*, 160 (L. Watters ed., 2004).

in some areas and drought in others.<sup>133</sup> There will be large-scale impacts on the unique Arctic environment. Arctic ecosystems support species well adapted to the extreme conditions, such as short growing seasons, low light availability and cold temperatures.<sup>134</sup> In the marine area of the Arctic, sea ice is the dominant feature.<sup>135</sup> The survival of certain marine animals, such as polar bears, is dependent on the existence of ice. Although the absence of sea ice is causing a reduction in Arctic marine species, it is important to note that some species, especially commercial fish (for example, cod and herring in the North Atlantic and walleye and Pollock in the Bering Sea), are expected to benefit from the larger expanse of open water leading to increased productivity.<sup>136</sup>

The rapid melting of sea ice as a consequence of the warming of the Arctic, is, on the one hand creating new opportunities and, on the other hand, posing new challenges to the Arctic environment.<sup>137</sup> The opportunities include increased economic activities, whereas the challenges are mostly about preserving the unique nature of the Arctic environment. The opening up of two major sea routes for a longer period of time will increase shipping and navigation.<sup>138</sup> In addition, the regional waters surrounding the Arctic countries will also be used for shipping. Due to these facts, there will be a rise in commercial activities. Transportation routes will also be established on the land area to carry goods from the sea ports. The Arctic seabed is considered to be the next big reservoir of the world's undiscovered oil and gas resources so seabed activities will most likely increase as well as an increase in the onshore and offshore mining and mineral activities. The tourism industry will flourish. Consequently, there will be a gradual rise in industrial and other commercial

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133 J. J. McCarthy *et al.*, *Climate Change 2001: Impacts, Adaptation and Vulnerability*, Contribution of Working Group II to the Third Assessment Report of the Intergovernmental Panel on Climate Change, Cambridge University Press (2001), 26.

134 ACIA (2005), *supra*, 481.

135 E. J. Molenaar *et al.*, Introduction to the background papers, *Arctic Transform* (2008).

136 Parry *et al.* (2007), *supra*, 669.

137 WWF, *Six ways loss of Arctic ice impacts everyone*, 2020, available at: <https://www.worldwildlife.org/pages/six-ways-loss-of-arctic-ice-impacts-everyone>.

138 The Arctic Climate Impact Assessment (ACIA) Report 2004 identified ten major findings as consequences of the rapid climate change in the Arctic One of the findings (number six) states that the reduced sea ice is very likely to increase marine transport and access to resources. See S. Hasso, *ACIA: Impacts of a Warming Arctic*, Cambridge: Cambridge University Press (2004), 10–11, 82–85; In 2008 there was an update by the WWF on ACIA that verified ACIA's findings and can be found at: [https://wwfeu.awsassets.panda.org/downloads/final\\_climateimpact\\_22apr08.pdf](https://wwfeu.awsassets.panda.org/downloads/final_climateimpact_22apr08.pdf); The most recent Arctic Climate Change update of 2021 briefly discussed the abovementioned issues and can be found at: <https://www.amap.no/documents/doc/arctic-climate-change-update-2021-key-trends-and-impacts.-summary-for-policy-makers/3508>.

activities, as well as societal changes resulting from large-scale infrastructural developments.<sup>139</sup>

The increase in the commercial activities will have negative consequences on the Arctic environment. Increased shipping and navigation will hinder the movement of migratory marine mammals and, at the same time, there will be an increase in the risk of oil spills.<sup>140</sup> Mineral and mining activities will contribute to the emission of greenhouse gases into the atmosphere, which will further accelerate climate change, causing the Arctic sea ice to melt faster. Seabed activities will rise, and will likely generate pollution caused by oil spills occurring during, for example, hydrocarbon exploitation and transportation. As clean-up operations, especially in the areas of sea ice, will be extremely difficult and expensive, a single large oil spill in the wrong place and at the wrong time of the year would have very serious, population-wide impacts on seabirds, fish, and marine mammals.<sup>141</sup> Pollution as a whole will cause the extinction of endemic species and will alter the bio system irreversibly, resulting in far-reaching consequences for the ecosystem at large. Industrial and other commercial activities as well as infrastructural development will have negative environmental impacts in the whole region.<sup>142</sup> Consequently, coastal communities in the Arctic, whose livelihoods depend upon the unique nature of the Arctic environment, will be affected greatly. Indigenous communities will likely lose their livelihoods and culture, since their “traditional lifestyle and cultural heritage depend upon the preservation of the Arctic environment”.<sup>143</sup> The Arctic Climate Impact Assessment (ACIA) report, a scientific report describing the impacts of climate change in the Arctic, identifies indigenous peoples as exceptionally vulnerable to the climate change.<sup>144</sup>

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139 According to the Arctic Human Development Report, it is unlikely that Arctic societies and cultures can remain resilient in the face of all the biophysical and societal changes. The Arctic societies face an unusual combination of biophysical and socio-economic stresses, many of which can be linked to oil and gas development. See O. R. Young, N. Einarsson, A Human Development Agenda for the Arctic: Major Findings and Emerging Issues, in Arctic Human Development Report, (Akureyri: Stefansson Arctic Institute, 2004), 230. See also O. Langhelle *et al.*, Framing Oil and Gas in the Arctic from a Sustainable Development Perspective, in Arctic Oil and Gas Sustainability at risk 32 (A. Mikkelsen, O. Langhelle eds., 2008).

140 ACIA (2005), *supra*, 84–85.

141 S. Smith, Environmental Impacts of Offshore Oil and Gas Development in the Arctic, WWF International Arctic Programme, available online at: <https://www.pame.is/document-library/amsp-documents/187-offshore-oil-and-gas-wwf/file>.

142 B. Carpenter, Warm is the New Cold: Global Warming, Oil, UNCLOS Art.76, and How an Arctic Treaty Might Stop a New Cold War, 39 Environmental Law Review (2009) 239.

143 The Arctic region is inhabited by more than thirty indigenous peoples, see more information at: <https://www.arcticcentre.org/EN/arcticregion/Arctic-Indigenous-Peoples>; N. Matz-Lück, Planting the Flag in Arctic Waters: Russia’s Claim to the North Pole, 1(2) Göttingen J. of Int’l L. 255 (2009).

144 ACIA (2005), *supra*, 651, 685, 1014. See also Parry *et al.*, (2007), *supra*, 672.

The following sections examine the way in which indigenous peoples in the Arctic are affected by climate change.

### 6.6.1 Societal change

Indigenous peoples in the Arctic live as a community, closely connected to each other, just as their livelihood and culture are deeply connected to the land on which they live. Hunting, gathering, trapping, and reindeer and caribou herding are traditional activities.<sup>145</sup> As climate change creates opportunities for rapid globalisation, social changes occur through capital flows, human migration, and gradual industrialisation. Consequently, new lifestyles, educational systems, technology, food, and diseases are introduced. In addition, modern transportation, infrastructural change, and State policies have increasingly affected all features of indigenous lifestyles.<sup>146</sup> The breakdown of interpersonal ties leads to more and more nuclear families.<sup>147</sup> The traditional knowledge, which gives members of indigenous communities the understanding of their environment, binding them strongly to nature, has now become inadequate as changes are occurring so fast. Many people feel alienated from the land of their ancestors.<sup>148</sup> The introduction of mixed culture, the gradual loss of traditional activities,<sup>149</sup> and the introduction of the modern school system, which has caused younger generations to slowly lose their native languages, contribute to large-scale societal change. The greatest challenges for many indigenous communities therefore include: relocation and urbanisation, as well as the northward advancement of agriculture.<sup>150</sup> The ultimate effect of societal change is the emergence of various social problems, such as poverty, depression, alcoholism, drug addiction, permanent unemployment, and rising suicide rates.<sup>151</sup>

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145 James D. Ford, Nia King, Eranga K. Galappaththi, Tristan Pearce, Graham McDowell, Sherilee L. Harper, *The Resilience of Indigenous Peoples to Environmental Change*, *One Earth*, Volume 2, Issue 6, 2020, Pages 532-543, ISSN 2590-3322, <https://doi.org/10.1016/j.oneear.2020.05.014>.

146 M. Nuttal, *supra*, 53–54.

147 Koivurova *et al.* (2008), *supra*, 16.

148 ACIA (2005), *supra*, 670, 675. See also Parry *et al.*, *supra*, 668.

149 Due to rapid climate change, traditional cultural festivals of the indigenous communities, which need certain climatic conditions to be observed, now need to be re-timed or are not being celebrated, resulting in a loss of traditional culture. See Koivurova *et al.* (2008), *supra*, 17.

150 M. Nuttal, *supra*, 4–5, 11–13.

151 ACIA (2005), *supra*, 17.

### 6.6.2 Economic disparities

Climate change and globalisation have introduced a mixed economy within the indigenous communities of the Arctic. Cash flow from the South has gradually replaced traditional harvesting. International trade, investment, tourism, and other commercial activities are creating new opportunities, the benefits of which can be enjoyed by indigenous communities.<sup>152</sup> Agricultural growth, increased fisheries, resource extraction (offshore and onshore), and the tourism industry will create more jobs for locals and promote greater investments in infrastructure.<sup>153</sup> These socio-cultural changes will lead to the introduction of modern school systems in Arctic communities, which will enable youth to access increased job opportunities. At present, indigenous people in the Arctic face high rates of unemployment and poverty as globalisation has caused living costs to rise. Climate change causes permafrost to thaw, resulting in higher maintenance costs. The devastation of roads causes remote coastal communities to be cut off from the main population centres, disrupting intercommunity trade.<sup>154</sup> However, with the melting of sea ice, marine transportation has become more accessible, and for longer periods of time.<sup>155</sup> This will eventually open up new routes. The traditional hunting ground of ice-dependent marine species, such as the polar bear, has been affected, as hunters need to travel longer distances than before. Traditional hunting rooted in indigenous culture provides traditional foodstuff that cannot be replaced by imported food because of nutrition and costs.<sup>156</sup> The gap between rising costs of living and decreasing possibilities to acquire financial resources may mean impoverishment for many people. Food security may consequently be threatened<sup>157</sup> despite the possibility of alternative sources of subsistence from increased production in agriculture and fisheries. Traditional subsistence activities bring economic benefit from the production of different kinds of goods which are then exported by indigenous people. These include products made from the hides of hunted animals, such as clothing, handicrafts, souvenirs, and other accessories. Both production and export are being affected due to the overall changes in the Arctic causing indigenous communities to suffer economically.

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152 Gassiy, V., 2018, 'Indigenous Communities in the Arctic Change in Socio-Economic and Environmental Perspective', in M. Kanao, Y. Kakinami, G. Toyokuni (eds.), *Arctic Studies – A Proxy for Climate Change*, IntechOpen, London, available at: <https://www.intechopen.com/chapters/64644>.

153 ACIA (2005), *supra*, 16.

154 Please see this report of 2021 by the World Bank that discusses in detail these issues: <https://www.worldbank.org/en/topic/indigenouspeoples>.

155 ACIA (2005), *supra*, 668–70.

156 F. Lynge, *Indigenous Peoples between Human Rights and Environmental Protection – An Arctic Perspective*, 64 *Nordic Journal of Int'l Law* (491) 1995.

157 ACIA (2005), *supra*, 657.

### 6.6.3 Development of infrastructure

With the increase in capital flow, industrial activities in the Arctic are gradually growing, resulting in drastic infrastructural changes. Construction activities and transportation are adversely affecting the region. Due to high noise levels, wildlife relocation is taking place. Reindeer and caribou herding activities are being affected, which will negatively impact indigenous communities.<sup>158</sup> Coastal erosion, together with rising sea levels, is disrupting inter-community communication. Moreover, sewage systems, airstrips, power lines, and roads built on permafrost are already being endangered.<sup>159</sup> The maintenance and repair of damage to infrastructure are highly expensive. Indigenous communities do not have the financial resources available to maintain and repair this damage.<sup>160</sup> Permafrost thawing, coastal erosion, lower lake water levels and changing river run-off – especially potential decreases in summer months – are threatening to jeopardise fresh water supply, due to damage to water containers and lake drainage in coastal areas. As a result, hydropower generation, oil pipelines and permafrost-based waste containers may be affected. It is then probable that contamination and pollution will grow.<sup>161</sup> One potential benefit will be that the rise in temperature will lower the costs of heating and insulation throughout the Arctic for indigenous communities.<sup>162</sup>

### 6.6.4 Livelihood and cultural changes

Changes in the societal structure, economy, and infrastructure of the Arctic significantly impact indigenous communities. As discussed previously, hunting, trapping, and gathering are significant aspects of the indigenous culture in the Arctic. Traditionally, indigenous people in the North engage in reindeer or caribou herding. Their livelihood and culture are rooted in these activities. Polar bears, seals, and some fish stocks depend on ice cover.<sup>163</sup> Due to the melting of sea ice, the population of ice-dependent mammals may decline in numbers or migrate to other areas.<sup>164</sup> For hunters, reaching harvesting areas located offshore will become impossible.<sup>165</sup> The construction of new infra-

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158 Information have been gathered by the 2022 IPCC report and especially chapter 3 on the Polar Regions available at: [https://www.ipcc.ch/site/assets/uploads/sites/3/2022/03/05\\_SROCC\\_Ch03\\_FINAL.pdf](https://www.ipcc.ch/site/assets/uploads/sites/3/2022/03/05_SROCC_Ch03_FINAL.pdf).

159 Koivurova *et al.*, *supra*, 14.

160 ACIA (2005), *supra*, 660, 670, 1004.

161 ACIA (2005), *supra*, 1011, 1013, 2005. See also Parry *et al.*, *supra*, 665, 672; Koivurova *et al.*, *supra*, 15.

162 ACIA (2005), *supra*, 1004.

163 Especially ringed seal, arctic fox, and polar bear, ACIA (2005), *supra*, 660.

164 ACIA (2005), *supra*, 75, 660.

165 ACIA (2005), *supra*, 662.

structure both onshore and offshore (such as oil installations and transportation routes) is causing the relocation of wildlife habitats. This forces hunters to move to new locations for hunting, making traditional knowledge to become less applicable and less accurate. Hunting thereby becomes more expensive, impacting the harvesting outcome. With more frequent storms and other natural disasters, hunters face accidents, requiring them to be prepared for new situations.<sup>166</sup> In cases where traditional subsistence is primarily based on one species, for example, the ringed seal for some Inuit communities,<sup>167</sup> the threat to basic food supply is very real. On the other hand, some indigenous communities stand to benefit from the newly gained access to large fish stocks.<sup>168</sup>

## 6.7 PRELIMINARY CONCLUSION

The Arctic indigenous peoples are significant actors in the region. Climate change and its impacts on the region are so drastic that overall changes are occurring faster in the Arctic than in any other region. The changes are creating opportunities for rapid globalisation, which is severely affecting the indigenous population. The survival of indigenous peoples in the Arctic mostly depends on the unique character of its ecosystem. However, changes in the ecosystem and globalisation resulting from such changes are adversely impacting traditional indigenous lifestyles. On one hand, globalisation is adversely affecting their traditional livelihood and culture, and on the other hand they are being deprived of the benefits of globalisation. They are being marginalised from both sides, and their rights under international law are behind curtailed. This is particularly evident for Articles 27 and 1(2) of the ICCPR.

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166 ACIA (2005), *supra*, 670.

167 Koivurova *et al.*, *supra*, 13.

168 ACIA (2005), *supra*, 659, 669.

## 7.1 INTRODUCTION

### 7.1.1 Climate change and security policy

The effect of global climate change on the physical environment of the Arctic has already been extensively discussed in previous Chapters. The melting of the polar ice cap is opening up previously inaccessible parts of the region to ship traffic and resource exploration. Issues pertaining to maritime jurisdiction and boundaries in the Arctic Ocean and its adjacent seas are rapidly evolving. Many have expressed concern that growing rivalry over access to natural resources and shipping lanes in the region may lead to open political and/or military conflicts between the Arctic (coastal) States, or between Arctic and non-Arctic States.<sup>1</sup>

The purpose of this Chapter is to explore the relationship between the effects of climate change and the multilevel issues of security in the northernmost part of the globe which has become increasingly relevant after the first invasion of Russia to Ukraine in 2014 which indicated the beginning of the stall of almost every Arctic Cooperation. This topic has received significant political and scholarly attention the last 15 years, particularly after the publication of the United Nations Intergovernmental Panel on Climate Change's (IPCC) Fourth Assessment Report in early 2007<sup>2</sup> and still remains a topic that will be covered by the next Assessment Report that will be discussed in April 2022 by the IPCC.<sup>3</sup> The long-term implications of climate change for global and regional stability has also been placed on the policy agendas of NATO and the EU. Speaking at a conference in Reykjavik in 2009, NATO's Secretary General of that time, Jaap de Hoop Scheffer, touched on the topics of navigation,

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1 S.G. Borgerson, Arctic Meltdown, *The Economic and Security Implications of Global Warming*, 87(2) *Foreign Affairs* 63 (2008); and M. Galeotti, Cold calling: Competition heats up for Arctic resources, 20(10) *Jane's Intelligence Review* 9 (2008).

2 The Fourth Assessment Report of the United Nations Intergovernmental Panel on Climate Change (IPCC) that was published at 2007 can be found at: <https://www.ipcc.ch/assessment-report/ar4/>.

3 The Sixth Assessment Report of the United Nations Intergovernmental Panel on Climate Change (IPCC) has been released in 2022 and will be available which are available online at <http://www.ipcc.ch/>.

resources, and territorial claims, and suggested that the Alliance could play a constructive role in maintaining stability in the High North:

“The Alliance’s agenda recently appears to have been dominated by events in Afghanistan, the Caucasus and the Horn of Africa – areas that can rightly be described as “hot”. So it is very welcome to shift our attention to a colder region. Having said this, the very reason we are focusing on the High North is because it may not remain so cold in the future. Here in the High North, climate change is not a fanciful idea – it is already a reality – a reality that brings with it a certain number of challenges, including for NATO. [...] Although the long-term implications of climate change and the retreating ice cap in the Arctic are still unclear, what is very clear is that the High North is going to require even more of the Alliance’s attention in the coming years”<sup>4</sup>

Similar signals have come from NATO’s Former Secretary General Anders Fogh Rasmussen, who called attention to the “potentially huge security implications” of climate change, saying NATO countries should use the Alliance as a forum in which to discuss and address the challenges it creates. He also called for active engagement with Russia in an effort to reduce security tensions in the Arctic.<sup>5</sup> NATO’s former Supreme Allied Commander for Europe, Admiral James G. Stavridis, echoed this statement in a speech at the Royal United Services Institute in London.<sup>6</sup> Finally, similar position has been taken by the current Secretary General of NATO, Jens Stoltenberg, during a panel discussion at COP26 taking place on November 2021 in Glasgow,<sup>7</sup> showing the ongoing and intense concern on the issue of addressing the impacts of Climate Change under a security prospective.

Equally, the EU sees itself as a potentially important player in the Arctic region. Describing climate change as a “threat multiplier”, the European Commission and the High Representative for the Common Foreign and Security Policy have pointed out that environmental changes are “altering the geo-strategic dynamics of the Arctic” which may have “consequences for inter-

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4 Speech by NATO Secretary General Jaap de Hoop Scheffer on security prospects in the High North, Reykjavik, Iceland, January 29, 2009, available online at <http://www.nato.int/docu/speech/2009/s090129a.html>.

5 Speech by NATO Secretary General Anders Fogh Rasmussen on emerging security risks, Lloyd’s, London, October 1, 2009, available online at [http://www.nato.int/cps/en/natolive/opinions\\_57785.htm](http://www.nato.int/cps/en/natolive/opinions_57785.htm).

6 T. Coghlan, NATO commander warns of conflict with Russia in Arctic Circle, *The Times*, October 3, 2009, available at: <https://www.thetimes.co.uk/article/nato-commander-warns-of-conflict-with-russia-in-arctic-circle-hjt98ll78xd>.

7 The assessment of the opinions of Mr Rasmussen’s views developed in that panel discussion can be found at: <https://www.nato.int/docu/review/articles/2022/02/01/nato-an-unexpected-driver-of-climate-action/>.

national stability and European security interests".<sup>8</sup> The EU developed an Arctic policy, the primary aim of which is to secure the Union's long-term economic interests in the region and promote "global climate security".<sup>9</sup>

Closely related to the concept of "climate security" is the concept of "environmental security", which has been an integral part of the political terminology of the United Nations ever since the launch of the Brundtland Commission's report *Our Common Future* in 1987.<sup>10</sup> Following the end of the Cold War, efforts have been made – inside as well as outside the UN system – to widen the concept of security.<sup>11</sup> Simply put, the purpose of these efforts has been to include not only military threats, but also threats emanating in other areas (such as the environment, economy, society, and politics), and threats emanating from other levels than that of the State (global, regional, and individual).<sup>12</sup> The "wideners" do not constitute a homogeneous group as they are divided over how far to expand the concept. The "traditionalists" maintain that if the concept of security is extended to encompass almost every sphere of human activity, it may eventually lose its meaning.<sup>13</sup> What both "wideners" and "traditionalists" seem to agree on is that the global security environment in the past three decades has undergone significant changes, and that this is affecting the role of military forces, as well as the nature of civil-military relations. For instance, the impacts of an ice-diminishing Arctic on naval and maritime operations have, in recent years, been the topic of a series of multi-agency symposia held at the U.S. Naval Academy.<sup>14</sup>

From a conceptual standpoint, environmental insecurity is fundamentally different from military insecurity because there are many arguments against

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8 European Parliament, The European Union and the Arctic Region, Communication from the Commission to the European Parliament and the Council, 2008, available online at [http://ec.europa.eu/external\\_relations/arctic\\_region/docs/com\\_08\\_763\\_en.pdf](http://ec.europa.eu/external_relations/arctic_region/docs/com_08_763_en.pdf); European Commission, Climate Change and International Security", Paper from the High Representative and the European Commission to the European Council, March 3, 2008, available online at [http://www.consilium.europa.eu/ueDocs/cms\\_Data/docs/pressData/en/reports/99387.pdf](http://www.consilium.europa.eu/ueDocs/cms_Data/docs/pressData/en/reports/99387.pdf). The abovementioned Joint Statement has been reaffirmed with minor changes by the Parliament and the Council in 2017. The relevant Communication can be found at: <https://eur-lex.europa.eu/legal-content/EN/LSU/?uri=CELEX%3A52016JC0021>.

9 Please see at: [https://www.youtube.com/watch?v=z\\_JDccpkMAM](https://www.youtube.com/watch?v=z_JDccpkMAM).

10 United Nations, Report of the World Commission on Environment and Development: *Our Common Future*, 1987, available online at <http://www.un-documents.net/wced-ocf.htm>.

11 See for instance the distinction between "state", "societal", and "human security" in Capable Force: Strategic Concept for the Norwegian Armed Forces, The Norwegian Ministry of Defence, 2009, available online at [http://www.regjeringen.no/upload/FD/Dokumenter/Capable-force\\_strategic-concept.pdf](http://www.regjeringen.no/upload/FD/Dokumenter/Capable-force_strategic-concept.pdf), pp 19–21.

12 J. Kraska, Arctic security in an age of climate change, CUP (2011), available online at <http://ebooks.cambridge.org/ebook.jsf?bid=CBO9780511994784>.

13 *Ibid.*

14 Please see the following: <http://www.star.nesdis.noaa.gov/star/IceSymposium2009.php>; <https://www.navalengineers.org/Symposia/MACC-2018>; <https://www.usna.edu/History/Symposium/index.php>; <https://www.usna.edu/LeadershipConference/index.php>.

“securitising” the issue of environmental degradation.<sup>15</sup> Threats to the environment are usually unintended, and often transcend national boundaries. They have to be dealt with in a collective manner, and usually by non-military means. Placing them in the same category as military threats may complicate, rather than facilitate, their prevention as it may promote State-centrism and “us-versus-them” thinking, rather than efficient collective responses. The key question is not whether the issue of environmental change deserves the attention of researchers and policy-makers, but whether it should be treated as a security issue. It can be argued that the challenges of environmental change can be addressed more successfully outside of the security context. Judging from the literature on climate change and security,<sup>16</sup> the advocates of a “marriage” between the two concepts do not seem to share one and the same view of what the exact nature of the relationship is – in other words, what makes climate change a security issue?

A central but often neglected question is whether the impact of climate change on global, regional, national, or human security is direct or indirect. Some see climate change as a security issue in and of itself (because it threatens the natural environment, and ultimately the existence of the human race),<sup>17</sup> whereas others are more concerned with the role of climate change as a potential driver of intra- and inter-State conflicts (because it may serve as a “multiplier” of other threats and lead to regional instability and violent conflicts).<sup>18</sup> The latter perspective, focusing on the indirect effects of climate change on regional security dynamics, seems to have increased in prominence in recent years. This has come partly at the expense of the former, which is more general in orientation and inherently difficult to operationalise for

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15 D. Deudney, *The Case Against Linking Environmental Degradation and National Security*, 19(3) *Millennium* 461 (1990); B. Buzan, *Environment as a Security Issue*, in *Geopolitical Perspectives on Environmental Security*, The Studies and Research Centre on Environmental Policies - Université Laval (P. Painchaud ed., 1992); R.H. Moss, *Environmental Security? The Illogic of Centralized State Responses to Environmental Threats*, in *Geopolitical Perspectives on Environmental Security*, The Studies and Research Centre on Environmental Policies - Université Laval (P. Painchaud ed., 1992).

16 Matt McDonald, *Climate change and security: towards ecological security?*, Cambridge University Press, 2018, available at: <https://www.cambridge.org/core/journals/international-theory/article/abs/climate-change-and-security-towards-ecological-security/228798050D9F11036FB72D9F2C84F70D>; Wilfrid Greaves, *Arctic break up: Climate change, geopolitics, and the fragmenting Arctic security region*, *Arctic Yearbook 2019*, available at: [https://arcticyearbook.com/images/yearbook/2019/Scholarly-Papers/9\\_AY2019\\_Greaves.pdf](https://arcticyearbook.com/images/yearbook/2019/Scholarly-Papers/9_AY2019_Greaves.pdf).

17 C.K. Penny, *Greening the Security Council: Climate Change as an Emerging Threat to International Peace and Security*, 7 *Int'l Environmental Agreements: Politics, Law and Economics* 35 (2007).

18 M.J. Trombetta, (J. Scheffran et al., 2012), *supra*.

security analysts and political decision-makers.<sup>19</sup> Examples of indirect effects of climate change on international peace and security include alterations in regional and global patterns of migration, and disputes over access to increasingly scarce natural resources and/or strategically important transport corridors in various parts of the world, including the “global commons”, meaning areas outside national jurisdiction.<sup>20</sup>

### 7.1.2 Rising temperatures equate to rising tensions

Climate change is different from traditional military security challenges, but not necessarily less severe:

“Climate stress may well represent a challenge to international security just as dangerous – and more intractable – than the arms race between the United States and the Soviet Union during the cold war or the proliferation of nuclear weapons among rouge states today.”<sup>21</sup>

While recognising the severity of the challenge and the need for adequate countermeasures, conclusions should not be made about the security implications of climate change, or the relationship between climate change and armed conflict. Contrary to the conventional wisdom, there is no “consensus” among scholars that climate change causes conflict, regardless of other factors.<sup>22</sup> The effect of climate change on armed conflict seems to be contingent on a number of political and social variables (such as the role of governments, political institutions, and social actors in managing the process of environmental change,

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19 For a discussion of the relationship between “direct” and “indirect” environmental security risks and how they may affect (U.S.) national security, see M.A. Levy, *Is the Environment a National Security Issue?*, 20(2) *Int'l Security* 35 (1995). Joshua Busby distinguishes between the “territorial” and “extraterritorial” effects of climate change, see “J. Busby, Who Cares about the Weather? Climate Change and U.S. National Security”, 17(3) *Security Studies* 468 (2008).

