Freezing the Issues: Why Arctic Coastal States Need To Implement Marine Protected Areas in the Arctic Seas

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I. INTRODUCTION

At the northern tip of the Earth, the Arctic lies semi-frozen and still ripe for exploration. This continuous exploration, however, creates an imbalance in the Arctic's fragile ecosystem. This ecosystem is home to a myriad of fish, marine mammals, and plants that rely on the Arctic's unwavering cold to survive. Unfortunately, climate change, increased maritime activities, and heavier tourism in the Arctic Ocean threaten this ecosystem. Implementing marine protected areas (MPA) throughout the Arctic Ocean, including the Central Arctic Ocean high seas, will help shield the Arctic from the detrimental effects of overfishing and shipping

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while giving it time to recuperate losses from climate change.[1