20 See for instance M. Flournoy, S. Brimley, *The Contested Commons*, 135(7) *U.S. Naval Institute Proceedings* 16 (2009).

21 T. Homer-Dixon: *Terror in the Weather Forecast*, *The New York Times*, April 24, 2007.

22 Please see: Cristina Cattaneo, Michel Beine, Christiane J. Fröhlich, Dominic Kniveton, Inmaculada Martinez-Zarzoso, Marina Mastrotillo, Katrin Millock, Etienne Pigué, and Benjamin Schraven, *Human Migration in the Era of Climate Change*, *Review of Environmental Economics and Policy*, volume 13, number 2, 2020, available at: <https://www.journals.uchicago.edu/doi/abs/10.1093/reep/rez008?journalCode=reep>; Matthew T. Ballew, Anthony Leiserowitz, Connie Roser-Renouf, Seth A. Rosenthal, John E. Kotcher, Jennifer R. Marlon, Erik Lyon, Matthew H. Goldberg & Edward W. Maibach (2019) *Climate Change in the American Mind: Data, Tools, and Trends*, *Environment: Science and Policy for Sustainable Development*, 61:3, 4-18, DOI: <https://doi.org/10.1080/00139157.2019.1589300>; Thomas, K, Hardy, RD, Lazrus, H, et al. *Explaining differential vulnerability to climate change: A social science review*. *WIREs Clim Change*. 2019; 10:e565. <https://doi.org/10.1002/wcc.565>.

mitigating resource pressures, and containing tensions). Ignoring these variables could lead to poor predictions about when and where climate-induced conflict is most likely to occur, and how.<sup>23</sup> The link between climate change and armed conflict is, in other words, far from self-evident. Deterministic and apocalyptic statements about the security implications of climate change may easily turn into self-fulfilling prophecies, rather than help address the problem at hand. Before going into the complex dynamics of climate change and security in the Arctic, it is appropriate to consider the observations and findings of researchers who have studied the topic from a more general perspective, based on quantitative data from other parts of the world.

The causal links between climate change and armed conflict are extremely complex.<sup>24</sup> A central concept in the IPCC terminology is that of “vulnerability”, defined as “the degree to which a system is susceptible to, and unable to cope with, adverse effects of climate change”.<sup>25</sup> States, groups, and societies that are able and willing to adapt to the consequences of climate change seem to stand a better chance of escaping its harmful effects than those that do not.<sup>26</sup> Conversely, societies that are unable or unwilling to adapt, may be left with little other choice than to move to more attractive locations, or engage in “resource conflicts” with their neighbours. This is the essence of the “threat multiplier” mechanism.<sup>27</sup> Resource scarcity is, as pointed out by Homer Dixon, “never a sole or sufficient cause of large migrations, poverty, or violence; it always joins with other economic, political, and social factors to produce its effects”.<sup>28</sup>

To cultivate a detailed understanding of the relationship between climate change and armed conflict, we must explore the interplay between climate change and other factors in causing intra- and inter-State tensions through

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23 I. Salehyan, *From Climate Change to Conflict: No Consensus Yet*, 45(3) *Journal of Peace Research* 315 (2008).

24 H. Buhaug, N.P. Gleditsch, O.M. Theisen, *Implications of Climate Change for Armed Conflict*, Paper presented at the World Bank workshop on Social Dimensions of Climate Change, Washington D.C., March 5–6 (2008); C. Raleigh, H. Urdal, *Climate Change, Environmental Degradation and Armed Conflict*, 26(6) *Political Geography* 674 (2007); J. Barnett, W. N. Adger, *Climate Change, Human Security, and Violent Conflict*, 26(6) *Political Geography* 639 (2007).

25 M.L. Parry, *et al.*, *Climate Change 2007: Impacts, Adaptation and Vulnerability*, Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change, Cambridge University Press (2007), 6.

26 J.B. Wyman, *Climate Change Adaptation Strategies in New England*, *Climate Change Impacts on Ocean and Coastal Law: U.S. and International Perspectives* 479 (R.S. Abate ed., 2015); M.C. Boland, *Adapting Like the Animals: the Endangered Species Act as a Model for Human Adaptation to Climate Change*, 40 *Brooklyn Journal of Int'l Law* 247 (2014).

27 See for instance *Climate Change and International Security*, *op. cit.*, p. 2; and *National Security and the Threat of Climate Change*. Alexandria, VA: Center for Naval Analyses Corporation, 2014, at 44, available at: [https://www.cna.org/cna\\_files/pdf/MAB\\_5-8-14.pdf](https://www.cna.org/cna_files/pdf/MAB_5-8-14.pdf).

28 T. Homer-Dixon, *Environment, Scarcity and Violence*, Princeton University Press (1999), 16.

mechanisms such as economic destabilisation, social fragmentation, and migration. Highly relevant in this regard are the political, economic, and social characteristics of the country or region in question as well as the role of potentially “stabilising” factors such as international law and multilateral governance and institutions. Economically developed and politically stable societies are better equipped to handle climate-induced environmental change than societies that are characterised by other conflict-prone features, such as “bad governance, large and heterogeneous populations, social inequalities, bad neighbourhood, and a history of violence”.<sup>29</sup> Thus, politically unstable and poorly developed regions such as sub-Saharan Africa may experience more severe consequences from climate change than politically stable, resource-rich, and relatively well institutionalised regions such as the Arctic.<sup>30</sup>

Under certain conditions climate change may lead to rising tensions also in the northernmost part of the globe.<sup>31</sup> The region’s growing economic significance, combined with several unresolved issues of international, and particularly maritime, law, add to the long-term conflict potential in the region. As the polar ice recedes, the region will become more accessible to State and non-State actors, and commercial activities such as fisheries, petroleum extraction, marine transportation, cruise traffic, polar research, and so on, are likely to increase. This may place new demands on the ability of Arctic States to maintain stability and provide on-site regulation of, and assistance to, new activities. The coast guard, naval, and air forces of Arctic coastal States may be required to take a more active role in areas such as resource management, ocean surveillance, search and rescue operations, border control and law enforcement at sea, strategic presence, etc.

The long-term security implications of climate change for Arctic States and societies are hard to predict, and there are many uncertainties associated with their nature, scope, and severity.<sup>32</sup> This should not deter the research community from raising the issue and discussing it in a systematic manner. Failure to take the climatic factor into account in security policy and defence planning may leave governments poorly prepared to deal with the multi-faceted consequences of climate change in the Arctic. This will jeopardise vital economic and national security interests, and the political, military, and ecological stability of the region as a whole.

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29 Buhaug, Gleditsch & Theisen (2008), *supra*, 20.

30 M. Akuno, J. Scheffran, On Raids and Relations: Climate Change, Pastoral Conflict and Adaptation in North-Western Kenya, in Conflict-Sensitive Adaptation to Climate Change in Africa 241 (U. Bob, S. Bronkhorst eds., 2014).

31 Seven things you need to know about Climate Change and Conflict, International Committee of the Red Cross, 2020, available at: <https://www.icrc.org/en/document/climate-change-and-conflict>.

32 T. Koivurova, Climate Change and International Security, in International Law and Changing Perceptions of Security: Liber amicorum 171 (S. Mahmoudi J. Ebbesson, M. Jacobsson, M. Klamberg, D. Langlet, P. Wrangé eds., 2014).

This Chapter consists of four sections. Section two delves into the topic of Arctic climate change, based on findings made *inter alia* in the Assessment Reports of the IPCC (2007/2021) and in the Arctic Council's Arctic Climate Impact Assessment (ACIA, 2013) in order to explore the "direct" (environmental) security implications of climate change. Section three sheds light on the "indirect implications," that is, the effects of climate change on the intra- and inter-State conflict potential in the region. The report's findings and conclusions are summarised in the fourth and final section.

## 7.2 THE CONFLICT POTENTIAL IN THE ARCTIC

In addition to its direct effect on the physical environment of the Arctic, climate change can also affect the region indirectly because it can serve as a "threat multiplier", potentially aggravating disputes and conflicts within and between States.<sup>33</sup> Throughout the 21<sup>st</sup> century, changes such as the ones outlined in this Chapter may alter the scope and level of human activity in the Arctic, or at least parts of the Arctic, with potential implications for the relationship between various State and non-State stakeholders in the region. Even in the medium term – the period up to 2030 – governments as well as international and regional organisations involved in Arctic affairs may have to deal with a wide range of security concerns. Many of the emerging security concerns are linked to activities such as oil and gas extraction, fisheries, and marine transportation, all of which can be facilitated by the dynamics of climate change. Contrary to the situation during the Cold War, the conflict lines of the 21<sup>st</sup> century Arctic will not necessarily follow traditional alliance patterns ("NATO vs. Russia"), let alone land, sea, and shelf borders between States. Such intra- and inter-State disputes may vary in severity, intensity, and duration so their containment may require not only the presence of military capabilities, but also robust international regimes and institutional arrangements.

### 7.2.1 Conflicts between interest groups and sectors

As pointed out by Gail Osherenko and Oran Young:

"[t]he landscape of Arctic conflict [...] constitutes a complex mosaic rather than a unidimensional pattern featuring a single dominant cleavage or axis of conflict. The interest groups holding significant stakes in the region do not line up on the

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33 V. Prescott, C.H. Schoffield, *The Marine Political Boundaries of the World*, Martinus Nijhoff (2<sup>nd</sup> ed., 2005), 20-26.

same side of each and every issue. Rather, Arctic conflicts form a pattern that political analysts describe in terms of the concept of cross-cutting cleavages.<sup>34</sup>

The term 'cross-cutting cleavages' refers to a situation in which (here: sub-State) actors and interest groups simultaneously have converging as well as diverging interests on others. Local communities and native groups in the Arctic may for example find it to be in their interest to ally with the oil industry and lobby for projects that can create new jobs and income opportunities. On other occasions, local actors may be inclined to oppose industrial projects and more likely to join forces with environmentalists in the protection of ecosystems. Thus, "[i]n the Arctic, your opponent today may well turn out to be your ally tomorrow".<sup>35</sup>

The presence of cross-cutting cleavages is generally believed to have a stabilising effect on political communities.<sup>36</sup> The lack of a clearly defined "front line" along which all or most States can line up, and the recognition that sub-State actor relations in the Arctic have undergone significant changes in the past and probably will continue to so, may serve as an incentive for actors to behave with restraint in region- or period-specific conflict situations.<sup>37</sup> Take for instance the relationship between the Russian military and the petroleum industry in the Barents Sea region, which in the course of the 1990s went from a state of rivalry to a state of pragmatic partnership.<sup>38</sup> Still, there is no denying that some 'cleavages' are deeper than others. The surge in interest shown towards the Arctic as an arena for economic activity may sharpen intra-State conflicts and complicate the relationship between, for example, industrial entrepreneurs, and native groups who perceive their livelihoods to be at stake.

Often, sub-State actors voice their concerns in terms of "security", suggesting that someone or something is "threatened" by an on-going or planned development.<sup>39</sup> The challenge, seen from a political perspective, is that their respective security agendas are not always compatible. The State-centric "hard security" agenda of military establishments, typically focusing on the maintenance of political and military stability in the region, may not necessarily be compatible with the "energy security" agenda of industrial actors, which again

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34 G. Osherenko, O. R. Young, *The Age of the Arctic: Hot Conflicts and Cold Realities*, Cambridge University Press (1989), 168.

35 *Ibid.*

36 T. Dunning, L. Harrison, *Cross-Cutting Cleavages and Ethnic Voting: An Experimental Study of Cousinage in Mali*, *American Political Science Review* (2010), available online at [http://isps.yale.edu/sites/default/files/page/2013/06/dunning\\_4.24.09\\_paper.pdf](http://isps.yale.edu/sites/default/files/page/2013/06/dunning_4.24.09_paper.pdf).

37 *Ibid.*

38 For details, see K. Åtland, *Russia's Northern Fleet and the Oil Industry – Rivals or Partners?*, 35(2) *Armed Forces & Society* 362 (2009).

39 This is the case with some Indigenous Communities in the Arctic especially in locations where these communities are the vast majority of the population, and the central government does not take into consideration their concerns and objections.

may be incompatible with the “environmental security” agenda of environmental NGOs, or the “societal” or “human security” agenda of indigenous or other groups. In the Arctic, as elsewhere, “threats” may emerge not only at the State level, but also at the level of societies and groups. The same goes for the mobilisation of various forms of counter-measures against the perceived threats.<sup>40</sup>

Conflicts of interest between various sub-State and non-State actors are likely to arise several places in the Arctic in the coming decades, without necessarily jeopardising the political stability of individual countries or the region as a whole. Many of the conflicts and disputes will have to be sorted out at the local level, through negotiations, private bargaining, or in court. Others will have to be addressed at the governmental level. Each Arctic State will have to formulate its priorities and find ways to balance its sometimes conflicting economic, environmental, and military security interests in the region. Overarching “Arctic strategies”, such as the ones that have been formulated by a number of Arctic States in recent years,<sup>41</sup> can be helpful insofar as they lay down some basic goals and principles for future activities.

### 7.2.2 Conflicts over access to petroleum resources

In 2008, the EU published a report titled *Climate Change and International Security*, which, *inter alia*, touches on the topic of climate-induced resource conflicts in the Arctic. In the report, the European Commission and its High Representative for Foreign and Security Policy argue that “the increased accessibility of the enormous hydrocarbon resources in the Arctic is changing the geo-strategic dynamics of the region with potential consequences for international stability and European security interests”. This development is, in the words of the Commission, “illustrated by the recent planting of the Russian flag under the North Pole”. The report calls attention to “the intensified competition over access to, and control over, energy resources”, and

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40 However, within the domain of “hard security”, the state level has traditionally been privileged, and this is likely to remain the case. All armed forces operating in the Arctic, including the High Seas, are regular forces controlled by states, particularly states that have prominent strategic and/or economic interests in the region.

41 Very good examples in this respect are the Russian Strategy Plan on the Arctic available online at [http://isps.yale.edu/sites/default/files/page/2013/06/dunning\\_4.24.09\\_paper.pdf](http://isps.yale.edu/sites/default/files/page/2013/06/dunning_4.24.09_paper.pdf) and the Norwegian at [https://www.regjeringen.no/en/dokumenter/report\\_summary/id2076191/](https://www.regjeringen.no/en/dokumenter/report_summary/id2076191/); the USA Arctic Policy can be found at: <https://www.state.gov/key-topics-office-of-ocean-and-polar-affairs/arctic/>.

maintains that “there is an increasing need to address the growing debate over territorial claims [in the Arctic]”.<sup>42</sup>

The United States has used the potential for resource-related conflicts in the Arctic as an argument in favour of strengthening the US Navy. In the “Cooperative Strategy for 21<sup>st</sup> Century Seapower”, it is argued that “climate change is gradually opening up the waters of the Arctic, not only to new resource development, but also to new shipping routes that may reshape the global transport system”. These developments may offer new opportunities for economic growth, but they are also, in the words of the Strategy, “potential sources of competition and conflict for access and natural resources”.<sup>43</sup>

Concerns that rivalry over access to Arctic petroleum resources may lead to increasing inter-State tensions are also common in the Russian political discourse. For instance, shortly before the Russian North Pole expedition, the former director of a Moscow-based foreign policy think tank,<sup>44</sup> Dr. Vladimir Frolov, published an article in the *Russia Profile* magazine titled “The Coming Conflict in the Arctic”. In this article, he argues that “Russia needs to find new sources of fuel” and that “the Arctic seems like the only place to go”. The fact that international law does not recognise Russia’s right to the entire Arctic seabed north of the Russian coastline is described as a “problem”, and the United Nations’ non-acceptance of previous Russian claims in the region is largely blamed on the United States. The United States is, in Frolov’s terminology, “jealous of Russia’s attempts to project its dominance in the energy sector”, and potentially disposed “to intrude on Russia’s home turf”.<sup>45</sup>

Statements such as these may indicate that there is a tendency among several Arctic States to regard their northern neighbours as potential “rivals” and “competitors” in the quest for oil and gas resources on the Arctic continental shelf. It is also possible that current legal disputes in the region may acquire increasing significance in the period up to 2030, possibly leading to an increase in the coastal States’ military presence in the region. But to suggest

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42 European Commission, *Climate Change and International Security*, Paper from the High Representative and the European Commission to the European Council, March 3, 2008, available online at [http://www.consilium.europa.eu/ueDocs/cms\\_Data/docs/pressData/en/reports/99387.pdf](http://www.consilium.europa.eu/ueDocs/cms_Data/docs/pressData/en/reports/99387.pdf), at 4, 6. Mr Xavier Solana, in 2018, has further elaborated in that respect in a joint Paper with the European Commission submitted to the European Parliament, available at: [https://www.consilium.europa.eu/media/30862/en\\_clim\\_change\\_low.pdf](https://www.consilium.europa.eu/media/30862/en_clim_change_low.pdf).

43 United States Navy, *A Cooperative Strategy for 21st Century Seapower*, October 2007, available online at <http://www.navy.mil/maritime/MaritimeStrategy.pdf>; The report has been updated in 2015 incorporating the potential conflict with Russia over the Arctic overlapping claims and can be found at: [https://www.globalsecurity.org/military/library/policy/navy/21st-century-seapower\\_strategy\\_201503.pdf](https://www.globalsecurity.org/military/library/policy/navy/21st-century-seapower_strategy_201503.pdf).

44 The National Laboratory for Foreign Policy, 09/01/2017, available at: <https://www.directives.doe.gov/directives-documents/400-series/0485.1-APolicy/@@images/file>.

45 V. Frolov, *The Coming Conflict in the Arctic*, *Russia Profile*, July 10 (2007), available online at <http://www.russiaprofile.org/page.php?pageid=International&articleid=a1184076124>.

that inter-State “resource wars” are looming in the background seems somewhat far-fetched. For all States concerned, the use of military force in the Arctic Region is seen as a last-resort.<sup>46</sup> Even though the stakes are high, most international powers would prefer to play by the rules of international law, as failure to do so would alienate the sympathy of foreign investors.<sup>47</sup> Also, there seems to be a growing recognition among Arctic States that they are facing a “security dilemma”, and that unilateral moves could set off an “arms race” that none of the States want.<sup>48</sup>

As Barry Zellen points out, military power will continue to have its place in the region, and to some extent determine the availability of resources but, in the most likely scenario, “it is science that will define the new boundaries”.<sup>49</sup> Uncertainty and disagreements over borders and jurisdiction on the Arctic continental shelf may be gradually replaced by certainty and agreement, as the outer limits of each Arctic State’s offshore domain are clarified through undersea mapping, agreed-upon legal procedures, and bilateral negotiations. Some of the disputes may be more difficult to resolve than others, or just take longer time to settle, but there seems to be more patience among the involved stakeholders than is generally recognised. One of the reasons for this is that most of the currently known and, in theory, extractable oil and gas resources on the Arctic shelf are located in areas of unchallenged national jurisdiction. Economically, as well as politically, it would make little sense for a country that has access to unexploited fields on land or in undisputed waters relatively close to the shore to embark on costly offshore projects in disputed, and possibly ice-infested, waters further from the coast.

However, when discussing the long-term conflict potential in the Arctic, one should also be aware of the potential for disagreement between the “Arctic five” (the Arctic coastal States) and the remaining three members of the Arctic Council (Iceland, Sweden, and Finland), and, perhaps more problematic, between Arctic and non-Arctic States. Should an “outside” actor such as China suddenly establish a significant presence in the region for commercial, military or other purposes, this could lead to frictions with the established community of Arctic States.<sup>50</sup> The involvement of third-party actors in the exploration

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46 E. Massingham, Military intervention for humanitarian purposes: does the Responsibility to Protect doctrine advance the legality of the use of force for humanitarian ends?, 91 (876) *International Review of Red Cross* (2009), available online at <https://www.icrc.org/eng/assets/files/other/irrc-876-massingham.pdf>.

47 R. Howard, *The Arctic gold rush: the new race for tomorrow’s natural resources*, Continuum London Publishing Group (2009), 19.

48 Julie Wilhelmsen, *Spiraling toward a New Cold War in the North? The Effect of Mutual and Multifaceted Securitization*, 2020, OUP, available at: <https://academic.oup.com/jogss/article/6/3/ogaa044/5916402>.

49 B. Zellen, *Arctic Doom, Arctic Boom: The Geopolitics of Climate Change in the Arctic*, Praeger (2009), 113.

50 R. Howard (2009), *supra*, 21–22.

or exploitation of resources in disputed areas could also have a destabilising effect on inter-State relationships.

### 7.2.3 Conflicts over access to marine resources

The Arctic seas contain some of the world's oldest and richest commercial fishing grounds, and fisheries constitute an important part of the economies of many, if not all, Arctic States. As documented in the Arctic Council's Arctic Marine Shipping Assessment 2009 Report, fisheries are particularly extensive in the Norwegian and Barents Seas, and the eastern part of the Bering Sea.<sup>51</sup>

The long-term impact of climate change on fish stocks in these and other waters adjacent to the Arctic Ocean is hard to predict, but the most likely scenario is that the stocks will gradually move northwards as sea temperatures heat up. A study conducted by the US Arctic Research Commission in 2014 concluded that "climate change is likely to bring extensive fishing activity to the Arctic, particularly in the Barents Sea and Beaufort-Chukchi region [...]", and that "Bering Sea fishery opportunities will increase as sea ice cover begins later and ends sooner in the year".<sup>52</sup> The abovementioned was adopted as a relevant challenge by all Arctic Member States and was the basis of their Moratorium on Fisheries Rights in the Central Arctic Ocean agreed in 2016.<sup>53</sup>

A relevant question is whether and how the northwards movement of fish stocks, possibly accompanied by a decline in stocks further south, will have an impact on inter-State relations in the region, and the relationship between Arctic and non-Arctic States. Fishery disputes may arise not only between neighbouring coastal States, such as Norway and Russia in the Barents Sea (including the Svalbard Zone), but also when coast guard vessels act to protect the region's marine resources from extensive harvesting by boats from distant regions. Tensions may also arise when stocks migrate from the waters of one country into those of another. An example of this is the migration of Alaskan snow crabs from traditional locations off the coast of Alaska towards Russia's north-eastern coastline. Another category of challenges relates to the northward movement of fish stocks into areas of the High Seas that are unregulated by fishing quotas.<sup>54</sup>

Inter-State disputes over access to marine resources in contested areas of the ocean are not a new phenomenon. Frequently cited examples of so-called "fish wars" are the British-Icelandic "cod wars" in the North Atlantic (1958-61,

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51 AMSA Report, 2009, online available at: <https://oaarchive.arctic-council.org/handle/11374/54>.

52 The Arctic Ocean and Climate Change, A Scenario for the US Navy, United States Arctic Research Commission Publications, No. 02-1, 2014, cited in R. Howard (2009), *supra*, 97.

53 See for example: <https://thebarentsobserver.com/en/arctic/2021/06/central-arctic-ocean-fishing-moratorium-comes-effect>.

54 R. Howard (2009), *supra*, 97.

1973-73, and 1975-76), the Norwegian-Icelandic dispute over fisheries in the Svalbard Fisheries Protection Zone (1994), and the Canadian-Spanish/EU “turbot war” on the Grand Banks off Newfoundland (1995). In the North Pacific, Russia and Japan have had a long-standing dispute over fishing rights in the waters around the disputed Kurile Islands, occasionally leading to the use of military force.<sup>55</sup> All of these clashes included various forms of “extraordinary” measures being undertaken in the name of a State against one or more fishing vessels of another State. Such measures included the firing of warning shots, trawls cuttings, seizure of ships and/or crews, deliberate ramming, and live fire aimed at the hull of fishing vessels.

Fishery-related disputes rarely escalate to the level of sinking of ships and loss of life. Statistically, the use of military force in fishery disputes is rare, and when force is used, it is rarely reciprocated. In other words: inter-State fishery disputes rarely get “militarised,” in the sense of leading to the exchange of fire between naval forces, and it can therefore be claimed that in most cases they do not “carry the implications of war”.<sup>56</sup> This is not to say that there is no potential for escalation of such disputes. Despite the progress that has been made in recent years in the efforts to address collective marine management challenges in the Arctic, such as previously extensive illegal, unreported, and unregulated (IUU) fishing in the Barents Sea, all Arctic States want to secure their “slice of the pie”. Regulatory measures undertaken by one State, particularly in areas of unclear or disputed jurisdiction, may be interpreted by another State as biased and unjustified, rather than motivated by objective management needs, which may be a potential source of conflicts.

If a fishing vessel – with or without the backing of its flag State – refuses to abide by instructions given by the official forces of a coastal State and tries to escape punishment by fleeing, the coastal State may decide to resort to the use of force to immobilise it. The coastal State may also extend its jurisdiction onto the high seas to seize the vessel. The coastal State’s right of “hot pursuit”,<sup>57</sup> which is elaborated in Article 111 of UNCLOS,<sup>58</sup> ceases only when the ship pursued has entered the territorial waters of its own or a third State. If the flag State of the fishing vessel in question does not recognise the coastal State’s right of hot pursuit,<sup>59</sup> it may attempt to convince (or deter) it to abort

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55 In 2006, a Japanese fisherman was shot and killed when a Russian patrol boat opened fire on a Japanese fishing schooner near Kaigara Island of the Southern Kuriles. See “Japanese Fisherman Killed in Kuriles Incident”, Radio Free Europe/Radio Liberty Newsline, 16 August 2006.

56 J. Weeks, D. K. Cohen, R. Herrings: Fishing Disputes, Regime Type, and Interstate Conflict, Paper presented at the Stanford International Relations Workshop, March 7 (2006), at 7.

57 Typically Coast Guard or Navy vessels, maritime patrol aircraft, or helicopters.

58 See article 111 UNCLOS available at: [https://www.un.org/depts/los/convention\\_agreements/texts/unclos/unclos\\_e.pdf](https://www.un.org/depts/los/convention_agreements/texts/unclos/unclos_e.pdf).

59 N. M. Poulantzas, *The Right of Hot Pursuit in International Law*. M. Nijhoff (2002); M. N. Shaw, *International Law*, Cambridge University Press 9<sup>th</sup> edition, 424–425.

the pursuit. This can be by diplomatic means, or by the threat, display, or use of military force against the pursuers.

An interesting case was the so-called Elektron incident in October 2005, when a Norwegian Coast Guard vessel attempted to arrest a Russian trawler in the Svalbard Fisheries Protection Zone.<sup>60</sup> The trawler refused to follow instructions given by the Norwegians, and suddenly took off from its pursuers, with two Coast Guard inspectors still on board. This led to a three-day chase through the Barents Sea, involving four Norwegian Coast Guard vessels, two helicopters, and a maritime patrol aircraft. The pursuit continued through the Barents Sea "Loophole"<sup>61</sup> and into the Russian EEZ, and was not aborted until the vessel crossed into Russian territorial waters.

Contrary to what many expected at the outset of the pursuit, the Elektron incident did at the time not escalate to become a militarised inter-State dispute between Norway and Russia. Instead, it was handled in a non-confrontational manner by diplomats, and later, the judicial system. Both parties exercised restraint with regard to the use of force. Because of the weather conditions at the time of the pursuit, with stormy weather and 30-foot waves, the Norwegian Coast Guard did not want to jeopardise the safety of the trawler and its crew by using excessive force to stop it. And despite numerous calls for a heavy-handed Russian response, particularly from the Murmansk-based Fishing Industry Union of the North, the Russian Navy did not get involved in the dispute. It did, however, dispatch a destroyer to the territorial line, where the "kidnapped" Norwegian officers were allowed to disembark the trawler. The Russian destroyer then escorted the trawler and its captain back to Murmansk for subsequent criminal proceedings. The Russian newspaper *Gazeta* reported that "the war with Norway has been called off".<sup>62</sup> Incidents such as this one, where diverging views on the legal status of a recourse-rich maritime area lead to potentially dangerous confrontations at sea, are likely to happen again. The handling of the Elektron incident gives cause for optimism regarding the prospects for non-violent resolutions of such disputes. There is, however, no guarantee that future incidents will be handled in the same manner.

The pressure against the renewable marine resources of the Arctic is likely to increase, partly as a result of global climate changes and resource scarcities in other parts of the world, leading to frictions not only between neighbouring coastal States, but also between regional and outside actors. As water temperatures rise and the ice edge moves further north, the feeding areas of com-

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60 For a detailed discussion, see K. Åtland, K. Ven Bruusgaard, *When Security Speech Acts Misfire: Russia and the Elektron Incident*, 40 (3) *Security Dialogue* 333 (2009).

61 The "Loophole" is a pocket of international waters in the central part of Barents Sea, surrounded by the Exclusive Economic Zones of Norway and Russia, and the Svalbard Fisheries Protection Zone.

62 Y. Zorin, E. Smirnov, *Voyna s Norvegiei otkladyvaetsya* [The war with Norway has been called off], *Gazeta*, October 20, 2005.

mercially important fish stocks are likely to follow suit, as will the fishing fleets of Arctic as well as non-Arctic States. This will place heavy demands on the coastal States' ability to regulate the harvest, hinder IUU fishing, and prevent the escalation of inter-State disputes.

#### 7.2.4 Conflicts over access to shipping lanes

There are a number of lingering disagreements between some Arctic States concerning the legal status of the two main maritime transport corridors through the Arctic: the Northwest Passage (north of Canada) and the Northern Sea Route (north of Russia). The disagreements relate to issues such as the drawing of baselines, the outer borders of internal waters, the status of straits, and the right of innocent passage.

According to the Arctic Council's Arctic Marine Shipping Assessment, some 6000 vessels of various categories visit the Arctic marine area annually.<sup>63</sup> All but a few voyages (such as icebreaker cruises to the North Pole) take place in the periphery of the Arctic Ocean, where ice conditions are the most accommodating.<sup>64</sup> Traffic is particularly extensive along the Norwegian west coast and in the Barents Sea, as well as in the waters around Iceland and the Faroe Islands, southwest of Greenland, and in the Bering Sea. This traffic forms a mix of fishing, domestic cargo and cruise ships. Cargo vessels also regularly travel along the North Pacific Great Circle Route between Asia and North America, through the Aleutian Islands.<sup>65</sup> In the Barents Sea, much of the traffic goes to and from the port of Murmansk. In addition to naval vessels, ships travelling the Barents and Norwegian Seas include oil and LNG tankers, bulk cargo carriers, coastal ferries, fishing vessels, cruise ships, research vessels, and so on. There is also a sizeable year-round traffic of ice-enforced tankers and bulk carriers along the western part of the Northern Sea Route, between Murmansk and Varandey on the Pechora Sea (petroleum shipments from Western Siberia),<sup>66</sup> and between Murmansk and Dudinka in Siberia (nickel and copper shipments from Noril'sk).

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63 AMSA Report, 2009, available at <https://oaarchive.arctic-council.org/handle/11374/54>; Analytical discussion on the Arctic Navigation has been conducted in Chapter 2 of this Thesis.

64 Marine Traffic in the Arctic, A Report Commissioned by the Norwegian Mapping Authority, available at: [https://legacy.iho.int/mtg\\_docs/rhc/ArHC/ArHC2/ARHC2-04C\\_Marine\\_Traffic\\_in\\_the\\_Arctic\\_2011.pdf](https://legacy.iho.int/mtg_docs/rhc/ArHC/ArHC2/ARHC2-04C_Marine_Traffic_in_the_Arctic_2011.pdf).

65 AMSA Report, 2009, online available at : <https://oaarchive.arctic-council.org/handle/11374/54> at 73f.

66 The Varandey terminal has shipped out total of 19 million tons of crude oil since the start-up in 2008, see respectively at <http://www.barentsobserver.com/10-million-tons-shipped-from-varandey-oil-terminal.4725304-16334.html>.

Despite significant reductions in the extent of sea ice in recent decades, traffic volumes along these routes are still fairly modest, and the traffic is mostly destinational (re-supply of local communities, transportation of natural resources out of the region, and cruise traffic), rather than trans-Arctic.<sup>67</sup> According to the Arctic Marine Shipping Assessment, this is likely to remain the situation in the foreseeable future. It is also possible to imagine scenarios in which trans-Arctic shipping becomes more attractive. In the coming decades, the sailing routes in question are likely to become ice-free for considerable parts of the year, particularly north of Siberia and the Russian Far East. This may, at least in theory, lead to an increase in traffic volumes, particularly in the event of a destabilisation of regions surrounding other strategic transit points such as the Suez and Panama Canals. Temporary or permanent increases in ship traffic in the Arctic may potentially heighten the risk of inter-State conflicts related to the use of major Arctic marine transport routes, regional as well as intercontinental.

The Northwest Passage goes along the northern coast of North America through the waters of the Canadian Arctic archipelago, around which Canada in 1985 drew straight baselines and simultaneously declared to be "internal waters."<sup>68</sup> This view is not shared by the United States, which considers the passages in question to be "international straits" subject to freedom of navigation, for commercial as well as State vessels.<sup>69</sup> The EU seems to take a similar view. While not explicitly addressing the status of the waters of the Northwest Passage, the 1988 Arctic Cooperation Agreement between Canada and the United States stipulates that navigation by US icebreakers in the waters claimed internal by Canada would take place with Canadian consent. This agreement temporarily stabilised the situation,<sup>70</sup> but applied only to icebreakers, assuming that any commercial vessel operating in these waters would require icebreaker assistance. This assumption may not necessarily be true in the future. Climate change may at some point turn the Northwest Passage into a commercially viable route for non-supported transits, seasonal or year-round, which may potentially heighten tensions between Canada and the United States and/or between Canada and the EU. An additional source of concern for the Canadians is the allegation that US nuclear submarines may have transited unannounced through Canadian Arctic waters. Such rumours circulated in

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67 AMSA Report, 2009, online available at [http://www.arctic.noaa.gov/detect/documents/AMSA\\_2009\\_Report\\_2nd\\_print.pdf](http://www.arctic.noaa.gov/detect/documents/AMSA_2009_Report_2nd_print.pdf), at 4–5.

68 D.R. Rothwell, *The Canadian-U.S. Northwest Passage Dispute: A Reassessment*, 26(2) *Cornell Int'l Law Journal* 331 (1993); R. Huebert, *Polar vision or tunnel vision: The making of Canadian Arctic policy*, 19(4) *Marine Policy* 343 (1995).

69 D.R. Rothwell, *The Canadian-U.S. Northwest Passage Dispute: A Reassessment*, 26(2) *Cornell Int'l L. Journal* 331 (1993).

70 J.C. Carman, *Economic and Strategic Implications of Ice-Free Arctic Seas*, in *Globalization and Maritime Power* Chapter 9 (Sam J. Tangredi ed., 2002) 171f.

2005, and provoked strong reactions in Canada.<sup>71</sup> In recent years, Canada has taken steps to strengthen its military presence in the region, the Canadian parliament voted almost unanimously in favour of a bid to rename the country's Arctic seaway "the Canadian Northwest Passage".<sup>72</sup>

On the other side of the Arctic, Russia's position is similar to that of Canada. Russia has drawn straight baselines around Novaya Zemlya, Severnaya Zemlya, and the East Siberian Islands, rendering the waters between the Russian mainland and the islands to be internal waters.<sup>73</sup> In fact, the entire "sector" between the Russian coastline and the North Pole is frequently described as Russian.<sup>74</sup> Russian and Soviet legal experts have long claimed that the straits along the Northern Sea Route "cannot be regarded as being used for international navigation, since the entire history of Arctic exploitation knows only extremely rare individual instances of passage through them by non-Russian ships".<sup>75</sup> The straits that connect the Barents, Kara, Laptev, and East Siberian Seas are seen as part of "a special legal regime [that precludes] their uncontrolled use by foreign seafarers".<sup>76</sup> Other countries, most notably the United States, have questioned the Russian position and claim that the straits are "international", and that the right of innocent passage for foreign vessels exists.

The Northern Sea Route, first established in the 1930s, was formally opened to international shipping traffic in July 1991. This was almost four years after Mikhail Gorbachev's 1987 "Murmansk Initiative", in which the Soviet leader took issue with security-related arguments against such a development.<sup>77</sup> In terms of distance, the Route offers significant savings compared to alternative routes between ports in Northwest Europe (e.g., Hamburg) and Northeast Asia/Northwest America (e.g., Yokohama, Hong Kong, Singapore, and Vancouver). For some destinations, distance savings can be as high as 50%. Distance savings would be even greater for traffic between high-latitude ports in Northern Europe (e.g., Northern Norway and the Kola Peninsula) and the Northern Pacific area (e.g., Alaska). For international shipping companies, savings in distance may lead to savings in time and money, and some analysts

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71 C. Wattie, U.S. Sub May Have Toured Canadian Arctic Zone, National Post, December 19, 2005, at A1.

72 R. Boswell, Arctic sea route to be renamed 'Canadian Northwest Passage', The Vancouver Sun, December 3, 2009.

73 R.R.D. Brubaker, The Legal Status of the Russian Baselines in the Arctic, 30(3) *Ocean Development & Int'l L.* 191 (1999), at 207.

74 A.L. Kolodkin, M. E. Volosov, The legal regime of the Soviet Arctic, 14(2) *Marine Policy* 158 (1990), at 163.

75 *Ibid.*

76 *Ibid.*

77 K. Åtland, Mikhail Gorbachev, the Murmansk Initiative, and the Desecuritization of Interstate Relations in the Arctic, 43(3) *Cooperation and Conflict* 289 (2008), at 304–305.

have estimated the savings could be as much as \$800,000 in fuel and labour per trip for a large freighter.<sup>78</sup>

Still, as of today, there is considerable reluctance among foreign as well as Russian shipping companies to make use of Russia's northern waterway, particularly as an intercontinental route. As a rare exception, two German cargo ships from the Bremen-based Beluga Group, assisted by a Russian icebreaker, has conducted a successful journey along the entire length of the Northern Sea Route every summer since the summer of 2009 and on.<sup>79</sup> The journey went from east to west, and the vessels encountered very little ice throughout the transit. However, neither this nor other shipping companies have plans to start regular or year-round trans-Arctic operations. There is still too much uncertainty, which relates to factors such as the generally unpredictable ice conditions, the lack of infrastructure, the lack of search and rescue services, inter-State disagreements over the legal status of the waters and straits along the route, insurance-related issues and the terms and fees set by the Russian Northern Sea Route Administration.

In the distant future, intercontinental transits along routes further from the coastline – north of the Russian islands and north of the Canadian archipelago – could become a reality. Such a turn of events could create new legal and safety concerns (nuclear threats), very different from those that are associated with the current sailing routes.

### 7.3 TRADITIONAL MILITARY CONFLICTS

Since the end of the Cold War, the potential for "traditional" military conflicts in the Arctic has been reduced, but not eliminated. The region is still seen, particularly in Washington and Moscow, as an important arena for ballistic missile nuclear submarine (SSBN) operations, and for defence against conventional or nuclear missiles launched from land, sea, or the air. As a US naval official stated, "when you go through the Panama Canal, every terrorist and his brother knows you're there. When you go through the Arctic, no one knows you're there".<sup>80</sup> Unlike Antarctica, the Arctic is not demilitarised, and is unlikely to become so in the foreseeable future.<sup>81</sup> Most likely, the deep and

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78 A.L. Russell, *Carpe Diem: Seizing Strategic Opportunity in the Arctic*, 51 *Joint Force Quarterly* 94 (2008), at 96.

79 See *First through Northeast Passage*, *Barents Observer*, September 9, 2009, available online at <http://www.barentsobserver.com/first-through-northeast-passage.4629485-16175.html>.

80 Barry L. Campbell, Head of Operations at the US Navy Arctic Submarine Laboratory in San Diego, California, cited in C. Harrington, *Eyeing up the new Arctic: competition in the Arctic Circle*, 45(3) *Jane's Defence Weekly* 24 (2008), at 26.

81 Map shows the state of play in the Arctic Ocean with respect to the presence of military forces. see respectively online at <http://uk.businessinsider.com/chart-of-russias-militarization-of-arctic-2015-8?r=US&IR=T>. That was relevant till the end of 2021-then Russia started

partly ice-covered waters of the Arctic Ocean will remain a potential hiding place for missile-carrying nuclear submarines. The region may also become accessible to naval surface forces from Arctic and non-Arctic States. This is not to say that we should expect a radical increase in the range and scope of military activity in the Arctic but it should be recognised that the region is still seen, and will continue to be seen, as militarily important to at least some Arctic States.

Nuclear submarines can operate autonomously under the cover of the Arctic ice canopy for long periods of time. They can rise to the surface, push their way through several meters of ice, and take up firing positions anywhere in the Arctic Basin, including the North Pole. The Russian and US navies regularly rehearse these scenarios, including the launch of missiles. In 2007, two British sailors lost their lives in an accident aboard the *HMS Tireless*, a Trafalgar-class hunter-killer submarine, which was participating in a joint exercise with US submarines under the Arctic ice cap north of Alaska.<sup>82</sup> For the first time in October 2009, a nuclear-powered United States attack submarine – the *USS Texas* – surfaced on the North Pole. Such operations require special training and are associated with significant danger, not only to the fragile Arctic environment, but also to the submarine crews.

In March 2021, three Russian submarines simultaneously broke through the ice near the North Pole.<sup>83</sup> Each boat could carry 16 ballistic missiles, and each missile could field multiple nuclear warheads. The submarines were soon joined by two MiG-31 aircraft and ground troops participating in Umka-2021, a Russian military exercise.<sup>84</sup>

This exercise in March 2021 highlighted increased Russian military activity in the Arctic, but that was not the sole Russian signal. US Alaska Command, under US Northern Command, reported that they had intercepted more Russian military aircraft near the Alaska Air Defense Identification Zone in 2020 than at any other time since the end of the Cold War. In April, Secretary of State Antony Blinken stated that Russia is trying “to exert control over new spaces. It is modernizing its bases in the Arctic and building new ones.”<sup>85</sup> Russian Foreign Minister Sergei Lavrov responded by saying, “[w]e hear whining about

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to reorganize its military forces in order to prepare for the war in Ukraine and its current state of play cannot be identified with a credible and definitive way.

82 Two Die in Accident on British Nuclear Submarine, AFP, March 21, 2007, available online at [http://www.spacewar.com/reports/Two\\_Die\\_In\\_Accident\\_On\\_British\\_Nuclear\\_Submarine\\_999.html](http://www.spacewar.com/reports/Two_Die_In_Accident_On_British_Nuclear_Submarine_999.html).

83 Information derived out from: <https://t.co/S0mVGzLosC>.

84 Information about the exercise can be found at: <https://www.thedrive.com/the-war-zone/39953/three-russian-ballistic-missile-submarines-just-surfaced-through-the-arctic-ice-together>.

85 Anthony Blinken’s comment can be found at: <https://apnews.com/article/arctic-europe-russia-business-technology-b67c5b28d917f03f9340d4a7b4642790>.

Russia expanding its military activities in the Arctic. But everyone knows that it's our territory, our land".<sup>86</sup>

In Russia, the sea-based nuclear weapons on the Kola Peninsula and on the Pacific Coast are seen as an important part of the country's nuclear arsenal, contributing to upholding the country's status as a great power. However, compared to its Cold War equivalents, the Russian SSBN fleet has shrunk and is badly deteriorated. The construction of a fourth-generation class of strategic submarines (the "Borey" class) and the development of a new ballistic missile system ("Bulava") have been significantly delayed. As a result, the number of Russian submarine patrols in the Arctic is still fairly limited. Even though the military activity level in the North is lower today than it was in the days of the Cold War, military considerations still play a role in the formation of national strategies and policies.

Russia's strategic interests in the Arctic are closely related to the country's economic interests in the region because there is a widespread fear that other States may be tempted to take control over Russia's natural resources as the ice cover recedes.<sup>87</sup> This fear is often coupled with Russia's traditional fear of NATO, which is a central topic in Russia's security and defence planning, particularly with regard to the European Arctic:

"We think the situation is very dangerous and serious, and we also think that NATO [North Atlantic Treaty Organization] will transform from a defence alliance to a bloc which will fight for energy resources, and it will fight for its interests by military means [...] Since 2002–2003 the Norwegian Navy has had several warships protecting their fishing fleet off Spitsbergen [Svalbard], and I don't exclude that Russia might send its navy there too."<sup>88</sup>

Along the same lines, a 2003 *Pravda* article titled "Spitsbergen: NATO's outpost under Russia's nose" listed a number of Russian security concerns pertaining to the archipelago of Svalbard. The article claimed that the Svalbard Environmental Protection Act<sup>89</sup> – a piece of legislation adopted by the Norwegian Parliament in 2001 – was aimed at hindering Russian mining activities and could be forcing Russia to abandon the archipelago. It also claimed that Norway was violating the demilitarisation clause of the 1920 Svalbard Treaty by allowing the construction and operation of radars and satellite stations that

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86 Lavrov's response can be found at: "<https://apnews.com/article/arctic-europe-russia-business-technology-b67c5b28d917f03f9340d4a7b4642790>."

87 A. Smolovskiy, *Voyenno-strategicheskaya obstanovka v Arktike* [The Military-Strategic Situation in the Arctic], 11 *Morskoi sbornik* 57 (2006).

88 G. Dyer, *Climate Wars*, Random House (2009), 38.

89 Please see at: <https://www.regjeringen.no/en/dokumenter/svalbard-environmental-protection-act/id173945/>.

allegedly could be used in a United States missile defence scheme.<sup>90</sup> Norway's rejection of these allegations appears to have had little effect on mainstream Russian perceptions.<sup>91</sup>

Today, more than three decades after the end of the Cold War, Russia's relations with NATO are still marked by a startling lack of trust. This was illustrated for the first time by the 2006-2009 "missile defence" debate and the controversy over NATO's plans for further enlargement into the post-Soviet space, which ended up to be one of the excuses that Russia used in invading Crimea in 2014 and Ukraine 2022. Russia is also concerned that that ship-based missile defence systems may be deployed in the Arctic.<sup>92</sup> Though not at Cold War levels in terms of frequency, Russia and the United States, maybe also the United Kingdom, are likely to maintain their ability to conduct SSBN and SSN operations in the Arctic Ocean and its adjacent waters, and this activity will inevitably entail the risk of incidents, accidents, or worse: an accidental launch of missiles. An increase in the number of naval surface vessels operating in the region can also not be excluded, as indicated by Canada's efforts to strengthen its naval presence in the northern waters. However, despite the numerous claims to the contrary, there are few indications of a "new Cold War" in the Arctic.

Russia is not the only authoritarian power with increased interest in Arctic affairs. In January 2018, Chinese officials published their first Arctic strategy document and attempted to buy and greatly expand Finland's Kemijärvi air base for use by large Chinese aircraft, ostensibly for Arctic research.<sup>93</sup> Their offer was rejected, supposedly because the northern airfield is next to Finland's Rovajärvi artillery range. This fits a pattern. China has built Arctic research stations, conducted ongoing oceanographic surveys, and attempted infrastructure development across the region, projects that some believe have geostrategic or military purposes.<sup>94</sup>

In order to better position the United States for geopolitical competition in the region, the Biden administration should write and publish a new national security strategy for the Arctic. The United States has a moribund 2013 Arctic strategy that was superseded by events and ignored by the Trump

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90 P. Rivetov, Shpitsbergen – forpost NATO pod nosom Rossii" [Spitsbergen: NATO's outpost under Russia's nose], Pravda online, April 14, 2003.

91 G. Dyer (2009), *supra*, 38.

92 U.S. could deploy missile shield in Arctic – Russia's NATO envoy, RIA Novosti, September 29, 2009, available online at <http://en.rian.ru/russia/20090929/156282845.html>.

93 The Chinese Arctic Policy can be found at: <https://www.uaf.edu/caps/resources/policy-documents/china-arctic-policy-2018.pdf>.

94 Swee Lean Collin Koh, China's strategic interest in the Arctic goes beyond economics, 2020, available at: [https://www.defensenews.com/opinion/commentary/2020/05/11/chinas-strategic-interest-in-the-arctic-goes-beyond-economics/?utm\\_source=Sailthru&utm\\_medium=email&utm\\_campaign=EBB%2005.12.20&utm\\_term=Editorial%20-%20Early%20Bird%20Brief](https://www.defensenews.com/opinion/commentary/2020/05/11/chinas-strategic-interest-in-the-arctic-goes-beyond-economics/?utm_source=Sailthru&utm_medium=email&utm_campaign=EBB%2005.12.20&utm_term=Editorial%20-%20Early%20Bird%20Brief).

administration.<sup>95</sup> In 2019, the Office of the Secretary of Defense released an Arctic strategy, and the Air Force, Navy and Army each released their own subordinate strategies.<sup>96</sup> However, these individual strategies were not coordinated before being released, did not fully integrate efforts with civilian foreign policy agencies, and in some cases were produced only because of pressure from Sen. Dan Sullivan from Alaska.<sup>97</sup>

### 7.3.1 Arctic security governance

In 2011, the Arctic Security Forces Roundtable (ASFR) was established upon the initiative of Norway and the US. It is a military-to-military forum, bringing together high-ranking military officers representing the Arctic states, France, Germany, the Netherlands and the UK. They generally discuss the increasing use of Arctic waters and examine how the deployment of national military and coast guard capabilities can support civilian authorities.<sup>98</sup> This platform provides a unique opportunity for stakeholders to cooperate, particularly on matters related to regional maritime security and emergency response capacity building.<sup>99</sup> The Arctic Coast Guard Forum (ACGF), established in 2016, has become a key venue for cooperation on 'soft' security.<sup>100</sup> It is functioning well, focussing on practical cooperation and the exchange of information on coast guard matters. Currently, there is no Arctic forum to discuss hard security issues that includes Russia, as the ASFR operates without Russian participation following the annexation of Crimea.<sup>101</sup>

#### 7.3.1.1 An Arctic Security Forum (?)

According to some analysts 'Arctic exceptionalism' – the cooperation of the Arctic states in a world of growing geopolitical strife – might be en-

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95 The USA Strategy can be found at: [https://obamawhitehouse.archives.gov/sites/default/files/docs/nat\\_arctic\\_strategy.pdf](https://obamawhitehouse.archives.gov/sites/default/files/docs/nat_arctic_strategy.pdf).

96 The report of the Secretary of Defence can be found at: <https://media.defense.gov/2019/Jun/06/2002141657/-1/-1/1/2019-DOD-ARCTIC-STRATEGY.PDF>.

97 Senator Sullivan's suggestions can be found at: <https://www.sullivan.senate.gov/>.

98 The future of the Arctic: cooperation or confrontation? *Adviesraad Internationale Vraagstukken*, No. 90, September 2014, p.37.

99 Rachael Gosnell, Andreas Hildenbrand and Elizabete Aunina, *Emerging Challenges in Arctic Security and Recommendations for the Future: Perspectives from the European Security Seminar-North*, Garmisch Partenkirchen: The Marshall Center, September 2018.

100 Ulf Sverdrup e.a., *A Governance and Risk Inventory for a Changing Arctic*, p. 6.

101 Ulf Sverdrup e.a., *A Governance and Risk Inventory for a Changing Arctic*, p. 6; Rebecca Pincus, 'NATO north? Building a role for NATO in the Arctic', *War on the Rocks*, 6 November 2019.

dangered.<sup>102</sup> One could argue that hard security matters need to be put on the political agenda when the region is discussed. For example, discussions could start on how to regulate military activities in the Arctic region – not replacing UNCLOS but setting specific rules for the international Arctic waters.<sup>103</sup> Others argue that there is little prospect of success in handling hard or political-military security issues while relations between the three superpowers remain tense.<sup>104</sup> Some experts claim that there are no hard security problems in the region and that the existing set of governance bodies should remain untouched.<sup>105</sup> The latter view neglects the potential impact of the trends and the risks associated with the growing geopolitisation of the Arctic. As elsewhere in the world, sooner or later tensions will increase further, incidents and accidents might occur, and conflicts and crises might arise. Thus, there seems to be sufficient reason to assess what forum, already existing or new, would be best suited to deal with political-military security issues in the Arctic.

Two important parameters should be considered when assessing the best option for discussing Arctic security. Firstly, all Arctic states should be included in such a forum. If resolving security tensions in the region is the objective, cutting off communication on political-military security issues with Russia is not the way to go. On the contrary, Russia's absence may even lead to increasing risks and uncertainties.<sup>106</sup> Clearly, this raises a significant political issue, to conduct 'business as usual' on Arctic political military matters with Moscow, while both the issue of Crimea and the conflict in Eastern Ukraine remain unresolved. Secondly, it is important to keep in mind that

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102Ekatarina Klimenko, *The Geopolitics of a Changing Arctic*, Stockholm: SIPRI, December 2019;.

103 Heather A. Conley, *A New Security Architecture for the Arctic: An American Perspective*, Washington, DC.: Center for Strategic and International Studies, January 2012; Seth Andre Meyers, 'With Strategic Spillover Rising, Now Is the Time for an Arctic Security Forum', *World Politics Review*, 5 July 2016; Duncan Depledge, Mathieu Boulègue, Andrew Foxall & Dmitriy Tulupo, 'Why we need to talk about military activity in the Arctic: Towards an Arctic Military Code of Conduct', in: *Arctic Yearbook 2019 – Redefining Arctic Security*, edited by Lassi Heininen, Heather Exner-Pirot and Justin Barnes, November 2019.

104 Ragnhild Groenning, 'Why military security should be kept out of the Arctic Council', *The Arctic Institute*, 2 June 2016. Groenning argues that it would be counterproductive to introduce hard security issues in the Arctic Council as this would disrupt cooperation on other issues.

105 Kathrin Stephen, 'An Arctic Security Forum? Please, no!', *The Arctic Institute*, May 26, 2016; Adam P. MacDonald, 'Precarious existence or staying the course? The foundations and future of Arctic stability', in: *Arctic Yearbook 2019 – Redefining Arctic Security*, edited by Lassi Heininen, Heather Exner-Pirot and Justin Barnes, November 2019. Specifically, MacDonald argues that the Arctic's regional stability can remain even among increasing great power competition, due to the "region's geographic division of authority, strategic alignments, and state coherence (.) that has ensured stability and the emergence of a decentralized but robust regional order.

106 Klimenko, *The Geopolitics of a Changing Arctic*, p. 13, *supra* note 83.

ecological, economic and political-military security in the Arctic are closely interconnected. Hence, it might be useful to discuss military matters in a wider set-up than military to military talks, in order to connect them with the actors dealing with economic and ecological security. Taking these two parameters into account, only two of the existing forums would be candidates.

### 7.3.1.2 Using the existing forum

#### – *The Arctic Council*

Military security is per mandate excluded from the Arctic Council's agenda. Nevertheless, this forum can still prove to be useful for political-military security matters. Firstly, the Arctic Council is already used for discussing soft security issues, related to economic activities, ecological matters, tourism and other matters: SAR, responding to environmental disasters, etc. A new working group could be established, focussing on the military use of Arctic waters, which in due course could result in a set of measures to prevent misunderstanding and resolve incidents, to make military activities more transparent and to strengthen military cooperation.

A more radical solution would be to create an Arctic security and cooperation organisation. This idea was coined by the US Secretary of State Mike Pompeo May 2019 in Rovaniemi, Finland.<sup>107</sup> Such a fundamental change to the nature of the Arctic Council would require a new mandate, based on a unanimous decision by all its members.<sup>108</sup> Setting up a new working group to deal with military security might be politically more attractive, particularly as it could build on already existing soft security issues. On the downside, bringing military matters to the Arctic Council could spoil the ongoing cooperation on other issues – thus having a counterproductive result. It seems that most members of the Arctic Council object to the inclusion of political military matters. Therefore, such a fundamental change is not feasible. Hence, the Arctic Council's mandate should remain as it is, thereby providing the best guarantee for continued cooperation between all Arctic states on matters other than political military security.

Reference must be made to the fact, that due the ongoing War in Ukraine due to the unlawful invasion on behalf of Russia to the territory of Ukraine, the Arctic Council has paused all of its activities until further notice.<sup>109</sup>

#### – *The Arctic Security Forces Round Table*

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107 Looking North: Sharpening America's Arctic Focus, Speech by Michael R. Pompeo, Secretary of State, in Rovaniemi Finland, 6 May 2019.

108 Van Schaik and Dams, *The Arctic Elephant*, p. 9 Available at: <https://www.clingendael.org/publication/arctic-elephant-europe-geopolitics-high-north>.

109 See the announcement of the Arctic Council is available at: <https://arctic-council.org/>.

Another option is to expand the mandate and composition of the ASFR. The main problem with this option is the absence of Russia at the ASFR meetings mainly due to its aggressive war in Ukraine. Politically, it seems possible that Russia may have a standing invitation to participate in the ASFR meetings upon the termination of the War against Ukraine and the normalization of its relationship with the West. Moscow prefers ASFR meetings between the Chiefs of Defence Staff.<sup>110</sup> Since Russia no longer participates in ASFR meetings, these are now held in two formats: one for exchanging open source information on military matters, including how to increase practical cooperation, e.g. when military assets are needed to address emergencies, and a so-called Northern Flank format in which Finland, Sweden and the NATO ASFR countries discuss Arctic military security matters including on the basis of classified information. As such, the first ASFR format seems to be the right forum to restart the discussions with Russia on political-military matters. At the moment, the prospects of resuming ASFR meetings with Russian military participation might not look favourable or even possible, based on Russia's attitude. Nevertheless, the option should not be excluded in the future at the aftermath of the restoration of peace in Ukraine. If relations with Moscow were to improve in the wider sense, the Russian approach might also start to change, which could create a window of opportunity for discussing political-military matters within the ASFR.

An even more ambitious approach could entail the expansion of the ASFR with the inclusion of China and the EU and potentially the chair of the Arctic Council, thus resulting in the establishment of an inclusive Arctic security and cooperation organisation.<sup>111</sup> However, this would require an even higher degree of improved relations in the China-Russia-US triangle. Moreover, both Russia and the US have expressed their objections towards the inclusion of China in such matters. For Russia, China is welcomed as an economic actor, but should not have a security presence or become an institutional actor in the Arctic.<sup>112</sup> It appears that this approach is not feasible if Russia and the US do not change their stance on the expansion of the ASFR.

### 7.3.2 The option of multilateral organisations

Apart from the European Arctic states, other European countries also have, to varying degrees, a stake in Arctic security, depending on their national security interests: France, Germany and the UK, but also the Netherlands,

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110 Tony van der Togt, *Conflict Prevention and Regional Cooperation in the Arctic*, Clingendael OpEd, October 2019 (hereafter 'Van der Togt').

111 Van Schaik and Dams, *The Arctic Elephant*, p. 10, *supra* note 89.

112 Laruelle, *Russia's Arctic Policy*, p. 29 Available at: [https://www.ifri.org/sites/default/files/atoms/files/laruelle\\_russia\\_arctic\\_policy\\_2020.pdf](https://www.ifri.org/sites/default/files/atoms/files/laruelle_russia_arctic_policy_2020.pdf).

Poland and the Baltic States. In essence, geopolitisation turns Arctic security into a matter for all European countries– and even for the whole globe. Below, the three major multilateral organisations that are relevant to European security are assessed concerning their roles in Arctic security.

### 7.3.2.1 *The EU*

The EU is already active in the working groups of the Arctic Council, while it still has no formal observer status – an issue that is often overrated in political terms as the EU is present at all ministerial and ambassadorial meetings of the Arctic Council. As the EU has broad responsibilities, encompassing all sectors of national government, the EU-Russia dialogue could be suitable to engage with Moscow on issues of the interconnectedness between ecological, economic and political-military security. Clearly, formal EU meetings are limited to its members, which excludes important Arctic States. It will be essential for the EU to associate the non-EU Arctic countries (Canada, Iceland, Norway, the US) as well as post-Brexit UK to the maximum extent with its own policy development. However, the exclusion of five of the eight Arctic States from the EU-Russia dialogue itself would probably make this option a non-starter. As the former US President Trump regularly portrayed the EU in negative terms, this proposal seems to be even more unrealistic in political terms.<sup>113</sup> An alternative for increasing the EU's role would be to give the organisation a more prominent role in the Arctic Council. Even though states like Sweden and Finland favour a more prominent role for the EU in the Arctic, politically this seems to be unattainable; even granting the EU observer status within the Arctic Council has been out of reach.<sup>114</sup>

### 7.3.2.2 *NATO*

Given its origin and nature, NATO would be a suitable forum to discuss and coordinate security cooperation in the Arctic. Even though the Arctic has gained prominence on NATO's agenda, the organisation has not yet developed an Arctic strategy. This is unlikely to happen. NATO's primary interest is not the Arctic but unrestricted use of the North Atlantic sea lanes linking continental US to Europe. Furthermore, several Arctic States seem to object to NATO's involvement in Arctic security as it might have a counter-productive effect on engaging with Russia on these matters. So far, Denmark has been reluctant to do so.<sup>115</sup> Where Canada used to take a more reluctant stance as well, it

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113 Please see also the analysis of the EEAS on EU-Arctic Policy published in the beginning of March 2022, available at: [https://eeas.europa.eu/headquarters/headquarters-homepage\\_en/20956/EU%20Arctic%20policy](https://eeas.europa.eu/headquarters/headquarters-homepage_en/20956/EU%20Arctic%20policy).

114 Van Schaik and Dams, *The Arctic Elephant*, p.6, *supra* note 83.

115 Van der Togt, p. 3., *supra* note 90.

has recently shown a greater willingness to bring NATO into Arctic affairs as a response to a militarising Arctic region.<sup>116</sup> A complicating factor is also that not all Arctic states are represented in NATO, such as Sweden and Finland. The engagement of China is less likely in a NATO context. Concerns regarding increasing tensions with Russia could be addressed through shifting Arctic security from being discussed solely within NATO toward discussions in the NATO-Russia Council.<sup>117</sup> Perhaps, Finland and Sweden – both countries already cooperate closely with NATO – can be invited to NATO-Russia Council meetings on Arctic security. Nevertheless, any forum with the title ‘NATO’ is most likely to generate a negative response from Moscow. Another downside of the NATO context is the political-military focus without much connectivity to the ecological and economic actors.

### 7.3.2.3 Organization for Security and Cooperation in Europe (OSCE)

Another potential platform to initiate a debate on military-security issues in the Arctic is the OSCE. Its broad membership that includes all Arctic States on an equal basis makes this organisation a useful forum. In addition, the OSCE’s comprehensive security mandate makes it an appropriate platform where both soft and hard security issues can be discussed in a sub-regional context. Raising Arctic issues in the OSCE could be done in the Permanent Council, in the Forum for Security Co-operation or in informal frameworks as well as within the context of the Economic and Environmental Dimension – even better, in a combined mode to encompass the three major elements of Arctic security. For now, the Arctic States show little or no willingness to discuss Arctic security matters in the OSCE, which makes this option politically unfeasible.<sup>118</sup> Moreover, to discuss hard security issues through the OSCE would require that both the US and Russia should be convinced of the benefits of addressing the topic in a multilateral setting, instead of the adoption of a unilateral or bilateral approach or using a regional forum such as the Arctic Council.<sup>119</sup> Finally, given the deep divisions within the OSCE over political-security issues elsewhere in the OSCE area, some of its other participating States which have no essential interests in the Arctic could use the OSCE format to spoil discussions on that region.<sup>120</sup>

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116 Rob Huebert, ‘Canada and NATO in the Arctic: Responding to Russia?’, in: *Canada’s Arctic Agenda: Into the Vortex*, edited by John Higginbotham and Jennifer Spence, Waterloo, ON.: Centre for International Governance Innovation, 2019.

117 Van der Togt, p. 3., *supra* note 90.

118 *Ibid.*

119 *Ibid.*

120 OSCE Special Representative’s report on the Arctic of November 2021 can be found at: <https://www.oscepa.org/en/documents/special-representatives/arctic-issues/report-24/4283-report-of-the-special-representative-on-arctic-issues-for-the-19th-osce-pa-autumn-meeting-3-november-2021/file>.

However, the experience of the OSCE regarding risk reduction, incident prevention, confidence-building measures and promoting military transparency in other regions could be made use of in the Arctic, for example by using some of the tools contained in the Vienna Document.<sup>121</sup> The OSCE Parliamentary Assembly also pays increased attention to the Arctic, through the appointment of a Special Representative for Arctic Issues.<sup>122</sup> It could serve as a channel for parliamentary diplomacy, including on environmental security issues.<sup>123</sup>

### 7.3.3 An alternative Arctic security forum?

Theoretically, both of the existing Arctic forums and the three multilateral organisations could be suitable to address the political-military aspects of Arctic security, but in practice they are difficult to realise for political reasons. Subsequently, the question arises whether an alternative Arctic security forum should be created. An answer can only be given by considering the vital elements which establish the common denominator. Based on the analysis in this Chapter, these are:

- The involvement of all Arctic States;
- The willingness to invite other interested states to the table;
- In due course, broadening the scope and participation if a security forum would start to discuss preventive measures and arrangements for de-escalation in times of increasing tensions.

It seems that transforming the ASFR could result in a forum fulfilling these criteria – perhaps with a new name, underlining a broader mandate and a more inclusive composition. First, a high-level political-military attempt could be made to convince Moscow that it is better to take its seat in the ASFR than continuing its policy of absence. If Russia would persist in its attitude of non-participation, then another approach could be to consign the ASFR into history and to establish a new forum to replace it. The agenda could then immediately be broadened to encompass talks on military stability and conflict prevention measures in the Arctic region. Such a new format could be called the Arctic Security Cooperation Forum (ASCF). It should consist of the eight Arctic states plus the most interested other European countries (France, Germany, the Netherlands and the UK). The EU and NATO could be invited on a case-by-case basis. One could think of a second ring of associated countries, e.g. China and other interested European states such as Poland and the Baltic States. Officials

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121 Loïc Simonet and Veera Tuomala, 'How can the OSCE help to reduce the risk of hazardous military incidents?', *NATO Review*, 2 November 2016.

122 The appointment took place in 2017 [new one in 2021] – relevant information can be found at: <https://www.oscepa.org/en/activities/special-representatives/arctic-issues>.

123 *Ibid.*

of foreign and defence ministries, on a case-by-case basis reinforced by representatives from ministries dealing with economic and ecological issues, should be represented. The same cross-government composition should apply to the ministerial level. It should be noted, however, that the establishment of a new and broader Arctic security forum is currently met by scepticism on the part of various Arctic states.<sup>124</sup> Canada and Denmark prefer that the Arctic states should first discuss matters of a political-military nature themselves, before this is expanded to include others.<sup>125</sup> Finland is also not an advocate of a new forum, but prefers to hold a security meeting within the Arctic Council.<sup>126</sup> In turn, Norway claims that a new forum is superfluous, given that matters of security are already discussed in other forums, such as the Nordic Council and NATO.<sup>127</sup>

## 7.4 MEETING THE NEW SECURITY CHALLENGES

### 7.4.1 Mitigation and adaptation strategies

It is uncertain whether, how, how much, and how soon the process of climate change will alter security dynamics and security politics in the circumpolar Arctic.<sup>128</sup> What is clear, is that changes in the region's physical environment – the exact rate of which is still uncertain – are likely to present policy planners and political decision-makers with an array of challenges that will require extraordinary measures at the national as well as the regional and international levels.<sup>129</sup> Polar ice melting, sea level rise, permafrost thaw, and coastal erosion may force governments and international organisations to rethink traditional security concepts and develop appropriate strategies aimed at mitigation and adaptation.<sup>130</sup> The term “mitigation” here denotes any action taken to reduce or eliminate the causes of climate change, such as cuts in greenhouse gas

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124 Hong, N. (2021). “Chapter 16 Non-Arctic States’ Role in the High North: Participating in Arctic Governance through Cooperation”. In *Marine Biodiversity of Areas beyond National Jurisdiction*. Leiden, The Netherlands: Brill | Nijhoff. doi: [https://doi.org/10.1163/9789004422438\\_017](https://doi.org/10.1163/9789004422438_017).

125 *Ibid.*

126 Please see the press release by the Finish Government available at: <https://valtioneuvosto.fi/en/-/10616/report-discusses-finland-s-new-role-in-the-arctic>.

127 Please see the information available at: <https://www.norden.org/en/news/new-era-nordic-defence-every-nordic-country-member-nato>.

128 A.J.K. Bailes, *The Small Nations of the Wider Arctic Space: Security Challenges, Policy Options*, 6 *The Yearbook of Polar L.* 598 (2014).

129 R. Pincus, *Security in the Arctic: A Receding Wall*, in *Diplomacy on Ice: Energy and the Environment in the Arctic and Antarctic* 161 (R. Pincus, S. H. Ali eds., 2015).

130 O.S. Stokke, *International Environmental Governance and Arctic Security*, in *Geopolitics and Security in the Arctic: Regional Dynamics in a Global World* 121 (R. Tamnes K. Offerdal, eds., 2014).

emissions. The term “adaptation” refers to the ability of the international community to adjust to the consequences of climate change in order to moderate harm and/or take advantage of possible new opportunities. Most likely, we will see a combination of mitigation and adaptation strategies at various levels.<sup>131</sup>

In the Arctic, the indirect effects of climate change as a potential “multiplier” of existing or latent intra- and inter-State disputes may not be less severe than its direct effects on the Arctic environment. Seen from a security perspective, the two types of challenges are inherently different, and will require different countermeasures undertaken by different actors. Military planners are, for obvious reasons, most preoccupied with the second type of concerns. Environmental security challenges, in the Arctic or elsewhere, cannot be averted by the threat, display, or use of military force, and they are typically dealt with in different fora than State security challenges. At the same time, efforts to address the immediate causes of the problem (e.g., limiting greenhouse gas emissions) and to reduce the pace of anthropogenic change, may lower the risk of secondary effects. These include conflicts over access to increasingly scarce renewable and non-renewable natural resources and/or emerging marine transport routes.

The apparent interconnectedness between the direct and the indirect effects of climate change is neither fixed nor total. It is, at least in theory, fully possible to imagine climate change, even dramatic climate change, without political destabilisation and conflict. Central intervening variables in the relationship between climate change and conflict are the roles played by governments, political institutions, and regional and international organisations in managing the process of environmental change and containing potential intra- and inter-State tensions. Under some conditions, the adverse impacts of climate change may even lead to increased dialogue and cooperation between States that are facing the same or similar challenges and facilitate the settlement of long-standing disputes such as those in the circumpolar Arctic. Contributions towards this aim can be made at several levels.

At the national level, all States that surround the Arctic Ocean should work to secure their short-, medium- and long-term strategic and economic interests in the region. The region’s new role as a potential energy province and transport corridor raises the stakes for all parties involved. None of the Arctic States seems to be willing to offer substantial concessions to its neighbours in the name of regional stability,<sup>132</sup> which may increase the level of inter-State tension. On the other hand, all Arctic States recognise the crucial role of international law, including UNCLOS, in the settlement of current and future

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131 *Ibid.*

132 One of the first reactions on behalf of Russia as a response to the sanctions on behalf of the western nations due to the Crimea crisis was to freeze the Arctic Cooperation projects at any stage and at any international initiative.

inter-State disputes over access to maritime and shelf areas in the region.<sup>133</sup> Unlike other and more conflict-prone regions, the Arctic is a region of economically developed and politically stable countries, which have a long tradition of peaceful coexistence. Thus, even though the effects of climate change on ecosystems are likely to be more extensive in the Arctic than in many other places, the consequences for regional peace and stability may turn out to be less severe here than in many other parts of the world, such as sub-Saharan Africa.

At the regional level, institutionalised cooperation arrangements such as the Arctic Council and the Barents Euro-Arctic Council can play an important role in the maintenance of regional stability. These and other components of the multi-faceted system of Arctic governance do not have the authority to make formally binding decisions on legal or other matters. They are, however, important arenas for interaction and cooperation among Arctic States on issues of common concern. For instance, by initiating regionally-oriented academic studies such as the Arctic Climate Impact Assessment and the Arctic Marine Shipping Assessment, the Arctic Council has drawn the attention of its member States and the outside world to emerging security and other concerns in the region, and created common understandings of possible ways to combat them. Central in this regard is the Council's role as a "soft law" institution, as illustrated by the process leading up to the adoption of the updated Arctic Offshore Oil and Gas Guidelines in 2009.<sup>134</sup>

Finally, the issue of climate change, and its security implications for the Arctic region, should also be dealt with at the international level. The observed increases in air and water temperature in the Arctic and the melting of sea and glacial ice are not only regional, but also global security concerns. Processes taking place in the northern part of the globe are likely to affect the rest of the world in a number of ways, most notably through sea-level rise. The driving forces behind the process of global climate change will have to be addressed in a collective manner, and few organs are better equipped to coordinate the effort than the United Nations. In addition to coordinating global processes addressing the source of the problem, the UN system can assist the Arctic States in settling disputes. Most importantly, the Arctic States can draw on tools such as UNCLOS, and increasingly relevant UN organs, such as the CLCS and the IMO.<sup>135</sup>

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133 This issue has been exhaustively discussed in the first part of this thesis.

134 More about the agreements adopted by the Arctic Council can be found at Chapter 4 on Arctic Governance.

135 Further analysis on the role of the CLCS and the IMO has been made on the relevant Chapters of this Thesis.

#### 7.4.2 Implications for military planners<sup>136</sup>

The ongoing changes in the physical environment of the Arctic are likely to have a profound impact not only on national, regional, and international political agendas, but also on the future task portfolio of navies and coast guards, particularly those of the Arctic coastal States. The direct and indirect effects of climate change may lead to changes in the way military capabilities are used on land, in the air, and in space. On a general level, a number of “issue areas” have been identified that deserve the attention of military planners and political decision-makers in Arctic States, in the years and decades to come:

*Cold weather operations:* The ability to conduct military operations in harsh climatic conditions is like to remain important, not only to the Arctic rim States, but also non-Arctic States operating in mountainous and/or cold regions elsewhere in the world (e.g., Afghanistan). Such operations require special training and preparation, and place heavy demands on equipment and logistics. Given its northern location, and as host nation to NATO’s Center of Excellence for Cold Weather Operations (COE-CW), Norway has a high level of competence in this field. This competence should be maintained and further developed, to the benefit of allies and partner States doing winter training in Norway.<sup>137</sup>

*Arctic maritime domain awareness:* Within the Arctic maritime domain, it is important to raise awareness of the complex challenges that naval, coast guard, and commercial shipping organisations, as well as the petroleum and fishing industries, may face in the future. A central point is the need to further strengthen inter-service and inter-agency coordination and cooperation at the national level, to optimise information sharing and situational awareness within the Arctic maritime domain.<sup>138</sup>

*Ocean and air surveillance:* An increase in ship traffic and/or other commercial activities in parts of the Arctic, such as the Barents Sea, will require an improved ability to monitor what is going on the ocean surface at any given time (ship movements, pollution, sea ice, etc.), as well as in the airspace above it. This presupposes the integration of information from sources such as satellites, ship tracking systems (AIS), land-based radars, maritime patrol and

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136 B. Nichiporuk, *Alternative Futures and Army Force Planning*, Aroyo Center, available online at [http://www.rand.org/content/dam/rand/pubs/monographs/2005/RAND\\_MG219.pdf](http://www.rand.org/content/dam/rand/pubs/monographs/2005/RAND_MG219.pdf).

137 US Department on Defence, *Report to Congress on Arctic Operations and the Northwest Passage*, available at [http://www.defense.gov/pubs/pdfs/Tab\\_A\\_Arctic\\_Report\\_Public.pdf](http://www.defense.gov/pubs/pdfs/Tab_A_Arctic_Report_Public.pdf).

138 *Ibid.*; *Fleet Arctic Operational Game*, U.S. Naval War College Newport, Rhode Island, available at <https://www.usnwc.edu/getattachment/Research---Gaming/War-Gaming/Documents/Publications/Game-Reports/FAOG-Game-Report-Final.pdf>.

other fixed-wing aircraft, helicopters, coast guard and naval vessels, and so on. There is reason to believe that the space-based component of the surveillance system will become more sophisticated in the future, and provide better coverage. For instance, the launch of the “AISSat-1” – a nano satellite developed at FFI – may significantly improve the monitoring of maritime activities in the European Arctic. It is also important to facilitate the cross-border exchange of data at the regional level and the “Barents Watch” project in Northern Europe is an interesting pilot project in this respect.

*Enforcement of fishery regulations:* The management of the Arctic’s living marine resources and the prevention of illegal, unreported, and unregulated (IUU) fishing in the northern waters are likely to remain important tasks for the coast guards of Arctic coastal States. The northwards movement of fish stocks, due to rising waters temperatures, may create additional challenges as fish stocks move from one State’s EEZ to another. The management of joint fish stocks will require enhanced bilateral and multilateral cooperation and a credible presence by coast guard vessels on the major fishing grounds, which may also contribute to the prevention of inter-State fishery disputes.<sup>139</sup>

*Enforcement of marine transportation regulations:* The Arctic coastal States have a common interest in making sure that national and international regulations governing ship traffic in the Arctic are enforced and complied with. This is important to prevent ice-related or other accidents or oil spills in the Arctic Ocean and surrounds. The IMO and regional cooperation arrangements such as the Arctic Council will hopefully continue to play an important role in the drawing up of regulations and “soft law” guidelines for marine transportation and cruise traffic in the Arctic. Their efforts cannot be successful without an adequate enforcement presence at sea.<sup>140</sup>

*Search and rescue operations:* An increase in industrial activity, fisheries, and/or ship traffic in the Arctic could render current search and rescue (SAR) systems inadequate, particularly in maritime areas far from the shore. As noted in the 2008 Ilulissat declaration, there is a need to strengthen SAR capabilities and capacity in and around the Arctic Ocean as in large parts of the region, SAR resources are still scarce with limited reach. The number of passengers on cruise ships operating in the Arctic often exceeds the capacity of the available SAR response vessels and aircraft. The shortcomings in Arctic emergency response preparedness may be alleviated through a strengthening of national SAR assets, enhanced bilateral cooperation, and the adoption of an Arctic SAR Treaty under the auspices of the Arctic Council.

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139 Detailed discussion has been made in Chapter 3.

140 Please see Chapter 2 of this Thesis for further analysis on that respect.

*Tugboat capacity:* In regions of considerable or growing tanker traffic, such as the Norwegian West Coast, the availability of tugboats may be a source of particular concern. In the event of an engine failure or some other kind of emergency, particularly in rough weather and/or in waters close to the coastline, unsatisfactory availability of relevant rescue capabilities could result in a major environmental disaster. Some coast guard vessels may be used as tugboats, whereas others may not, depending on weather conditions and the size of the vessel in distress, while in some scenarios, specialised civilian tugboats are preferable. In any event, attention must be paid to tugboat availability and cooperation between all relevant agencies must be optimised.<sup>141</sup>

*Maritime security operations:* As the sea ice retreats and the Arctic region becomes more accessible than before, the “constabulary tasks” in waters adjacent to the Arctic Ocean may increase in scope and number. An increase in ship traffic and other forms of human activity in the region may lead to an increase in smuggling or illegal migration. Other and more serious forms of illegal activity, such as piracy and sea-based terrorism, seem less likely in the Arctic than in most other maritime areas, at least in the foreseeable future, due to the absence of land-based infrastructure.<sup>142</sup>

*Submarine and anti-submarine warfare operations:* Due to its geographical location, size, water depths, and ambient noise conditions, the Arctic Ocean is likely to remain a potentially important arena for strategic nuclear submarine operations. However, as large parts of the Arctic Ocean become open water, anti-submarine warfare operations may become more efficient, and submarines may become easier to track from the surface. Stealthy diesel-electric submarines will continue to have a role as surveillance assets and defensive weapons close to the shore.

*Communication systems:* Developments such as those described above may require a strengthening of C4ISR<sup>143</sup> interoperability. Given the anticipated complexity of future coast guard, naval, or joint operations in the Arctic, the interoperability of communication systems is likely to become an important issue. The need for interoperable communication systems is evident at inter-State level. This issue area includes not only technical solutions, but also user competence and language skills.

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141 A very important analysis on this respect can be found online at <http://www.fastcompany.com/1755444/watch-tugboat-drag-arctic-iceberg-parched-people-half-world-away-video>.

142 *Supra* note 134.

143 Command, Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance, for some further information on that technology please see : <https://www.lockheedmartin.com/en-us/capabilities/c4isr.html>.

*Bathymetric mapping:* Knowledge about underwater topography is essential for most, if not all, naval operations. Bathymetric charts may improve the safety of surface as well as sub-surface navigation, and help ASW forces to detect foreign submarines operating in both deep and shallow water. Not all Arctic waters are sufficiently charted, and additional surveying is needed in order to produce new and more detailed maps. This is especially true for areas that are ice-covered, where few bathymetric data are available.<sup>144</sup>

*Weather and ice forecasting:* The ability to predict meteorological, oceanographic, and sea ice conditions is an essential part of military exercises and operations in the Arctic. Meteorological and oceanographic data need to be tailored to the needs of the forces using them. The forecasts may vary in detail, duration, and geographical scope, depending on the location and operational needs of one's vessels and/or aircraft. Also, merchant ships operating in the Arctic will need high-quality weather and ice data.<sup>145</sup>

*Knowledge-building:* Military planners – and the institutions that employ them – should work towards a higher level of understanding of the various aspects of climate change, as well as its potential security implications in regions such as the Arctic. The changes in the physical environment of the region may, as noted above, have significant bearing on the region's future as an arena for naval and coast guard operations. It may also lead to changes in geopolitical dynamics and Arctic inter-State relations. Multidisciplinary research and interaction with non-military institutions at home and abroad can make military planners better equipped to meet the future challenges of climate change.<sup>146</sup>

## 7.5 PRELIMINARY CONCLUSIONS

This Chapter has elucidated various aspects of the process of climate change and its security implications in the northernmost part of the globe. The dramatic changes that are taking place in the circumpolar Arctic – ice melting, permafrost thaw, coastal erosion, sea level rise, etc. – are likely to have a major impact on the security situation of the countries that surround it, as well as the rest of the world, in the decades to come. The changes raise several new

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144 Jakobsson, M., Mayer, L.A., Bringsenparr, C. et al. The International Bathymetric Chart of the Arctic Ocean Version 4.0. *Sci Data* 7, 176 (2020). <https://doi.org/10.1038/s41597-020-0520-9>.

145 Jun Inoue, Review of forecast skills for weather and sea ice in supporting Arctic navigation, *Polar Science*, Volume 27, 2021,100523, ISSN 1873-9652, <https://doi.org/10.1016/j.polar.2020.100523>.

146 The abovementioned information has been extracted out of military books belonging in the Arctic States.

environmental security concerns, as well as concerns related to the dynamics of inter-State relations and the danger of a “remilitarisation” of the region. The direct and indirect impacts of climate change, and their consequences for political and military planning at various levels, are still not fully understood so further research is needed. The dialogue between natural scientists and social scientists on the topic of climate change is still fragmented, and few social scientists have begun to explore the vast amounts of data that natural scientists have provided in recent years. Similarly, natural scientists are not always aware of the facets of climate change that social (e.g., political) scientists are most interested in, such as the “peace and conflict” dimension.

In recent years, it has become fashionable, at least in the press, to talk about the Arctic in terms of potential conflicts. The region is often described as an arena where states are preparing for a future “resource race” and a new “great game”. However, the link between climate change and conflict is far from self-evident. There are many intervening variables such as the role of governments, regional and international institutions, and international law. Despite the number of unresolved issues pertaining to borders and jurisdiction in the northern waters, they are not necessarily more complex or numerous than those in maritime areas of comparable size elsewhere in the world. In addition, the Arctic is a generally peaceful region, surrounded by politically stable and economically developed countries which, despite their disagreements, have a long tradition of cooperation and peaceful coexistence at the regional level. This provides a basis for cautious optimism over the prospect of peaceful resolution of remaining issues. The settlement of legal disputes and establishment of “rules of the road” for shipping and offshore petroleum activities can assist in improving the prospects for a peaceful, stable, and prosperous Arctic.

The first invasion of Russia to Ukraine in 2014 and the illegal annexation of Crimea<sup>147</sup> has had a major impact on the Arctic Cooperation which has been immediately become a “non-issue” for any of the parties of the dispute.<sup>148</sup> Crimea was a turning point on that respect, since after 2014 almost every significant initiative was frozen and the issue of military security and the use of military forces to maintain stability and security in the region was prevailing contrary to what was happening the previous years where the

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147 William W. Burke-White (2014) Crimea and the International Legal Order, *Survival*, 56:4, 65-80, DOI: 10.1080/00396338.2014.941548.

148 A very important and interesting analysis on that respect has been made by the Brookings Institute and can be found available at: <https://www.brookings.edu/blog/order-from-chaos/2022/01/31/lessons-from-ukraine-for-the-arctic-russian-dialogue-isnt-always-what-it-seems/>.

vocabulary of collaboration and cooperation was the most relevant one with respect to the Arctic Issue.<sup>149</sup>

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149 Relevant literature on that respect includes among others the following papers: Pavel Baev, *Russia's Ambivalent Status-Quo/Revisionist Policies in the Arctic*, 2019, available at: <https://arcticreview.no/index.php/arctic/article/view/1336>; V. Konyshov and Sergunin. A, *The Changing Role of Military Power in the Arctic*, 2019, available at: [https://link.springer.com/chapter/10.1007/978-3-319-91995-9\\_11](https://link.springer.com/chapter/10.1007/978-3-319-91995-9_11); A.Sergunin, *Subnational Tier of Arctic Governance*, 2018, available at: [https://link.springer.com/chapter/10.1007/978-3-319-91995-9\\_16](https://link.springer.com/chapter/10.1007/978-3-319-91995-9_16).

## Conclusions

Change is occurring in the Arctic at an unprecedented pace. This dynamism is, first and foremost, a consequence of biophysical processes and the cluster of developments ordinarily categorised as ‘climate change’.<sup>1</sup> These developments are real, they are occurring now and are not just matters of speculation about the future. Not only have average temperatures increased by as much as 2°C in various parts of the Arctic, but sea ice is receding and thinning, the depth of the active layer of the permafrost is increasing, and Arctic glaciers are melting. These changes have direct impacts on the Arctic in diverse forms. These include: coastal erosion, expected to necessitate the relocation of whole communities; the disruption of infrastructure including roads, airports and pipelines; and a shortening of the season for activities like the use of ice roads. They also may have far-reaching impacts on the overall climate system of the Earth. Coupled with globalisation, these biophysical changes are generating a drastic rise in interest in economic opportunities that will open up in the Arctic during the next few decades.<sup>2</sup> These opportunities include the prospect of increased commercial shipping in the Arctic Basin, the expansion of offshore oil and gas production, the inception of new commercial fisheries, and the growth of ship-based tourism throughout the Arctic. Projections of future trends involving activities like oil and gas development and commercial fishing are notoriously difficult. Recoverable reserves of oil and gas located in the Arctic may prove to be limited, difficult to access, or otherwise costly to extract. Fishing on a commercial scale may turn out to be a non-starter in this setting. Such projections are also sensitive to conditions occurring in other parts of the world (for example, political conditions in the Middle East or in Europe) as well as to the effects of new technologies that may increase or decrease the

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- 1 E. Elverland, *The Arctic system: International Polar Year 2007/2008*, Tromsø, Norway: Norwegian Polar Institute (2009); M. Sommerkorn, S. J. Hassol (eds), *Arctic Climate Feedbacks: Global Implications* Oslo: World Wildlife Fund International Arctic Programme (2009).; *Climate change widespread, rapid, and intensifying*, IPCC, 9 August 2021, available at: <https://www.ipcc.ch/2021/08/09/ar6-wg1-20210809-pr/>; Sofie Bates, *NASA Fieldwork Studies Signs of Climate Change in Arctic, Boreal Regions*, 2 November 2022, available at: <https://climate.nasa.gov/news/3229/nasa-fieldwork-studies-signs-of-climate-change-in-arctic-boreal-regions/>
  - 2 *Background Papers* in R. A. Kraemer (Director), *Arctic TRANSFORM Project*, Berlin (2008); Á. Anderson, *After the Ice: Life, Death, and Geopolitics in the New Arctic*, Smithsonian Books/HarperCollins (2009).

importance of natural resources like fossil fuels. Still, it would be foolish to ignore the probable effects of rapid changes in the Arctic and, consequently, to fail to think about the governance needs that these changes will generate.<sup>3</sup>

Governance in this context can be defined as a manner of steering human-environment interactions toward socially desirable outcomes and away from undesirable outcomes. What, therefore, are the implications of these changes for governance? What started as a focus on the rush to extract the Arctic's resources leading to serious clashes among major players and even the emergence of a new 'great game' featuring competition for control of the Arctic<sup>4</sup> has now captured the attention of members of the policy community. The five Arctic coastal States, meeting in Greenland in May 2008, issued the Ilulissat Declaration asserting their dominance in the region "[b]y virtue of their sovereignty, sovereign rights and jurisdiction in large areas of the Arctic Ocean" and suggesting, rather pointedly, that other States should leave Arctic affairs in the hands of the coastal States.<sup>5</sup> Since then, both the United States and Russia have issued new Arctic policy statements emphasising the importance they attach to issues arising in the Arctic region.<sup>6</sup> The government of Canada has adopted a more assertive strategy regarding Canadian interests in the Arctic.<sup>7</sup> In September 2008, the Nordic Council of Ministers organised a conference, also in Greenland, entitled "Common Concern for the Arctic" that provided a forum for various non-Arctic States and non-State actors to articulate their concerns regarding developments in the Arctic.<sup>8</sup> The European Parliament adopted a resolution in October 2008 expressing concern about the impacts of climate change on the lives of indigenous peoples and the condition of Arctic ecosystems, and looking forward to negotiations designed

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3 C.K. Ebinger, E. Zambetakis, *The geopolitics of Arctic melt*, 85 *International Affairs* 1215 (2009); Arctic Governance Project, *Arctic Governance in an Era of Transformative Change: Critical Questions, Governance Principles, Ways Forward* (2010), available online at [www.articgovernance.org](http://www.articgovernance.org).

4 S.G. Borgerson, *Arctic Meltdown, The Economic and Security Implications of Global Warming*, 87(2) *Foreign Affairs* 63 (2008).

5 Ilulissat Declaration, adopted on 28 May 2008, available online at <http://www.um?NR/rdonlyres/BB00B50-D278-4459-A6BE-6AE230415546/0/ArcticOceanConference.pdf>.

6 U.S. Government, *Arctic Region Policy*, National Security Presidential Directive 66, 9 January 2009, available online at [www.whitehouse.gov](http://www.whitehouse.gov), accessed on 20 May 2016; Russian Federation Government, *Basics of the State Policy of the Russian Federation in the Arctic for the Period Till 2020 and for a Further Perspective*, Publication of the official governmental newspaper *Rossiyskaya Gazeta*, March 30, 2009.

7 Public Works and Government Services Canada, *Canada's Northern Strategy: Our North, Our Heritage, Our Future*, Ottawa (2009); M. Byers, *Who Owns the Arctic?: Understanding Sovereignty Disputes in the Arctic*, Douglas & McIntyre (2010).

8 Nordic Council of Ministers, *Common Concern for the Arctic*, September 9–10, 2008, available online at [www.norden.org/conference.arctic](http://www.norden.org/conference.arctic).

“to lead to the adoption of an international treaty for the protection of the Arctic”.<sup>9</sup>

In 2008, the European Commission weighed in with a paper setting out EU interests in the Arctic and laying the foundation for a European Arctic policy statement expected to come in the near future.<sup>10</sup> The European Commission has already opened a consultation on the future approach towards the Arctic.<sup>11</sup> A year later, the Council of the European Union pushed ahead with a statement entitled “Council Conclusions on Arctic Issues”.<sup>12</sup> Although they have adopted a low-key approach, the Chinese have also made their growing interest in the Arctic known.<sup>13</sup> China has stepped up its research efforts in the Arctic and joined the European Commission in “permanent observer” status in the Arctic Council.

## 1 EU ARCTIC POLICY

In May 2019, in Rovaniemi in the north of Finland, the US Secretary of State spoke aggressively against Chinese activities in the Arctic and deplored Russian attempts to seize greater control over Arctic maritime traffic.<sup>14</sup> The tone and timing of the speech raised many eyebrows in Arctic policy circles, which are used to a more cordial and cooperative regional tone and to the willingness of great powers to insulate Arctic matters from global tensions. In fact, Arctic cooperation was actually strengthened following the Crimean and East Ukrainian crises, and most recently, in 2021, through the adoption and the entry into force of a fisheries agreement for the Central Arctic Ocean.<sup>15</sup> How-

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9 European Parliament, Resolution of 9 October 2008 on Arctic Governance, available online at <http://www.europa.eu/sides/getDoc.do?pubRef=/EP/TEXT+TA-2008-0474+0+DOC+XML+VO//EN>.

10 European Commission, The European Union and the Arctic regions, November 20, 2008, available online at <http://eur-lex.europa.eu/LexUriSer//LexUriSer.do?uri=CELEC:DKEY=483680:EN:NOT>; L. Phillips, Commission backs Norway’s Arctic vision: no new treaty, Euroobserver, November 11, 2008, available online at <http://euroobserver.com/9/27104?print=1>.

11 See the relevant announcement at the website of the European Commission available at: [https://ec.europa.eu/commission/presscorner/detail/en/IP\\_20\\_1318](https://ec.europa.eu/commission/presscorner/detail/en/IP_20_1318)

12 Council of the European Union, Council Conclusions on Arctic Issues, in the Arctic Governance Compendium December 8, 2009, available online at [www.arcticgovernance.org](http://www.arcticgovernance.org).

13 L. Jakobson, China Prepares for an Ice-Free Arctic, 2 SIPRI Insights on Peace and Security (2010)

14 The analytical statement of Secretary Pompeo can be found here: <https://www.arctictoday.com/pompeo-russia-is-aggressive-in-arctic-chinas-work-there-also-needs-watching/>

15 International Agreement to Prevent Unregulated High Seas Fisheries in the Central Arctic Ocean, signed 3<sup>rd</sup> of October 2018, enters into force in 25<sup>th</sup> of June 2021 and can be available at: <https://faolex.fao.org/docs/pdf/mul199323.pdf>

ever, there were concerns US climate denialism may adversely impact the functioning of the Arctic Council.<sup>16</sup>

The perceived shift in Arctic geopolitics and economics led to calls for updating the EU's Arctic policy and adopting a true EU strategy for the Arctic. It is assumed that this means that the EU should identify its key interests, adopt a long-term perspective, pronounce clear goals and provide institutional and financial means for their achievement. Can the EU adopt a credible and effective Arctic strategy? What are the EU's strategic considerations for a region most European citizens only associate with polar bears?

In answering these questions, three aspects should be highlighted. First, the Arctic policy is a mixed bag of politics, economics, and environmental conservation, making policy prioritisation very challenging. Second, there are problems with most objectives the EU could adopt for its Arctic policy. Third, the Arctic is actually a marginal topic within the EU.

The EU Arctic policy domain encompasses many issues, sectors and stakeholders, some interlinked, some connected only via an 'Arctic' label, as it has already been discussed in this Thesis; of both an internal and external nature. The internal dimension refers primarily to the European Arctic, including topics such as sustainable economic development and investment, nature conservation or local climate adaptation. There are also pan-EU domestic actions that have indirect relevance to the Arctic, such as climate policy or the regulation of the EU's energy market. External actions comprise the EU's involvement in the work of the Arctic Council, its bilateral relations with Arctic states, and the Union's role in shaping international norms relevant for the Arctic. Devising an effective strategy bringing together these various elements is a structural challenge, with which all Arctic and non-Arctic States struggle, with varied degrees of success.

The broad scope of issues, often linked only with an 'Arctic' label, means that EU Arctic policymaking has often constituted an exercise in defining which existing EU policies and activities are most Arctic-relevant. The last reiteration of the EU's Arctic policy was the Joint Communication on an integrated European Union policy for the Arctic from April 2016 which was updated in 2021.<sup>17</sup> Policymakers attempted to limit this broad spectrum and focused around three key themes – climate change and environment, sustainable development and international cooperation. While the themes signified a step towards prioritisation, they remained – necessarily – broad. Considering that the EU's current Arctic policy has issues of an internal nature at its core,

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16 Dick Zandee Kimberley Kruijver, Adája Stoetman, *The future of the Arctic Security*, Clingendael Report, April 2020, available at: [https://www.clingendael.org/sites/default/files/2020-04/Report\\_The\\_Future\\_of\\_Arctic\\_Security\\_April\\_2020.pdf](https://www.clingendael.org/sites/default/files/2020-04/Report_The_Future_of_Arctic_Security_April_2020.pdf)

17 The joint communication is available at: [http://eeas.europa.eu/archives/docs/arctic\\_region/docs/160427\\_joint-communication-an-integrated-european-union-policy-for-the-arctic\\_en.pdf](http://eeas.europa.eu/archives/docs/arctic_region/docs/160427_joint-communication-an-integrated-european-union-policy-for-the-arctic_en.pdf)

particularly the sustainable development of the European Arctic, a future strategy would continue to combine various internal and external elements.

It is rather challenging to define clear, convincing and credible goals for the EU's future Arctic engagement. The EU's Arctic policy itself has no effect on some of the key issues it continuously stresses, like global climate change. In other areas, the EU either has little influence or its attempts to use its market power are met with anxiety in the region. Moreover, the Arctic policy may not be the best place to make concrete decisions on regional development projects and investments.

First, climate change mitigation – a central 'priority area' of the EU's Arctic policy – is a global issue, not an Arctic-specific one. It is almost absurd to imagine that a backwater policy such as an Arctic one would significantly influence the EU's overall climate action. Equally, it would be erroneous not to take into account the Arctic environment in any European climate policy. The EU's Arctic engagement should certainly continue to include Arctic climate research and local climate adaptation. But these pillars can only be seen as supportive for climate action, the influence of which shall be seen in practice on the global mitigation decisions.

Second, the EU's role in maintaining Arctic peace and cooperation is marginal. The Arctic region is populated by self-confident and powerful actors, such as Canada, Russia and the US. The 2016 Global Strategy sets a goal for the EU to contribute to an orderly and cooperative Arctic region. But the same Strategy admits that this contribution is to take place at the level of low politics, through the work on climate change, environmental research, sustainable development, and search and rescue issues. However, the Union has precious little to do in terms of influencing the relations between Arctic states or the regional actions of global powers such as China.

Third, as regards rule-based governance of Arctic resource extraction and navigation, an increased EU involvement usually triggers anger or anxiety among Arctic actors, also from close partners such as Iceland or Norway. A good point of reference is the 2009 ban on imports of seal products and the related possibility of using the EU's market leverage to influence activities in the Arctic.

Finally, more specific aims included in an Arctic strategy might enter the domain of sectoral policies, such as transport, environment or the digital market. Is an Arctic policy or strategy – an appropriate place to, for instance, reshape the Trans-European Network for Transport or make concrete investment decisions? Making any concrete decisions is also likely to trigger local tensions and value conflicts.

No decent strategy can be construed on the basis of inaccurate assumptions and false expectations. There is a good awareness of Arctic realities among the handful EU officials who are directly involved in Arctic affairs. Good information is available and the EU has in fact greatly contributed to production (via research funding) and aggregation (via various assessments and reports)

of knowledge about the region. However, the relative marginality of Arctic issues in Brussels means that this information is not necessarily absorbed by all relevant policymakers.

If the EU were to adopt a strategy, its objectives would need to be shared by all member States with the need for some coordination between their activities relevant to the Arctic. Could that be effective for a Union of 27 regarding a marginal policy area where the EU has relatively limited influence? No single narrative for a grand Arctic strategy exists within the EU. Climate change is not to be tackled in the Arctic, it is a global issue. Presidents Putin, Biden and Xi Jinping are not the Arctic destabilisers the media might portray them to be. Thus, what should the EU do?

The EU does indeed influence many Arctic developments, in particular in the European part of the region. It is definitely important that EU policymakers have an opportunity to reflect on this influence and communicate their aims to the EU public and to Arctic actors. There are synergies between different Arctic activities that should be identified and an EU Arctic policy creates possibilities for that to happen.

Changes in the Arctic so far are dramatic mainly in terms of climate change impacts on Arctic environment and livelihoods. EU policymakers should not fall for over-egged geopolitical or economic narratives. However, the region is clearly changing and thus the EU's Arctic policy is indeed in need of an update. Keeping to the current 'priority areas' and using Arctic policy as a vehicle for institutional reflection is a more realistic and likely course of action. An update of the EU's Arctic policy has to be based on realistic foresights and the acknowledgement of the actual role of the EU in the region and its capability to make a difference. A modest option for Arctic strategy-building could be to agree on a small set of clear sustainable development targets specific for the Arctic falling under the jurisdiction of the EU – rather than for the Arctic as a whole – and devise a strategy to implement those targets.

The long-term pursuit of far-reaching goals is impossible without resources and institutional continuity. The Arctic cross-sectoral policy has drawn on disconnected sectoral sources of funding and institutional human resources characterised by fragmentation and lack of continuity. Policymakers should attempt to address these deficiencies before making grand strategic declarations.

## 2 CHINA'S ARCTIC POLICY

The Arctic is emerging as a new domain for the strategic rivalry between the United States and China. As China expands its engagement in the Arctic, the implications of its presence and activities are an increasingly debated topic in the United States, among the Arctic states, and globally. China has claimed benevolent intentions in peace, development, and improving Arctic governance.

However, given the opaqueness of China's decision-making and capability development, many American policymakers and observers, if not most, remain skeptical or even hostile toward China's potential in the Arctic.

One concern about the Chinese threat in the Arctic is a manifestation of the rising strategic rivalry between the U.S. and China in the era of great power competition. US criticism of China's Arctic policy reached an unprecedented level in 2019. Both the US Department of Defense and Secretary of State publicly cast doubt on China's self-proclaimed status as a "near-Arctic state". Strategic thinkers in the U.S. worry that China's economic engagement in the region could be a precursor to much more invasive political and strategic ambitions. China's Arctic infrastructure development has the potential for dual-use facilities, paving the ground to Beijing's permanent security presence in the region. In their view, the Sino-Russia commercial cooperation in the Arctic is also creating potential opportunities for security collaboration in the context of their strategic alignment vis-à-vis the United States. In addition, many liken China's intentions in the Arctic to that in the South China Sea, which has resulted in the South China Sea being "fraught with militarization and competing territorial claims".<sup>18</sup>

China certainly has not helped its own case in the Arctic. Arctic policy-making in China is opaque at best, creating ambiguities in its priorities and ambitions. While Beijing publicly claims that its goals in the Arctic are about "knowledge, protection, development and governance" of the region, it has also declared China's "activities, assets and other interests" in the polar regions as intrinsic to China's national security.<sup>19</sup> China's record of incremental development of overseas power projection capability in the name of asset protections, attested by its naval base in Djibouti and dual-use facilities in the Indian Ocean, suggests a pattern repeatable in the Arctic. Observers only get a glimpse of China's capability when Beijing chooses to publicize information on topics such as the state of its nuclear-powered icebreakers, exacerbating anxieties about what other capabilities are under development.<sup>20</sup>

On a more strategic level, China's desire to expand outside its power-saturated neighborhood is understood as a rising hegemon's effort to export power and influence outside the overcrowded East Asia. Such efforts, as spearheaded by the Belt and Road Initiative, are integral to its bid for global hegemonic status. The Arctic may not be a power vacuum, but it represents a front where power export is still possible for China. For example, the infra-

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18 Elizabeth Buchanan and Bec Starting, WHY THE ARCTIC IS NOT THE 'NEXT' SOUTH CHINA SEA, 2020, available at: <https://warontherocks.com/2020/11/why-the-arctic-is-not-the-next-south-china-sea/>

19 Yun Sun, Defining the Chinese Threat in the Arctic, 2020, The Arctic Institute, available at: <https://www.thearcticinstitute.org/defining-the-chinese-threat-in-the-arctic/>

20 *Ibid.*

structure projects China has proposed in Russia and Iceland represent the Chinese effort to channel its financial wealth into footholds in the region.

Upon understanding the Chinese strategic thinking, the next step is to accurately define the Chinese threat in the Arctic specifically based on concrete evidence. Instead of speculating about China's potential, efforts should be focused on assessing probabilities and capabilities. We need to be vigilant about China's intentions and activities, but also vigorous in gauging the nature and depths of the threat it concretely poses.

Creating an accurate picture of China's threat in the Arctic is important for consensus building and alliance management with other Arctic states, such as the Scandinavian countries. Given their better negotiation positions vis-à-vis China compared to, for example, debt-ridden Africa countries, some may not feel as vulnerable or share the same threat perception about China with the US. Despite their unease with Sino-Russia cooperation in the High North on energy development in Siberia's Yamal Peninsula and the shipping lane through the Northern Sea Route, they may not be convinced of Beijing-Moscow military cooperation in the Arctic given the Russian territoriality about the region.

In addition, the clear definition of China's threat in the Arctic is also essential to the development of a counter strategy. Denying China access to the Arctic and preventing its activities there is not legal, sensible or feasible. It should be acknowledged that susceptibility to the Chinese presence in the Arctic does not equate to vulnerability to Chinese dominance. Some Arctic states might be susceptible to the appeal of Chinese investment or its scientific interest, but it does not mean that they will be compelled to embrace invasive Chinese activities. The question here is not whether China will try to expand activities in the Arctic, because it will. The question is how to develop sophisticated policies to identify and deny malign or ambiguous behaviors while managing and shaping other behaviors that are neutral or potentially constructive.

In this sense, the key to US policy toward China's Arctic influence and activities should begin with solid assessment of China's concrete capabilities instead of speculations about its intentions and potential. A preemptive or complete denial of China in the Arctic may be desirable but not feasible. Chinese economic activities in the Arctic have been welcomed by some Arctic States. The scope and depth of China's military ambitions need much more research and deliberation before consensus could be reached and common actions be developed.

## 3 POLICY DISCOURSES

Policy agendas are crowded with issues defined in concrete terms.<sup>21</sup> In the Arctic today, there are numerous significant issues, including: how to delineate jurisdictional boundaries on the seabed; the optimal format of a regulatory code to deal with enhanced commercial shipping; how to anticipate pressures to initiate industrial fishing in the far North; how to prepare for the possibility of oil spills under Arctic conditions; what rules to impose on tour operators, to name a few. All of these issues are likely to give rise to vigorous debates that result in decisions that may have significant impacts on human activities in the Circumpolar North. Underlying such debates are deeper and broader issues regarding the conceptual frameworks employed to organise thinking about specific policy issues and the discourses we develop to bring these frameworks to bear in specific situations. Although they do not prescribe detailed answers to specific policy questions, the influence of such discourses is enormous. They shape the way we formulate questions, and they can direct our thinking in ways that favour some answers and rule out others.<sup>22</sup> The current state of change in the Arctic raises fundamental issues about the character and content of the policy discourse used to come to terms with Arctic affairs. Two discourses, in particular, are in competition at this stage: the discourse of geopolitics/political realism and of ecosystem-based management or EBM.

Already quite a while ago, it has been suggested that the Arctic is being overtaken by the discourse of geopolitics/political realism.<sup>23</sup> Many pundits anticipate an era of “high politics” marked by aggressive assertion of jurisdictional claims, a growing competition for control over the Arctic’s natural resources, a remilitarisation of the region, and more or less frequent clashes among leading States active in the Arctic.<sup>24</sup> This discourse, which assumes that States are the major players and that relative power among the key States or coalitions of States is the critical determinant of outcomes, anticipates the emergence of a new ‘great game’ in the Arctic. As a region that is sparsely inhabited, but that appears to contain a treasure trove of natural resources, including large quantities of oil and natural gas, the Arctic will become an irresistible target of opportunity for powerful States as well as leading corporations engaged in the exploitation of natural resources. The Arctic will, accordingly, be of interest to influential non-Arctic States, such as China, or associations of States, such as the EU. As we move into a world in which the United States is no longer the world’s sole superpower, it will become harder and

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21 J.W. Kingdon, *Agendas, Alternatives, and Public Policies*, Pearson (2<sup>nd</sup> ed., 2014)

22 K.T. Litfin, *Ozone Discourses: Science and Politics in Global Environmental Cooperation*, Columbia University Press (1995)

23 K.N. Waltz, *Theory of International Politics*, Addison-Wesley (1979)

24 S.G. Borgerson (2008), *supra*.

harder to exclude actors like China, Japan, and the EU when negotiating deals on Arctic issues. The Arctic will become a theatre of operations for extractive industries and military forces, a fact that makes the prospect of an “Arctic meltdown”, giving rise to armed clashes, a real and present danger.<sup>25</sup>

The alternative policy discourse, based on the concepts of EBM and spatial planning, starts from the premise that the Arctic is a complex and dynamic socio-ecological system. Such systems are prone to the impacts of tipping points, non-linear changes, and system flips that can lead to State changes that are undesirable in anthropogenic terms and that are hard to reverse once they occur.<sup>26</sup> On this account, we should focus on large socio-ecological systems (for example, large marine ecosystems), avoid the fragmentation resulting from battles over jurisdictional issues, and devise co-operative regimes that make it possible to address interrelated Arctic issues in an integrated manner. There may be scope for the development of sectoral arrangements (for example, distinct regimes for oil and gas development, fishing, shipping) within this framework. But the key to sustainability lies in accounting for the complex linkages arising from interactions between human activities and biophysical forces.<sup>27</sup> A matter of particular importance arising from the application of this discourse to the Arctic centres on the connections between the Arctic and the Earth system as a whole. Nowhere is this more apparent than in climate change. The Arctic is already experiencing far-reaching impacts of climate change, and the region may shift from sink to source with regard to greenhouse gas emissions during the foreseeable future. But other regional/global links are important as well. For example, POPs, which are released in the mid-latitudes, regularly materialise at high levels in the Arctic. The global interest in the Arctic’s oil and gas reserves is fuelled by the needs of industrial societies far removed from the region rather than by demand for energy arising in the Arctic itself.

Yet, this comparative freedom comes at a political price as it raises serious questions about the future of the Arctic Council’s influence in the wake of the new State change. This change is strengthening the connection between the Arctic and global concerns. This may exert pressures that increase incentives to look at Arctic issues through the lens of the geopolitics/political realism discourse.<sup>28</sup> Under its current mandate, the Arctic Council is expressly

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25 *Ibid.*

26 L.H. Gunderson, C.S. Holling (eds.), *Panarchy: Understanding transformations in human and natural systems*, Island Press (2002).

27 R.G. Rayfuse, *Melting Moments: The Future of Polar Oceans Governance in a Warming World*, 16 *RECEIL* 196 (2007).

28 T. Koivurova, *Alternatives for an Arctic Treaty – Evaluation and a new proposal*, 17 *Review of European Community and Int’l Environmental Law* 1 (2008).

prohibited from addressing conventional security issues.<sup>29</sup> It lacks authority that would induce important stakeholders to pay attention to its views regarding regulatory issues associated with the opening of the Arctic to oil and gas development, industrial fishing, or commercial navigation. The fact that the Arctic coastal States have elected to bypass the Council in addressing the delineation of seabed jurisdiction is not a good sign. Powerful outsiders, like China and the EU, are not likely to be content to follow the lead of the Council in addressing Arctic issues, even though they profess to be motivated by a concern for matters of environmental protection and the rights of indigenous peoples. It is possible that the discourses of geopolitics/political realism and EBM will exert influence simultaneously in the handling of Arctic issues in the near future. The two discourses are incompatible with one another in their application to policy issues in the Arctic. The discourse of EBM seeks to transcend jurisdictional boundaries, approach socio-ecological systems in holistic terms, and provide a rationale for collaborative management practices. Whereas the discourse of geopolitics/political realism focuses on matters of control or influence and anticipates more or less severe conflicts between or among those seeking to exploit specific natural resources like oil and natural gas. Nonetheless, there is nothing new about the occurrence of cognitive dissonance in the world of public policy. It is possible that neither of these discourses will triumph over the other in the near future. Many debates about policy issues in the Arctic are likely to take the form of arguments between those who see the issues through either of these two disparate discourses.

#### 4 A REGIME FOR THE ARCTIC OCEAN

What does this analysis tell us about the desirability of establishing a “regional agreement on management and conservation of the Arctic marine environment”,<sup>30</sup> “a comprehensive treaty regime for the Arctic Ocean beyond national jurisdiction”,<sup>31</sup> or a legally binding instrument for the “governance and regulation of the marine Arctic”?<sup>32</sup> Given the dramatic biophysical changes arising from the melting of sea ice in the Arctic and the prospect that this process may trigger a rapid expansion of economic activities in the region, it is hardly surprising that those concerned with environmental protection and sustainable development see a need for the creation of new governance arrangements

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29 A footnote to the main text of the 1996 Ottawa Declaration on the Establishment of the Arctic Council states that “The Arctic Council should not deal with matters related to military security.”

30 R. Huebert, B. B. Yeager, *A New Sea: The Need for a Regional Agreement on Management of the Arctic Marine Environment*, WWF International Arctic Programme (2008).

31 R.G. Rayfuse (2007), *supra*.

32 T. Koivurova, E.J. Molenaar, *International Governance and Regulation of the Marine Arctic: A Proposal for a Legally Binding Instrument*, WWF International Arctic Programme (2010).

focused on the marine systems of the Arctic.<sup>33</sup> But is a treaty or some other legally binding arrangement focused on the Arctic Ocean the way forward in this connection? There are several reasons to conclude that such a strategy may be neither necessary nor desirable as a means for providing the protection the Arctic Ocean will need in the coming years. The Arctic Ocean is fully covered by UNCLOS which “provides for important rights and obligations concerning the delineation of the outer limits of the continental shelf, the protection of the marine environment, including ice-covered areas, freedom of navigation, marine scientific research, and other uses of the sea”.<sup>34</sup> Canada, Denmark/Greenland, Norway, and Russia have all ratified UNCLOS. The United States accepts most of its provisions as a matter of customary international law or practice. The Arctic coastal States have made a point of asserting that they “remain committed to this legal framework and to the orderly settlement of any overlapping claims”.<sup>35</sup> There is a need for specific regulatory arrangements tailored to emerging uses of the sea and its resources in the Arctic. That said, there is nothing to be gained by establishing an entirely new constitutive framework for the Arctic Ocean, given the status of UNCLOS as an overarching legal regime.<sup>36</sup>

A new regime focusing on the Arctic Ocean would not be effective in addressing some of the fundamental challenges to the integrity of the marine environment in this region. The land/ocean boundary is artificial in the Arctic. Coastal adaptations by human communities, featuring shore-based harvesting of marine mammals, have been a critical part of the system for millennia.<sup>37</sup> Discharges from a number of large rivers (for example, the Mackenzie, the Ob, the Yenesej, and the Lena) ensure that the ocean will feel the effects of activities occurring hundreds of kilometres from the coast. Any regime for the Arctic Ocean that fails to take these considerations into account is likely to fail. A more inclusive regime would need to cover the whole of the Circumpolar Arctic, a fact that makes it inappropriate to think of a regime for the Arctic Ocean that differs in some way from a comprehensive regime for the whole of the Arctic. An effective initiative would also need to pay attention to the importance of spatial/functional crosscuts. Most species of great whales and many species of birds are highly migratory, spending a portion of each year in the Arctic, but also travelling far south in the course

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33 R. Huebert, *The Need for an Arctic Treaty: Growing from the United Nations Convention on the Law of the Sea*, 23 (1) *Oceans Yearbook* 27 (2009).

34 *Ilulissat Declaration* 2008.

35 *Ibid.*

36 H. Corell, *The North is not the Wild West*, *The Globe and Mail*, April 28 (2008), available online at: <https://www.havc.se/res/SelectedMaterial/20190115bibliographyhanscorell1.pdf>; Ç. Corell, *The Arctic: An Opportunity to Cooperate and to Demonstrate Statesmanship*, 42 *Vanderbilt Journal of Transnat'l L.* 1065 (2009).

37 I. Krupnik, *Arctic Adaptations: Native Whalers and Reindeer Herders of Northern Eurasia*, University Press of New England (1993).

of their annual migratory cycles. They are covered by functional regimes, such as the arrangements established under the terms of the 1946 International Convention for the Regulation of Whaling and a sizable number of migratory bird treaties to which various combinations of Arctic States are parties. At a minimum, therefore, efforts to create an effective governance system for the Arctic Ocean would have to address the interplay between a spatially defined regime for this area and a variety of functionally defined regimes whose operation affects the area.<sup>38</sup> There is no reason to be pessimistic about the prospects for handling these issues of coordination in an effective way. But this matter must loom large in the thinking of those desiring to take steps to protect the Arctic Ocean in anticipation of new human activities stimulated by the melting of sea ice.

## 5 THE GOALS OF A NEW GOVERNANCE FRAMEWORK

Some of the most serious threats to the integrity of marine systems in the Arctic originate far outside the region so they would not be subject to control under the terms of a regime for the Arctic Ocean. These include emissions of POPs, ozone-depleting substances, and greenhouse gases. Efforts are underway on a global scale to address these problems and some have borne considerable fruit (e.g., the negotiation of the 2001 Stockholm Convention on POPs and the various amendments to the 1987 Montreal Protocol on ozone-depleting substances). In some areas (e.g., POPs), evidence regarding environmental impacts occurring in the Arctic has made a difference in key negotiations.<sup>39</sup> Nevertheless, it would be naïve to think that we can take effective steps to protect the marine systems of the Arctic without addressing global concerns that have far-reaching implications for the Arctic Ocean. Does this mean there is no need for specific agreements dealing with human activities affecting the Arctic Ocean? All efforts should be nested into the overarching framework provided by UNCLOS and the global arrangements dealing with issues like POPs, ozone-

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38 For a more general treatment of institutional interplay, see O.R. Young, L.A. King, H. Schroeder (eds.), *Institutions and Environmental Change: Principal findings, applications, and research frontiers*, MIT Press (2008).

39 Leonard, David Downie and Terry Fenge (eds), 2003, *Northern Lights against POPs, Combatting Toxic Threats in the Arctic*, Montreal and Kingston, Published for the Inuit Circumpolar Conference Canada by McGill-Queen's University Press, 354 pages, illustrations, maps, tables, figures, appendices., available at: [https://doi.org/10.1038/s43017-022-00279-8](https://www.researchgate.net/publication/272721583_Leonard_David_Downie_and_Terry_Fenge_eds_2003_Northern_Lights_against_POPs_Combatting_Toxic_Threats_in_the_Arctic_Montreal_and_Kingston_Published_for_the_Inuit_Circumpolar_Conference_Canada_by_McGill-; Bergmann, M., Collard, F., Fabres, J. et al. Plastic pollution in the Arctic. <i>Nat Rev Earth Environ</i> 3, 323–337 (2022). <a href=).

depleting substances, and greenhouse gases.<sup>40</sup> It may be timely to promulgate mandatory rules regarding commercial shipping in the Arctic, to extend the coverage of existing RFMOs, like the North East Atlantic Fisheries Commission, to encompass (a larger sector of) Arctic waters, and to create an association of Arctic tour operators somewhat similar to the International Association of Antarctic Tour Operators (IAATO). Current efforts under the auspices of the Arctic Council to develop co-operative practices dealing with SAR and under the auspices of the IMO to upgrade existing guidelines for shipping under Arctic conditions into a mandatory Polar Code are notable in this connection. The goal will be to develop effective regulatory arrangements covering specific activities that do not fall prey to the problem of sectoral fragmentation.<sup>41</sup> Perhaps the adoption of a sophisticated strategy, under which an Arctic Ocean coordinating body capable of issuing legally binding rules could be established, would be preferable. This could be created alongside regulatory arrangements designed to deal with functionally specific activities, such as commercial shipping or tourism.

The Arctic Council deserves considerable credit for documenting and drawing attention to a number of threats to the integrity of Arctic marine systems, such as the instrumental role it played in building the case for regulating POPs under the terms of the Stockholm Convention. Evidence regarding the effects of climate change in the Circumpolar Arctic, compiled under the auspices of the Arctic Council, was important in negotiations aimed at extending and strengthening the Kyoto Protocol beyond 2012, and fulfilling the mandate of the 2007 Bali Road Map to reach agreement on a more comprehensive and legally binding climate regime, which has been concluded with the Paris Agreement in 2015. The Council may well continue to play a generative role of this sort. The on-going efforts of the Council's Task force on Short-lived Climate Forcers are interesting. But it is highly unlikely that the Council will evolve from its current function as a "high-level forum" for the consideration of Arctic issues into a regulatory body with the authority to make and implement rules regarding the protection of the Arctic Ocean. This is not to belittle the work of the Council, but it does have important implications for the landscape of Arctic governance in the foreseeable future.

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40 O.R. Young, *Institutional Linkages in International Society: Polar Perspectives*, 2 *Global Governance* 1 (1996).

41 L.B. Crowder *et al.*, *Resolving Mismatches in U.S. Ocean Governance*, 313 *Science* 617 (2006); Interagency Ocean Policy Task Force, *Interim Framework for Effective Coastal and Marine Spatial Planning*, December 9, 2009, available online at <http://www.whitehouse.gov/administration/eop/ceq/initiatives/oceans/interim-framework>.

## 6 A COMPREHENSIVE ARCTIC TREATY

An alternative approach features the development of a more comprehensive and legally binding Arctic Treaty (some Europeans prefer to speak of an Arctic Charter).<sup>42</sup> For example, in its 2008 Resolution on Arctic governance, the European Parliament suggested that:

“... the [European] Commission should be prepared to pursue the opening of international negotiations designed to lead to the adoption of an international treaty for the protection of the Arctic, having as its inspiration the Antarctic Treaty, as supplemented by the [Environmental] Protocol signed in 1991”.<sup>43</sup>

A number of commentators and legal scholars have proposed similar initiatives. Although they vary in significant ways, all these proposals are alike in advocating a regime for the Arctic that is comprehensive, articulated in a legally binding convention or treaty, and open to participation on the part of legitimate stakeholders located beyond the confines of the Arctic per se.

Any effort to create an Arctic Treaty would be politically charged, to say the least. As the Ilulissat Declaration states explicitly, the Arctic Five “... see no need to develop a new comprehensive international legal regime” to govern the Arctic Ocean, much less the Circumpolar Arctic as a whole.<sup>44</sup> And there is no reason to believe that the Arctic Eight would be any more receptive to a comprehensive agreement along these lines, despite the fact that three members of the Arctic Council (Denmark, Finland, and Sweden) are full members of the EU and two others (Iceland and Norway) maintain close ties to the EU.<sup>45</sup> It is doubtful whether a comprehensive legally binding Arctic Treaty would be desirable, even if it were feasible politically to reach agreement on the terms of such an instrument. Legally binding treaties have a number of limitations as mechanisms for providing effective governance for complex and dynamic systems that are apt to experience non-linear and abrupt changes that have important implications for efforts to meet needs for governance. Legally binding agreements are attractive as they generate a greater normative pull than informal non-binding arrangements affecting the actions of those expected to comply with their provisions. This is not a trivial virtue. The problem of compliance is arguably the single greatest challenge facing

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42 L. Nowlan, Arctic Legal Regime for Environmental Protection, IUCN Environmental Policy and Law, Paper No. 44 (2001 T. Koivurova, Alternatives for an Arctic Treaty – Evaluation and a new proposal, 17 Review of European Community and Int'l Environmental Law 14 (2008).

43 European Parliament, Resolution of 9 October 2008 on Arctic Governance, *supra*.

44 Ilulissat Declaration 2008, *supra*.

45 There are ongoing discussions regarding the possibility of full EU membership for Iceland. But the outcome is difficult to predict at this juncture.

international law.<sup>46</sup> Yet legally binding agreements typically: (i) require protracted negotiations to reach agreement on their substantive provisions, coupled with time-consuming procedures to meet the requirements for entry into force; (ii) avoid issues expected to prove contentious in the interests of building consensus; (iii) are difficult to adapt to changing circumstances in a timely manner; and (iv) do not accord roles to non-State actors that are commensurate with their importance in the relevant system.<sup>47</sup> A brief explanation of these limitations as they pertain to the Arctic will illustrate these concerns. Negotiations regarding the terms of legally binding agreements sometimes move forward relatively rapidly. The Montreal Protocol to the 1985 framework convention on stratospheric ozone came two years after the original agreement. The Environmental Protocol to the Antarctic Treaty came less than three years after the collapse of the 1988 Convention on the Regulation of Antarctic Mineral Resource Activities. However, more typical are conventions that take four years or more to negotiate and additional years to enter into force. The terms of UNCLOS, which is admittedly an extreme case, took almost 10 years to negotiate and entered into force approximately 20 years after the start of negotiations. There is no basis for assuming that a comprehensive and legally binding treaty for the Arctic could be negotiated quickly and put on a fast track to enter into force on a timetable commensurate with the need to address problems like those associated with the melting of sea ice.

One common manoeuvre designed to speed up the process of treaty-making is to limit the substantive content of such agreements. The Paris Agreement imposed targets regarding reductions of greenhouse gas emissions. It does not include substantive and credible measures of the sort that would be needed to countries into the effort to limit emissions. The Stockholm Convention directs attention to chemicals (the so-called “dirty dozen”) that most signatories had already banned prior to signing the agreement. Even non-binding agreements can lose content as a consequence of efforts to achieve consensus. The text of the 1996 Ottawa Declaration establishing the Arctic Council, for instance, contains considerably less content than earlier drafts of the document. Other members of the Arctic Eight acquiesced in this move as a concession needed to keep the United States engaged in Arctic co-operation. The likelihood that the United States would be prepared to sign and ratify a comprehensive Arctic treaty with real substance, even under the Biden leadership, remains low. Even more important with regard to the Arctic is the fact that legally binding agreements are hard to adapt to changing circumstances, especially once they have entered into force. Most treaties contain provisions for introducing

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46 A. Chayes, A. Handler Chayes, *The New Sovereignty: Compliance with International Regulatory Agreements*, Harvard University Press (1995).

47 C. Lipson, *Why Are Some International Agreements Informal*, 45 *Int'l Organization* 495 (1991); K.W. Abbott, Kenneth, D. Snidal, *Hard and Soft Law in International Governance*, 54 *Int'l Organization* 421 (2000).

adjustments. The 1959 Antarctic Treaty even authorises the convening of a review conference at any time following 30 years after its entry into force,<sup>48</sup> but these provisions are seldom exercised, and adjustments to existing agreements are notoriously difficult to agree on and to implement. The case of the Montreal Protocol, which allows for the acceleration of phase-out schedules without ratification on the part of the signatories, is a prominent exception. Almost certainly, a comprehensive Arctic Treaty would have more in common with the Antarctic Treaty than with the Montreal Protocol with regard to adjustability. This means that reliance on a legally binding treaty for the Arctic would run the risk of setting up a serious mismatch between the pace of change in major biophysical and socio-economic systems in the region and the ability of the associated governance system to evolve and adjust to keep up with these dynamic processes.

Equally troubling in the case of the Arctic is the fact that a legally binding Arctic Treaty would reinforce the capacity of States to control governance in the Circumpolar North. This is problematic in an era marked by the growing importance of global civil society as such a development seems particularly ill suited to Arctic governance during the foreseeable future.<sup>49</sup> Sub-national units of government (e.g., counties, States, provinces, oblasts, okrugs), the business sector, indigenous organisations, and environmental NGOs all have strong and legitimate interests that differ – sometimes substantially – from the interests of national governments in this realm.<sup>50</sup> The current mosaic of governance arrangements in the Arctic provides opportunities for a variety of non-State actors to exercise real influence over specific issues arising in the region. As both the content of the Ilulissat Declaration and the fact that the governments of the coastal States deliberately avoided engaging with non-State actors, including indigenous organisations, in crafting the text of the Declaration suggest, there is reason to believe that national governments are well aware of the goal of maintaining their control over Arctic affairs. This effort is likely to fail in the long run.

The growing influence of non-State actors (including business corporations and civil society movements) worldwide has advanced too far to allow for traditional diplomatic practices to assume and maintain supremacy over issues

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48 Antarctic Treaty, (adopted 1 December 1959, entered into force 23 June 1961) 402 UNTS 71, Art. XII.2 states that any Contracting Party may call for a review conference “after the expiration of thirty years from the date of entry into force of the present Treaty.” Once that happens, a “Conference of all the Contracting Parties shall be held as soon as practicable to review the operation of the Treaty.”

49 M. Kaldor, *The Idea of Global Civil Society*, 70 *Int'l Affairs* 583 (2003); P.H. Pattberg, *Private Institutions and Global Governance. The New Politics of Environmental Sustainability*, Cheltenham (2007); Anderson (2009), *supra*.

50 O.R. Young, *Can the Arctic Council and the Northern Forum Find Common Ground?*, 38 *Polar Record* 289 (2002).

like those arising in the Arctic today.<sup>51</sup> The negotiation of a traditional legally binding treaty for the Arctic would not be a progressive development in this context. A rejection of the rationale for establishing a comprehensive legally binding treaty for the Arctic should not be read as a denial of the need for regulatory arrangements to govern human activities in the region. It would be unrealistic to expect the Arctic Council to metamorphose into a body with the authority, much less the capacity, to handle regulatory matters in the far North. Under the circumstances, it is appropriate to pursue specific regulatory concerns through existing arrangements authorised to deal with the relevant issues. It makes sense, for instance, to negotiate on the terms of a mandatory Polar Code for Arctic shipping within the setting of the IMO; to rely on the North East Atlantic Fisheries Commission to cover industrial fishing throughout the Greenland and Norwegian Seas; to address issues pertaining to contaminants under the auspices of the Stockholm Convention on POPs; and to make use of the forum provided by the Convention on Biological Diversity to work on matters pertaining to the protection of species and the rights of indigenous peoples in the Arctic.<sup>52</sup> In some ways, the outcomes of this approach are bound to be messy. Progress is likely to occur at different rates and in different fora regarding different issues. But, a messy process that yields effective governance with respect to important issues and that evolves over time into a governance complex seems preferable to a more comprehensive and orderly process that is unsuccessful.

## 7 MOVING FORWARD

I have dashed cold water on some of the popular proposals of the day regarding Arctic governance. An Arctic Ocean treaty would not solve the problem of safeguarding the marine systems of the far North, even if it were at all politically feasible to reach consensus on the terms of such an agreement. As a result, the prospects for negotiating a comprehensive and legally binding treaty for the Arctic as a whole seem also dim. Such an instrument almost certainly would be disappointing in terms of substantive content, and could end up doing more harm than good. How should we respond to growing needs for governance in the Arctic during the foreseeable future? Individual observers can and will answer this question in their own ways. In light of the arguments I have presented in the body of this thesis, I would like to offer the following package of recommendations aimed at producing a governance complex or a set of distinct but interlocking institutional arrangements for the Arctic. The international community should strive to frame issues of govern-

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51 S. Sassen, *Territory, Authority, Rights: From Medieval to Global Assemblages*, Princeton University Press (2006).

52 1992 Convention on Biological Diversity, 1760 UNTS 79, 31 ILM 818 (1992).

ance in the Arctic in terms of the discourse of EBM and spatial planning and to grant all legitimate stakeholders, including a number of non-State actors, a seat at the table in addressing these issues. Furthermore, the Arctic State and its observer States should make every effort to maintain and even enhance the effectiveness of the Arctic Council, while not expecting the Council to turn into an organisation with the capacity to make regulatory decisions on a variety of subjects, much less to implement and enforce them effectively. The Council has performed particularly well in the development of scientific assessments, a capacity that may prove helpful in applying the precepts of EBM in Arctic conditions. With regard to issue-specific regulatory matters, such as the development of a mandatory Polar Code, the framing of regulations pertaining to Arctic tourism, or the establishment of rules governing industrial fishing in Arctic waters, the international community should proceed in a pragmatic fashion, using appropriate and effective forums for handling key issues as they arise. This could entail, for example, turning to the IMO to improve its mandatory Polar Code for Arctic shipping. This package of recommendations is likely to disappoint those who are wedded to the idea of a legally binding treaty focused on the Arctic Ocean or even a comprehensive Arctic Treaty or Charter. The resulting governance system would be messier than a comprehensive and integrated regime set forth in the provisions of a single treaty. Its virtue, on the other hand, would be a greater opportunity to provide the Circumpolar Arctic with effective governance.



# Summary

## 1 AIM OF THE THESIS AND RESEARCH QUESTIONS

This Thesis provides a comprehensive scholarly analysis of contemporary international law, geopolitics and international security in the Arctic. It also traces historical lines, helping to make sense of where we stand today. Many recent publications hasten to conclude that the Arctic is experiencing a rush for resources and increased geopolitical rivalry. The key aim of this Thesis is to identify the application and implementation of contemporary international law and its role in shaping the conditions for cooperation, stability and peace in the Arctic.

The Thesis aims to answer the following research questions:

- *how does contemporary international law respond to the massive changes that are underway in the Arctic?*
- *Is the existing legal framework effective and efficient in its response to the current complex and multilevel problems of the Arctic area?*
- *What is the geopolitical significance of the Arctic, regionally and globally?*
- *Which are the key stakeholders and how can their interests and policies impact on the development and implementation of international law?*
- *Is the Arctic Council as the primary forum for regional co-operation in the Arctic up to its task?*
- *What are the main characteristics of governance in the Arctic, and how can institutions and regimes promote stability and security in the region?*
- *What are the security challenges in the region?*

The abovementioned questions constitute the basis of the analysis throughout the whole text of the Thesis and are answered in the concluding Chapter.

## 2 THE LEGAL FRAMEWORK

The Arctic does not have a legal system of its own, as the region does not enjoy any unique recognized legal status. Instead, it is a geographic space within and beyond the jurisdiction of several circumpolar countries, generally referred to as the Arctic states. Of the Arctic states, five are considered Arctic coastal (or littoral) states because they share maritime areas in the Arctic Ocean. These

are Canada, Denmark (through Greenland), Norway, Russia, and the United States. The other three, Iceland, Finland, and Sweden, have Arctic territories but do not have coastlines on the Arctic Ocean.

The Arctic Ocean encompasses a maritime area of fourteen million square kilometers, an expanse that includes areas within as well as beyond national jurisdictions. Because of this fragmented jurisdictional configuration, the Arctic legal order is a complex set of national, international and transnational regulations. While national regulations apply to the Arctic within the sovereign jurisdiction of each Arctic state, international law is binding on all the nations, including the Arctic states, that have agreed to abide by that law. In other words, the countries are bound by specific international rules they ratify following the procedures referred to in international law, such as those in the 1969 Vienna Convention on the Law of Treaties (VCLT). Furthermore, the United Nations Convention on the Law of the Sea (UNCLOS) is an international regulation containing comprehensive mechanisms for governing the world's oceans and seas. It is often referred to as the "Constitution of the Oceans"; it is binding on all the Arctic nations except the United States, which has not ratified the instrument. Because the US has not ratified UNCLOS, the rules of the Convention do not strictly control its behavior in the Arctic marine area. Nevertheless, the United States is bound to follow customary international law, a set of norms or rules observed by states consistently and continuously based on the belief that such behavior is law – the so-called customary international law. Most articles in UNCLOS are a codification of the rules of customary international law, whereby those provisions are binding on the United States as part of the law of the sea. The law of the sea, including UNCLOS, provides an overarching legal framework for governing the Arctic Ocean. While the framework applies to all actors from within and beyond the Arctic, UNCLOS, pursuant to its Article 234 on ice-covered areas, grants Arctic coastal states some prerogatives, such as the right to adopt special legal measures on frozen areas.

Similarly, the United Nations Framework Convention on Climate Change (UNFCCC) – a global regulatory scheme for mitigating and adapting to the impacts of climate change – applies to all parties to the Convention, including all the Arctic states. The Convention and its follow-up processes impose a global legal responsibility, shared by the Arctic states, to reduce the emission of greenhouse gases. Alongside the set of international regulatory mechanisms that apply to the Arctic are regionally focused regulations that are also binding on the region's actors. The latest instrument of this sort of regulation is the FAO (Food and Agriculture Organization) Fisheries Agreement (Agreement to Prevent Unregulated High Seas Fisheries in the central Arctic Ocean). The parties include all five Arctic coastal states (Canada, Denmark (for the Faroe Islands and Greenland), Norway, Russia, and the United States) as well as other actors having a stake in Arctic fisheries, such as China, the European Union, Iceland, Japan and the Republic of Korea. The FAO Agreement did not mark the first time Arctic states came together to create regional regulations.

The 1973 Polar Bear Agreement (Agreement on the Conservation of Polar Bears) was the first legally binding treaty that brought all five Arctic coastal states together under one umbrella.

Cooperation continued under the auspices of the Arctic Council, an inter-governmental forum of the eight Arctic countries. Within this framework, the Arctic states have adopted a set of regulatory instruments that legally bind them. Examples of such regulatory arrangements are the 2011 Arctic Search and Rescue Agreement (Agreement on Cooperation on Aeronautical and Maritime Search and Rescue in the Arctic), the 2013 Arctic Oil Spill Agreement (the Agreement on Cooperation on Marine Oil Pollution Preparedness and Response in the Arctic) and the 2017 Arctic Scientific Cooperation Agreement (the Agreement on Enhancing International Arctic Scientific Cooperation). An additional aspect of the Arctic legal system is intensive involvement on the part of non-state actors, such as the region's Indigenous peoples, in policy shaping, which eventually influences the law-making process in the regional setting. For example, certain Indigenous groups have been designated "permanent participants" in the Arctic Council. This gives them a role in the decision-making process, providing inclusivity in the making of soft law. The Arctic legal system thus recognizes the involvement of both state and nonstate actors at various levels.

Finally, Arctic states' national regulations cover the Arctic territory within their domestic boundaries. These regulations are often influenced by and sometimes adjusted to comply with the rules of several international legal instruments with transnational effects. For example, the laws of many countries contain regulations on environmental impact assessments. While implemented nationally, these also apply to actions which states propose within their Arctic jurisdictions, highlighting regional specificity. In sum, the Arctic legal system includes laws that apply to the individual countries either as part of national law or international law, as well as those adopted and enforced by all states as part of international law, these pertaining primarily, but not exclusively, to the environmental governance of the Arctic region as a whole.

### 3 INDIGENOUS PEOPLE AND ARCTIC GOVERNANCE

Indigenous knowledge refers to the wisdom, practices, specific skills and techniques, social interactions, rituals, spirituality and worldview found among Indigenous peoples. This knowledge has been developed over long histories and with the experiences of interaction between Indigenous communities and their surrounding natural and social environment. The knowledge is often known as "traditional knowledge" despite its crucial value in providing insights into social-ecological processes and interactions that today serve to supplement science-based Western knowledge. Given the knowledge value of Indigenous peoples on sustainable land use behavior, natural resource

practices and the functioning of ecological processes and biodiversity, a part of Indigenous knowledge is referred to as “Indigenous ecological knowledge” or “Traditional Ecological Knowledge” (TEK). In a nutshell it is a system of knowledge which, in most cases, is transmitted orally from generation to generation, yet is dynamic and has proven its validity.

The knowledge is context-specific, collective, holistic, and adaptive. Society transforms due to its internal and external stressors, and so its knowledge systems, including Indigenous knowledge, that adapt to such transformation. For Indigenous peoples, this knowledge informs decision-making about fundamental aspects of their livelihood. It provides the basis for locally managed forms of environmental governance and “sustainable development”. However, the knowledge suffers from a lack of strict legal protection in the prevailing Intellectual Property Rights framework because of its subjective existence, as a result of which it lacks proper documentation that would identify the knowledge and its owner.

Yet the knowledge is well-recognized as a fundamental resource, especially in environmental governance. Recognition was first given in the 1992 Rio Declaration on Environment and Development. Principle 22 of the Declaration stressed the value of Indigenous knowledge in environmental decisionmaking for achieving sustainable development. The renovated interest in recognizing Indigenous knowledge is evident in the international legal framework, such as in the Convention on Biological Diversity (CBD). The Preamble of the Convention and particularly Article 8(j) reflect such acknowledgement. State parties to the Convention are encouraged to respect, preserve and maintain the knowledge, innovations and practices developed by their Indigenous and other local communities for the conservation of biological diversity and sustainable use of the environment.

The 2010 Nagoya Protocol on Access to Genetic Resources and Benefit Sharing under the CBD later undertook to operationalize the use of Indigenous knowledge, particularly that concerning the use of genetic resources associated with traditional knowledge. One aim of the Protocol is to create a system that will protect Indigenous knowledge from biopiracy, misappropriation and misuse. The Preamble and Article 31 of the UN Declaration on the Rights of Indigenous Peoples (UNDRIP) – a universally agreed international instrument – refer to Indigenous knowledge as an essential element not only for sustainable development but also for equitable development and proper management of the natural environment. Indigenous knowledge plays an integral part in the fight against climate change. The climate change regime calls for integrating Indigenous knowledge in climate governance because of the deep interconnection between Indigenous peoples and the environment, and their profound respect for the planet Earth. Article 7(5) of the 2015 Paris Agreement stressed that adaptation actions to fight against the impacts of climate change should take advantage of the knowledge that Indigenous and other local communities possess.

In this regard, an emphasis has been put on community-driven, participatory and transparent processes. Today, Indigenous peoples participate in climate negotiation processes through their representative organizations, such as the International Indigenous Peoples' Forum on Climate Change (IIPFCC), and thereby influence the international climate law-making process. Indigenous knowledge forms an integral part of the Arctic governance framework. The peoples have inhabited the region for thousands of years, living in harmony with its pristine natural environment. They have experienced the changes that have affected the Arctic for many generations from time immemorial and have developed survival techniques allowing them to adapt. In their land- and nature-based livelihood practices, such as hunting, fishing, reindeer and caribou herding, Arctic Indigenous peoples have elaborated unique practices. These offer fundamental lessons to promote our understanding of the Arctic's ecological support systems, nature conservation and human-animal interactions in the specific Arctic context.

However, because of the disproportionate impacts on the Arctic driven by climate change, the knowledge held by its Indigenous peoples lacks the predictability it once had. Nevertheless, their knowledge is crucial in Arctic-related legal and policy processes. Such processes are reflected in the Arctic's governance structure, such as in the Arctic Council.

#### 4 THE ARCTIC AND THE WAR IN UKRAINE

The damage done by Russia's full-scale invasion of Ukraine is hard to quantify. To stalled grain shipments, world hunger, soaring energy prices, and rampant inflation must be added the baleful effects for one of the most remote and uninhabitable regions of the world, the Arctic. The war has essentially frozen the region's preeminent governing body, the Arctic Council.

For decades, the Council has been a shining star of light-touch, collaborative governance. Driven by its mandate of sustainable development and environmental protection, its work has informed some of the most significant legally binding international agreements and treaties like the International Maritime Organization's Polar Code and the Arctic section of the annual Intergovernmental Panel on Climate Change report.

This work ground to a halt in March 2022, as the other seven Arctic States – the United States, Canada, Denmark, Norway, Sweden, Finland, and Iceland – “paused” their cooperation with Russia. In a joint statement in June, the “Arctic 7” announced in a Joint Declaration on Limited Resumption of Arctic Council a “limited resumption of our work in the Arctic Council, in projects that do not involve the participation of the Russian Federation.” However, without data from Russia's roughly 45% share of the Arctic, the Council's working groups cannot possibly function at full capacity. Having forsaken its traditional “leave politics at the door” policy by excluding Russia,

the Council must now evolve to compensate for today's realities. The Arctic has changed significantly since the Council's inception in 1996 and according to Boulègue, the traditional "High North – low tension" paradigm in the region has been replaced by a "high-octane" environment of geopolitical competition and crisis.

The climate crisis has arrived and is hitting the Arctic especially hard. Interest in new shipping lanes and potential natural resource extraction has sparked competition between non-Arctic states, and the rapid militarization of the region by both Russia and NATO has raised tensions. Employing doom-filled phrases like "the Arctic Council is dead," some Arctic experts have suggested that the events of 2022 indicate there is no chance of a revival. In this view, the Arctic 7 should focus its attention on other mechanisms of High North governance and security like the Barents Euro-Arctic Council, the Arctic Security Forces Roundtable, and the Northern Group. This perspective eschews the importance of the political function of the Council to the Arctic's roughly 4 million inhabitants, who are some of the most vulnerable to climate change and environmental degradation. It does not resolve the significance of the work done by the Council's six active Working Groups in shaping global Arctic policies, nor does it address the importance of the Council as a forum for discussion on the future of the Arctic with non-Arctic states. Another approach is to push for the full resumption of Arctic Council operations. From this perspective, the benefits of the Arctic Council's style of apolitical, collaborative governance are worth preserving. The challenge is to keep the process alive in the hope of a future, less aggressive Russia which is of course impossible while the Kremlin occupies large swaths of Ukraine.

## 5 STRUCTURE OF THE THESIS

This Thesis is divided into two parts; the first explores the contemporary international law of the sea applicable to the Arctic and consists of three chapters. The first chapter (Chapter 1) investigates Arctic territorial and resources claims that have been developed since 2012 in the light of the climate change effects in the area. Special emphasis is given to the legal status of the commitment on behalf of the United States, and whether it is bound by UNCLOS in relation to the delimitation of maritime borders. Attention is paid to the outer limits of the continental shelf delineation pursuant to Article 76 of UNCLOS and its applicability in the relations of the Arctic States vis-à-vis the United States. The second and third chapters (Chapters 2 and 3) focus on the sea itself and the regimes regulating economic activity in the area.

The second part of the thesis deals with governance issues. The first chapter of this part (Chapter 4) examines and rejects the idea that the current framework for Arctic governance follows "conventional wisdom". The next chapter (Chapter 5) deals with the idea of the creation of a new Arctic Treaty as a

substantive means of governance. The following chapter (Chapter 6) discusses adaptation to the effects of climate change in the Arctic. The penultimate chapter (Chapter 7) examines issues of security in the Arctic Region in terms of diplomatic and military importance, including its energy dimensions, since the amounts of untapped hydrocarbons are amply sufficient to change the energy map of the world. The final chapter (Chapter 8) contains concluding observations and provides answers to the research questions posed in the introductory chapter.

## 6 CONCLUSION

National borders are often seen as alien by the indigenous peoples of the circumpolar north, both in Europe and in North America. Sápmi is divided in four parts. In Greenland, which is part of Denmark, and in Canada's Nunavut, different approaches to autonomy can be seen. The move towards regional autonomy can include a few first steps towards the reconstitution of the original sovereignty over these lands and waters. But the borders in the Arctic hurt all who live there. Today, the Arctic is not united. The dominant role of two large powers, the United States and Russia, and the relatively small stature enjoyed by the other Arctic countries in international politics (although they regularly punch above their weight) means that it is unlikely that this situation will change anytime soon. If Arctic communities want to decide the future of the Arctic, at least as far as they can do so today, they need to harness the spirit of international cooperation which for the time being still prevails in the Arctic. After the end of the Cold War, the Arctic has become a space of international cooperation across political divides, but there is no guarantee that the *status quo* will endure forever. Some fault lines already emerged during the 2019 ministerial meeting in Rovaniemi, others are likely to emerge in the future – unless the Arctic finds a unifying project which concentrates the forces of the Arctic nations and excites the people of the Arctic driving them to greater cooperation. The fight against climate change will not be the topic around which the Arctic people will rally, simply because the current leaderships in Moscow and Washington D.C. at best do not believe in climate change and at worst want to accelerate it for personal or national gain.

The law is in the service of society, in particular of the most vulnerable members of society. Article 38 of the Statute of the International Court of Justice reminds international legal scholars that the work of even the best of us is only a “subsidiary means for the determination of rules of law”. The same applies to Arctic law. The question for the international community today is whether the people who live in the Arctic will be given the chance to make decisions for their home region. This is particularly urgent for the Central Arctic Ocean, which is increasingly free of the sea ice (which was long thought to be eternal) or whether the Arctic Ocean will be regulated by the inter-

national community at large just like all other seas. Closer to shore and on land, the rights of local communities will be even more affected by international legal norms. Climate change and globalization have already fundamentally changed the Arctic and made it more similar to the rest of the global north. It remains to be seen whether Arctic law will remain a tool for Arctic communities to defend regional interests. This choice should be in the hands of the people who live in the Arctic.

It is the task of the Arctic legal researcher to empower the people of the Arctic by creating and sharing knowledge about the international legal system and the place of the Arctic within it. Arctic law, therefore, is the sum total of the norms of public international law which are or can become relevant for the Arctic and the people who live here. Legal research in this field has to have a practical aim and is not an end in itself. The research of Arctic law is by necessity practical and centered on the Arctic and all who live there. Arctic law cannot be limited to philosophical or theoretical considerations, nor can it be only *l'art pour l'art*. The task of the modern international legal scholar is to give a voice to those who do not have one, be it for those who are in need of protection of human rights or for those who, for lack of being part of human society, cannot speak on their own behalf, such as animals, nature or future generations. At a time when international law is more needed than ever before but also ignored by those in power, the task of the academic writers in this field is no longer theoretical. Instead, legal research in the Arctic has to inform the practice of law and speak to the practical problems encountered by people in the Arctic – just as, *vice versa*, the practice of law might benefit from the service provided by legal researchers. As a practice-oriented field of legal research, Arctic law can help erode the artificial distinction between academia and legal practice because, at the end of the day, both aspects serve the protection of the people of the Arctic and their wellbeing.

# Samenvatting (Dutch summary)

## INTERNATIONAAL RECHT EN BESTUUR VAN HET NOORDPOOLGEBIED IN EEN TIJDPERK VAN KLIMAATVERANDERING

### 1 DOEL VAN HET PROEFSCHRIFT EN ONDERZOEKSVRAGEN

Dit proefschrift biedt een uitgebreide wetenschappelijke analyse van het hedendaagse internationale recht, de geopolitiek en de internationale veiligheid in het Noordpoolgebied. Het schetst ook historische lijnen en helpt te begrijpen waar we vandaag staan. In veel recente publicaties wordt haastig geconcludeerd dat het Noordpoolgebied te maken heeft met een stormloop op grondstoffen en toenemende geopolitieke rivaliteit. Het belangrijkste doel van deze dissertatie is het identificeren van de toepasselijkheid en implementatie van hedendaags internationaal recht en de rol ervan in het vormgeven van de voorwaarden voor samenwerking, stabiliteit en vrede in het Noordpoolgebied.

Het proefschrift beoogt de volgende onderzoeksvragen te beantwoorden:

- *Hoe reageert het hedendaagse internationale recht op de enorme veranderingen die gaande zijn in het Noordpoolgebied?*
- *Is het bestaande juridische kader effectief in zijn antwoord op de huidige complexe en veelzijdige problemen van het Noordpoolgebied?*
- *Wat is de geopolitieke betekenis van het Noordpoolgebied, regionaal en mondiaal?*
- *Welke zijn de belangrijkste belanghebbenden en hoe kunnen hun belangen en beleid van invloed zijn op de ontwikkeling en tenuitvoerlegging van het internationaal recht?*
- *Is de Arctische Raad als belangrijkste forum voor regionale samenwerking in het Noordpoolgebied op zijn taak berekend?*
- *Wat zijn de belangrijkste kenmerken van bestuur in het Noordpoolgebied en hoe kunnen instellingen en regimes de stabiliteit en veiligheid in de regio bevorderen?*
- *Wat zijn de veiligheidsuitdagingen in de regio?*

Bovengenoemde vragen vormen de basis van de analyse in de gehele tekst van het proefschrift en worden beantwoord in het afsluitende hoofdstuk.

## 2 HET JURIDISCHE KADER

Het Noordpoolgebied heeft geen eigen rechtsstelsel, aangezien het geen unieke erkende juridische status heeft. In plaats daarvan is het een geografische ruimte binnen en buiten de jurisdictie van verschillende circumpolaire landen, die over het algemeen de Arctische staten worden genoemd. Vijf van de Arctische staten worden beschouwd als Arctische kuststaten (of kuststaten) omdat ze zeegebieden delen in de Noordelijke IJszee. Dit zijn Canada, Denemarken (via Groenland), Noorwegen, Rusland en de Verenigde Staten (VS). De andere drie, IJsland, Finland en Zweden, hebben Arctisch grondgebied maar geen kustlijn aan de Noordelijke IJszee.

De Noordelijke IJszee omvat een zeegebied van veertien miljoen vierkante kilometer, een gebied dat zowel binnen als buiten de nationale rechtsmacht van de kuststaten valt. Door deze gefragmenteerde configuratie van jurisdicties bestaat de rechtsorde van het Noordpoolgebied uit een complex geheel van nationale, internationale en transnationale regels. Terwijl nationale regelgeving van toepassing is op het Noordpoolgebied binnen de soevereine jurisdictie van elke Arctische staat, is het internationaal recht bindend voor alle landen, inclusief de Arctische staten, die ermee hebben ingestemd zich aan dat recht te houden. Met andere woorden, de landen zijn gebonden aan specifieke internationale regels die ze ratificeren volgens de procedures waarnaar in het internationaal recht wordt verwezen, zoals die in het Verdrag van Wenen inzake het verdragenrecht (VCLT) uit 1969. Bovendien is het Verdrag van de Verenigde Naties inzake het recht van de zee (UNCLOS) een internationale regeling met uitgebreide mechanismen voor het beheer van de oceanen en zeeën van de wereld. Het wordt vaak de "Grondwet van de oceanen" genoemd; het is bindend voor alle Arctische landen behalve de VS, die dit verdrag niet hebben geratificeerd. Omdat de VS UNCLOS niet hebben geratificeerd, zijn de regels van het verdrag niet strikt bepalend voor hun gedrag in het Arctische zeegebied. Niettemin zijn de VS gebonden aan het internationaal gewoonterecht, een verzameling normen of regels die consequent en voortdurend door staten worden nageleefd op basis van de overtuiging dat dergelijk gedrag het geldende recht weergeeft – het zogenaamde internationaal gewoonterecht. De meeste artikelen in UNCLOS zijn een codificatie van de regels van het internationaal gewoonterecht, waardoor deze bepalingen bindend zijn voor de VS als onderdeel van het recht van de zee. Dit rechtsgebied, met inbegrip van UNCLOS, biedt een overkoepelend rechtskader voor het beheer van de Noordelijke IJszee. Hoewel het kader van toepassing is op alle actoren binnen en buiten het Noordpoolgebied, verleent UNCLOS op grond van artikel 234 over met ijs bedekte gebieden een aantal voorrechten aan Arctische kuststaten, zoals het recht om speciale wettelijke maatregelen te nemen voor bevroren gebieden.

Evenzo is het Raamverdrag van de Verenigde Naties inzake klimaatverandering (UNFCCC) – een wereldwijd regelgevend stelsel voor de beperking van en aanpassing aan de gevolgen van klimaatverandering – van toepassing op

alle partijen bij het Verdrag, met inbegrip van alle Arctische staten. Het verdrag en zijn vervolgovereenkomsten leggen een wereldwijde juridische verantwoordelijkheid op, die door de Arctische staten wordt gedeeld, om de uitstoot van broeikasgassen te verminderen. Naast de internationale regelgevende mechanismen die van toepassing zijn op het Noordpoolgebied, zijn er regionaal gerichte regelgevingen die ook bindend zijn voor de actoren in de regio. Het meest recente voorbeeld van dit soort regelgeving is de visserijovereenkomst van de FAO (Voedsel- en Landbouworganisatie van de VN) (Overeenkomst ter voorkoming van ongereguleerde visserij op volle zee in het centrale deel van de Noordelijke IJszee). De vijf Arctische kuststaten (Canada, Denemarken (voor de Faeröer en Groenland), Noorwegen, Rusland en de VS) en andere actoren met een belang in de visserij in het Noordpoolgebied, zoals China, de Europese Unie, IJsland, Japan en de Republiek Korea, zijn partij bij deze overeenkomst. De FAO-overeenkomst was niet de eerste keer dat Arctische staten samenkwamen om regionale regelgeving op te stellen. De Overeenkomst over het behoud van ijsberen uit 1973 was het eerste juridisch bindende verdrag dat alle vijf Arctische kuststaten samenbracht onder één paraplu.

De samenwerking is voortgezet onder auspiciën van de Arctische Raad, een intergouvernementeel forum van de acht Arctische landen. Binnen dit forum hebben de Arctische landen een reeks regelgevende instrumenten aangenomen die hen juridisch binden. Voorbeelden zijn de Arctische opsporings- en reddingsovereenkomst van 2011 (Overeenkomst inzake samenwerking bij opsporing en redding in de lucht en op zee in het Noordpoolgebied), de Arctische overeenkomst inzake olielekages van 2013 (Overeenkomst inzake samenwerking bij de voorbereiding en bestrijding van verontreiniging door olie op zee in het Noordpoolgebied) en de Overeenkomst inzake wetenschappelijke samenwerking in het Noordpoolgebied van 2017 (Overeenkomst inzake de versterking van de internationale wetenschappelijke samenwerking in het Noordpoolgebied). Een bijkomend aspect van het Arctische rechtssysteem is de intensieve betrokkenheid van niet-gouvernementele actoren – zoals de inheemse bevolkingsgroepen in de regio – bij de beleidsvorming, die uiteindelijk van invloed is op het rechtsvormingsproces in de regionale context. Bepaalde inheemse groepen zijn bijvoorbeeld aangewezen als “permanente deelnemers” aan de Arctische Raad. Dit geeft hun een rol in het besluitvormingsproces en zorgt voor inclusiviteit bij het maken van zachte wetgeving. Het Arctische rechtssysteem erkent dus de betrokkenheid van zowel statelijke als niet-statale actoren op verschillende niveaus.

Tot slot bestrijkt de nationale regelgeving van de Arctische staten het Arctische grondgebied binnen hun nationale grenzen. Deze regelgeving wordt vaak beïnvloed door en soms aangepast aan de regels van verschillende internationale rechtsinstrumenten met transnationale effecten. De wetten van veel landen bevatten bijvoorbeeld voorschriften over milieueffectbeoordelingen. Hoewel deze op nationaal niveau worden geïmplementeerd, zijn ze ook van toepassing op het handelen van staten binnen hun Arctische rechtsmacht, wat

de regionale specificiteit benadrukt. Kortom, het rechtssysteem van het Noordpoolgebied omvat de rechtsmacht die van toepassing is op de afzonderlijke landen, als onderdeel van de nationale wetgeving of de internationale wetgeving, evenals het recht dat door alle staten is aanvaard en moet worden gehandhaafd als onderdeel van de internationale regelgeving, die voornamelijk, maar niet uitsluitend, betrekking heeft op het milieubeheer van het Noordpoolgebied als geheel.

### 3 INHEEMSE VOLKEREN EN ARCTISCH BESTUUR

Inheemse kennis verwijst naar de wijsheid, praktijken, specifieke vaardigheden en technieken, sociale interacties, rituelen, spiritualiteit en het wereldbeeld van inheemse volkeren. Deze kennis is ontwikkeld in de loop van eeuwen en op basis van de ervaringen van de interactie tussen inheemse gemeenschappen en hun omringende natuurlijke en sociale omgeving. De kennis staat vaak bekend als "traditionele kennis", ondanks de cruciale waarde ervan voor het verschaffen van inzichten in sociaal-ecologische processen en interacties die vandaag de dag dienen als aanvulling op wetenschap gebaseerde westerse kennis. Gezien de kenniswaarde van inheemse volkeren over duurzaam landgebruik, praktijken met natuurlijke hulpbronnen en het functioneren van ecologische processen en biodiversiteit, wordt een deel van de inheemse kennis "Inheemse ecologische kennis" of "Traditionele Ecologische Kennis" (TEK) genoemd. In een notendop is het een kennissysteem dat in de meeste gevallen mondeling wordt overgedragen van generatie op generatie, maar toch dynamisch is en zijn geldigheid heeft bewezen.

De kennis is contextspecifiek, collectief, holistisch en adaptief. De maatschappij transformeert door interne en externe stressfactoren en dus ook haar kennissystemen, inclusief inheemse kennis, die zich aan deze transformatie aanpassen. Voor inheemse volkeren vormt deze kennis de basis voor de besluitvorming over fundamentele aspecten van hun levensonderhoud. Ze vormt de basis voor lokaal beheerde vormen van milieubeheer en "duurzame ontwikkeling". De kennis lijdt echter onder een gebrek aan strikte, wettelijke bescherming in het heersende kader van intellectuele eigendomsrechten vanwege het subjectieve bestaan ervan, waardoor het ontbreekt aan goede documentatie waarmee de kennis en de eigenaar ervan kunnen worden geïdentificeerd.

Toch wordt de kennis algemeen erkend als een fundamentele hulpbron, vooral in het milieubeheer. Deze erkenning werd voor het eerst gegeven in de Verklaring van Rio van 1992 over milieu en ontwikkeling. Beginsel 22 van de Verklaring benadrukt de waarde van inheemse kennis in de besluitvorming over het milieu om duurzame ontwikkeling te bereiken. De vernieuwde belangstelling voor de erkenning van inheemse kennis wordt duidelijk in het internationale juridische kader, zoals in het Verdrag inzake Biologische Diversi-

teit. De preambule van het Verdrag en in het bijzonder artikel 8(j) weerspiegelen een dergelijke erkenning. Staten die partij zijn bij het Verdrag worden aangemoedigd om de kennis, innovaties en praktijken die door hun inheemse en andere lokale gemeenschappen zijn ontwikkeld voor het behoud van biologische diversiteit en duurzaam gebruik van het milieu, te respecteren, te behouden en te onderhouden.

Het Nagoyaprotocol van 2010 over toegang tot genetische rijkdommen en verdeling van voordelen onder het biodiversiteitsverdrag beoogt het operationaliseren van het gebruik van inheemse kennis, in het bijzonder dat met betrekking tot het gebruik van genetische rijkdommen die verband houden met traditionele kennis. Een van de doelstellingen van het Protocol is een systeem te creëren dat inheemse kennis beschermt tegen biopiraterij, verduistering en misbruik. De Preambule en artikel 31 van de VN-Verklaring over de rechten van inheemse volkeren (UNDRIP) – een universeel overeengekomen internationale verklaring – verwijzen naar inheemse kennis als een essentieel element, niet alleen voor duurzame ontwikkeling maar ook voor rechtvaardige ontwikkeling en goed beheer van de natuurlijke omgeving. Inheemse kennis speelt een integrale rol in de strijd tegen klimaatverandering. Het internationale klimaatrecht roept op tot integratie van inheemse kennis in het klimaatbeheer vanwege de diepe verwevenheid tussen inheemse volkeren en het milieu en hun diep respect voor de planeet aarde. Artikel 7(5) van de Overeenkomst van Parijs van 2015 benadrukt dat aanpassingsmaatregelen om de gevolgen van de klimaatverandering te bestrijden, gebruik moeten maken van de kennis die inheemse en andere lokale gemeenschappen bezitten.

In dit verband is de nadruk gelegd op door de gemeenschap gestuurde, participatieve en transparante processen. Vandaag de dag nemen inheemse volken deel aan klimaatonderhandelingsprocessen via hun representatieve organisaties, zoals het International Indigenous Peoples' Forum on Climate Change (IIPFCC), en beïnvloeden zo het internationale proces van vorming van klimaatrecht. Inheemse kennis vormt aldus een integraal onderdeel van het Arctische bestuurskader. De volkeren bewonen de regio al duizenden jaren en leven in harmonie met de ongerepte natuurlijke omgeving. Ze hebben de veranderingen die het Noordpoolgebied sinds onheuglijke tijden hebben beïnvloed, van generatie op generatie meegemaakt en overlevingstechnieken ontwikkeld waarmee ze zich konden aanpassen. Arctische inheemse volken hebben unieke praktijken ontwikkeld voor hun levensonderhoud op het land en in de natuur, zoals jagen, vissen en het hoeden van rendieren en kariboes. Deze bieden fundamentele lessen om ons begrip van de ecologische ondersteuningssystemen van het Noordpoolgebied, natuurbehoud en de interacties tussen mens en dier in de specifieke Arctische context te begrijpen en te bevorderen.

Door de onevenredige gevolgen van de klimaatverandering voor het Noordpoolgebied is de kennis van de inheemse volken niet meer zo voorspelbaar als vroeger. Toch is hun kennis van cruciaal belang in Arctische rechts-

vormings- en beleidsprocessen. Dergelijke processen worden weerspiegeld in de bestuursstructuur van het Noordpoolgebied, zoals in de Arctische Raad.

#### 4 DE NOORDPOOL EN DE OORLOG IN OEKRAÏNE

De schade van de grootschalige invasie van Rusland in Oekraïne is moeilijk in cijfers uit te drukken. Bij de vastgelopen graantransporten, de honger in de wereld, de stijgende energieprijzen en de ongebreidelde inflatie komen nog de funeste gevolgen voor een van de meest afgelegen en onbewoonbare gebieden ter wereld, het Noordpoolgebied. De oorlog heeft in wezen het belangrijkste bestuursorgaan van de regio, de Arctische Raad, bevroren.

Decennialang is de Raad een lichtend voorbeeld geweest van bestuur met een laagdrempelige aanpak en samenwerking. Gedreven door zijn mandaat van duurzame ontwikkeling en milieubescherming heeft het werk van de Raad geleid tot enkele van de belangrijkste juridisch bindende internationale overeenkomsten en verdragen, zoals de Polar Code van de Internationale Maritieme Organisatie en het Arctische deel van het jaarlijkse rapport van de Intergouvernementele Werkgroep inzake Klimaatverandering (IPCC).

Dit werk kwam tot stilstand in maart 2022, toen de andere zeven Arctische staten – de VS, Canada, Denemarken, Noorwegen, Zweden, Finland en IJsland – hun samenwerking met Rusland “opschortten”. In juni kondigden de “Arctische zeven” in een gezamenlijke verklaring over beperkte hervatting van de Arctische Raad een “beperkte hervatting van onze werkzaamheden in de Arctische Raad aan, in projecten waaraan de Russische Federatie niet deelneemt”. Zonder gegevens van Ruslands aandeel van ongeveer 45% in het Noordpoolgebied kunnen de werkgroepen van de Raad echter onmogelijk op volle capaciteit functioneren. Nadat de Raad zijn traditionele “laat de politiek voor wat ze is”-beleid heeft opgegeven door Rusland uit te sluiten, moet hij nu evolueren om de huidige realiteit te compenseren. Het Noordpoolgebied is aanzienlijk veranderd sinds de oprichting van de Raad in 1996. Volgens Boulègue is het traditionele “hoge noorden – lage spanning”-paradigma in de regio vervangen door een “high-octane”-omgeving van geopolitieke concurrentie en crisis.

De klimaatcrisis heeft toegeslagen en treft vooral het Noordpoolgebied hard. De belangstelling voor nieuwe scheepvaartroutes en de mogelijke ontginning van natuurlijke rijkdommen heeft de concurrentie tussen niet-Arctische landen aangewakkerd en de snelle militarisering van de regio door zowel Rusland als de NAVO heeft de spanningen doen toenemen. Sommige Arctische experts hebben met doemdenkende woorden als “de Arctische Raad is dood” gesuggereerd dat de gebeurtenissen van 2022 aangeven dat er geen kans is op een opleving. In deze visie moet de Arctische Raad zijn aandacht richten op andere mechanismen voor bestuur en veiligheid in het hoge noorden, zoals de Euro-Arctische Raad voor de Barentszee, de Arctic Security Forces Round-

table en de Northern Group. Dit perspectief gaat voorbij aan het belang van de politieke functie van de Raad voor de ongeveer 4 miljoen inwoners van het Noordpoolgebied, die tot de meest kwetsbare bevolkingsgroepen behoren als het gaat om klimaatverandering en aantasting van het milieu. Het belang van het werk van de zes actieve werkgroepen van de Raad bij het vormgeven van het wereldwijde Arctische beleid wordt niet opgelost, evenmin als het belang van de Raad als forum voor discussie over de toekomst van het Noordpoolgebied met niet-Arctische staten.

Een andere aanpak is aandringen op volledige hervatting van de werkzaamheden van de Arctische Raad. Vanuit dit perspectief zijn de voordelen van de stijl van apolitiek, collaboratief bestuur van de Arctische Raad het behouden waard. De uitdaging is om het proces levend te houden in de hoop op een toekomstig, minder agressief Rusland, wat natuurlijk onmogelijk is zolang het Kremlin grote delen van Oekraïne bezet houdt.

## 5 STRUCTUUR VAN HET PROEFSCHRIFT

Dit proefschrift bestaat uit twee delen: het eerste onderzoekt het hedendaagse internationale recht van de zee dat van toepassing is op het Noordpoolgebied en bestaat uit drie hoofdstukken. Het eerste hoofdstuk onderzoekt Arctische territoriale aanspraken en claims op hulpbronnen die sinds 2012 zijn ontwikkeld in het licht van de gevolgen van klimaatverandering in het gebied. Er wordt speciale nadruk gelegd op de juridische status van de rechten en verplichtingen van de VS, en op de vraag of de VS gebonden zijn door UNCLOS met betrekking tot de afbakening van zeegrenzen. Er wordt aandacht besteed aan de buitengrenzen van de afbakening van het continentaal plat overeenkomstig artikel 76 van UNCLOS en de toepasbaarheid daarvan in de betrekkingen van de Arctische staten met de VS. Het tweede en derde hoofdstuk richten zich op de zee en de regelingen die de economische activiteit in het gebied reguleren.

Het tweede deel van het proefschrift gaat over bestuurskwesties. Het eerste hoofdstuk van dit deel (hoofdstuk 4) onderzoekt of en verwerpt vervolgens het idee dat het huidige kader voor Arctisch bestuur de "conventionele wijsheid" volgt. Het volgende hoofdstuk (hoofdstuk 5) behandelt het voorstel om een nieuw Arctisch Verdrag te sluiten als een inhoudelijke vorm van bestuur. Hoofdstuk 6 bespreekt de aanpassing aan de gevolgen van klimaatverandering in het Noordpoolgebied. In hoofdstuk 7 worden veiligheidskwesties in het Noordpoolgebied onderzocht in termen van diplomatiek en militair belang, met inbegrip van de energiedimensies, aangezien de hoeveelheden onaanbeoordeelde brandstoffen ruimschoots voldoende zijn om de energieke kaart van de wereld te veranderen. Hoofdstuk 8 bevat slotopmerkingen en geeft antwoorden op de onderzoeksvragen die in het inleidende hoofdstuk zijn gesteld.

## 6 CONCLUSIE

Nationale grenzen worden door de inheemse volkeren van het circumpolaire noorden vaak als vreemd beschouwd, zowel in Europa als in Noord-Amerika. Sápmi is verdeeld in vier paart. In Groenland, dat deel uitmaakt van Denemarken, en in het Canadese Nunavut zijn verschillende benaderingen van autonomie te zien. De tendens naar regionale autonomie kan een paar eerste stappen vormen in de richting van het herstel van de oorspronkelijke soevereiniteit over deze landen en wateren. De huidige grenzen in het Noordpoolgebied doen iedereen die daar woont pijn. Vandaag de dag is het Noordpoolgebied niet verenigd. De dominante rol van twee grote mogendheden, de VS en Rusland, en de relatief kleine positie die de andere Arctische landen in de internationale politiek innemen (hoewel ze regelmatig boven hun gewicht uitsteken), betekent dat het onwaarschijnlijk is dat deze situatie op korte termijn zal veranderen. Als de Arctische gemeenschappen willen beslissen over de toekomst van het Noordpoolgebied, althans voor zover ze dat vandaag de dag kunnen, moeten ze gebruikmaken van de geest van internationale samenwerking die voorlopig nog heerst in het Noordpoolgebied. Na het einde van de Koude Oorlog is het Noordpoolgebied een ruimte geworden van internationale samenwerking over politieke scheidslijnen heen, maar er is geen garantie dat de *status quo* voor altijd zal blijven bestaan. Tijdens de ministeriële bijeenkomst van de Arctische Raad in 2019 in Rovaniemi zijn al enkele breuklijnen naar voren gekomen, en andere zullen in de toekomst waarschijnlijk nog volgen – tenzij het Noordpoolgebied een verenigend project genereert dat de krachten van de Arctische landen bundelt en de mensen in het Noordpoolgebied aanzet tot meer samenwerking. De strijd tegen klimaatverandering zal niet het onderwerp zijn waar de mensen van het Noordpoolgebied zich om zullen scharen, simpelweg omdat de huidige leiders in Moskou en Washington D.C. in het beste geval niet eensgezind zijn over klimaatverandering en in het slechtste geval de klimaatverandering willen versnellen voor persoonlijk of nationaal gewin.

Het recht staat in dienst van de samenleving, in het bijzonder van de meest kwetsbare leden van de samenleving. Artikel 38 van het Statuut van het Internationaal Gerechtshof herinnert internationale rechtsgeleerden eraan dat het werk van zelfs de besten onder ons slechts een "subsidiar middel is voor het vaststellen van rechtsregels". Hetzelfde geldt voor het Arctisch recht. De vraag voor de internationale gemeenschap is vandaag of de mensen die in het Noordpoolgebied wonen de kans krijgen om beslissingen te nemen voor hun thuisregio. Dit is vooral dringend voor de centrale Noordelijke IJszee, die steeds meer vrij is van zee-ijs (waarvan lang werd gedacht dat het eeuwig was) of dat het gebruik van de Noordelijke IJszee net als alle andere zeeën door de internationale gemeenschap zal worden gereguleerd. Dichter bij de kust en op het land zullen de rechten van lokale gemeenschappen nog meer worden beïnvloed door internationale rechtsnormen. Klimaatverandering en

globalisering hebben het Noordpoolgebied al fundamenteel veranderd en het meer doen lijken op de rest van het aardse noorden. Het valt nog te bezien of het Arctisch recht een instrument zal blijven voor Arctische gemeenschappen om regionale belangen te verdedigen. Deze keuze zou in handen moeten zijn van de mensen die in het Noordpoolgebied wonen.

Het is de taak van de Arctisch juridisch onderzoeker om de positie van de mensen van het Noordpoolgebied te helpen versterken door kennis te creëren en te delen over het internationale rechtssysteem en de plaats van het Noordpoolgebied daarin. Arctisch recht is daarom de som van de normen van internationaal publiekrecht die relevant zijn of kunnen worden voor het Noordpoolgebied en de mensen die hier wonen. Juridisch onderzoek op dit gebied moet een praktisch doel hebben en is geen doel op zich. Het onderzoek naar Arctisch recht is noodzakelijkerwijs praktisch en gericht op het Noordpoolgebied en iedereen die daar woont. Arctisch recht kan niet worden beperkt tot filosofische of theoretische overwegingen, noch kan het alleen *l'art pour l'art* zijn. Het is de taak van de hedendaagse internationale rechtsgeleerde om een stem te geven aan hen die er geen hebben, of het nu gaat om hen die bescherming van mensenrechten nodig hebben of om hen die, omdat ze geen deel uitmaken van de menselijke samenleving, niet namens zichzelf kunnen spreken, zoals dieren, de natuur of toekomstige generaties. In een tijd waarin internationaal recht meer dan ooit nodig is, maar ook wordt genegeerd door de machthebbers, is de taak van de academici op dit gebied niet langer theoretisch. In plaats daarvan moet het juridisch onderzoek in het Noordpoolgebied de rechtspraktijk informeren en inspelen op de praktische problemen waarmee mensen in het Noordpoolgebied worden geconfronteerd – net zoals, omgekeerd, de rechtspraktijk kan profiteren van de inzichten en de dienstverlening van juridische onderzoekers. Als een praktijkgericht juridisch onderzoeksgebied kan Arctisch recht helpen het kunstmatige onderscheid tussen de academische wereld en de juridische praktijk te verkleinen, opdat uiteindelijk beide sectoren de bescherming van de mensen in het Noordpoolgebied en hun welzijn kunnen dienen.

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# Maps

Image 1

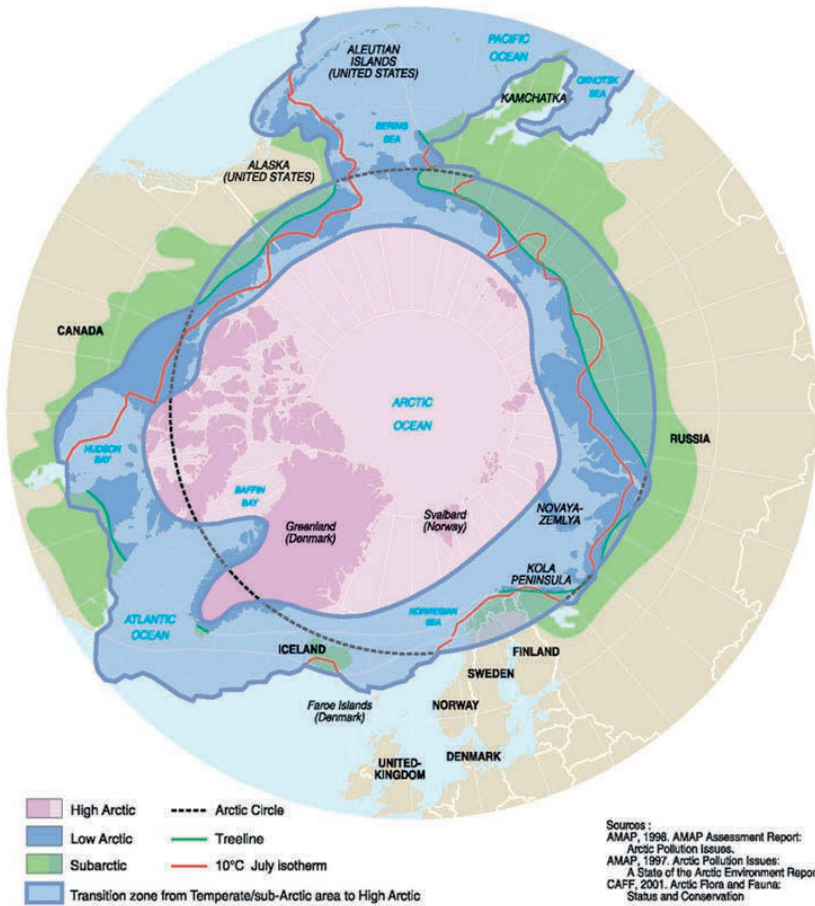


Image 2

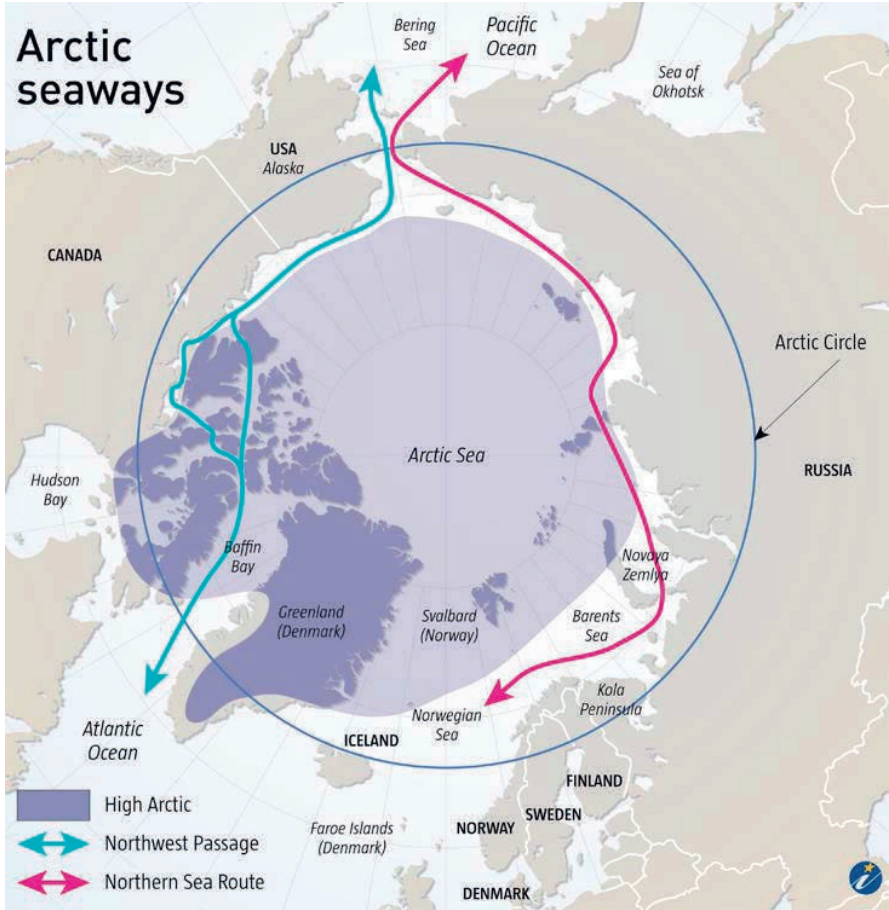


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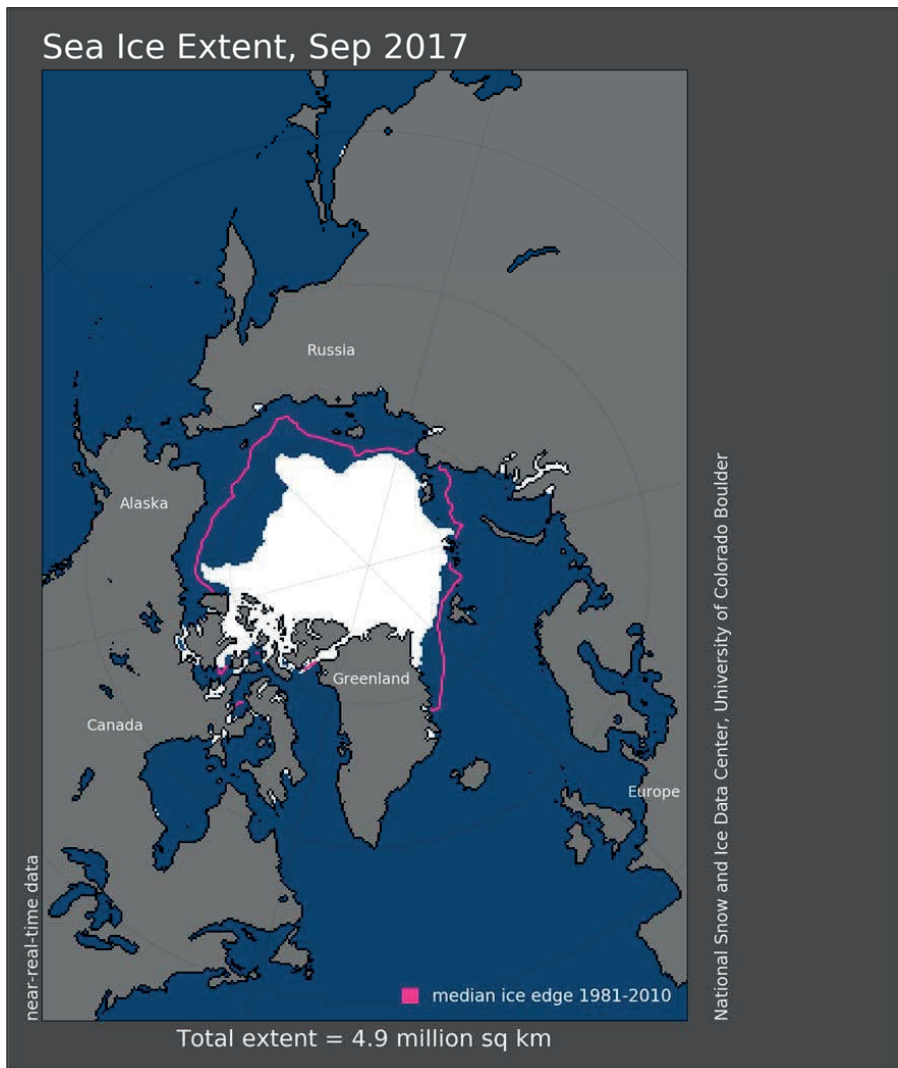


Image 4

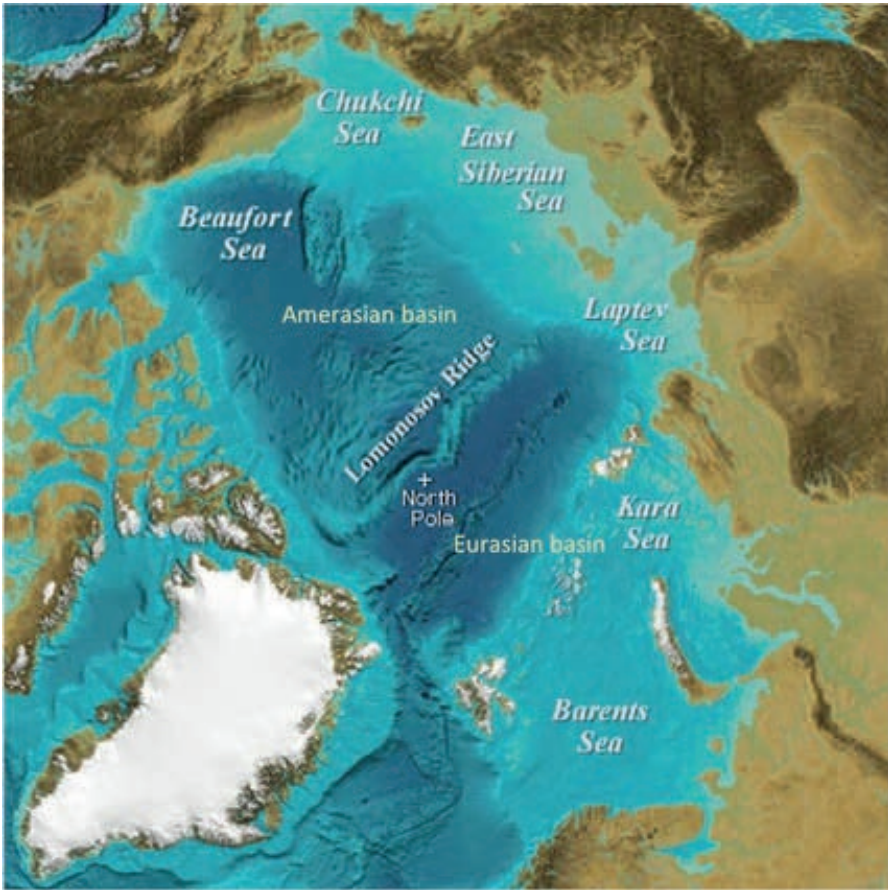
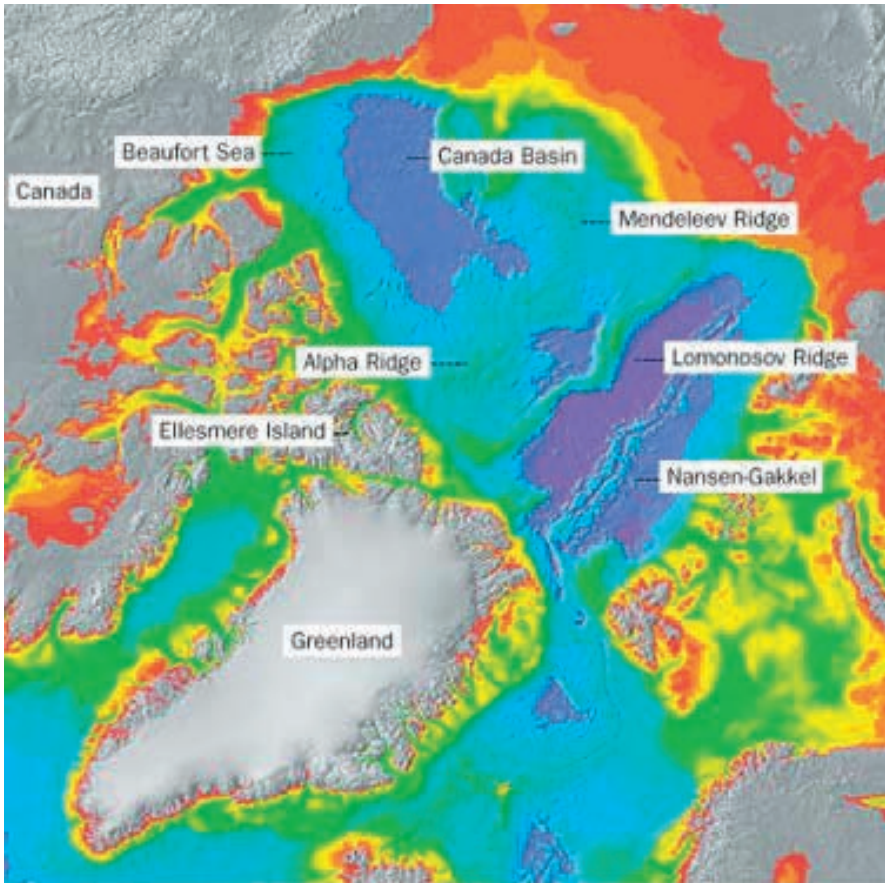


Image 5





## Curriculum vitae

Alexandros Sarris is currently a PhD Fellow at Leiden Law School, Senior Lecturer in International Law at Erasmus University College at Rotterdam and Senior Lawyer in the Legal & Regulatory department at Enel Green Power Hellas, the Greek Subsidiary of Enel Green Power SpA. As far as his educational background is concerned, he obtained his LLB and LLM at Democritus University of Thrace, in Greece. During his doctoral studies at Leiden University, he was awarded a Graduate Research Fellowship at PON/Harvard Law School allowing him to spend more than a year at Harvard University conducting research in international law and alternative dispute resolution. In 2010 he started his research at Leiden Law School of Leiden University as an external PhD candidate. Alexandros' research interests focus on the axes of public international law, environmental and energy law, sustainable development and green energy, corporate law and corporate governance as well as negotiations and all forms of alternative dispute resolution. He has extensive teaching experience within the field of international law, with special focus on the law of the sea, energy, and environmental law. He was previously employed in various positions such as (Senior) Lawyer at various multinational firms and Guest Lecturer in International Law at Leiden University College.



In the range of books published by the Meijers Research Institute and Graduate School of Leiden Law School, Leiden University, the following titles were published in 2021-2024

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The far-reaching invasion of Ukraine by the Russian Federation on 24 February 2022 poses the greatest threat to international peace and security in Europe since the end of World War II. The unjustified attack also impacts the relations between Russia and other Arctic nations, i.e. Norway, Sweden, Finland, Iceland, Denmark, Canada, and the United States of America, all of which are members of the European Union or the North Atlantic Treaty Organization, or both.

This thesis analyses the existing legal framework in the Arctic with a special focus on the region's governance and its indigenous people. It will be argued that the Arctic Council as a forum for the Arctic cooperation will continue to play a role in the future, but that international cooperation for governance in the Arctic will be very different as compared to the last three decades. The thesis offers an extensive analysis of the Arctic's legal framework, and of the need for a comprehensive and efficient Arctic Governance Regime based on International Law and the main principles and purposes of the United Nations Charter.

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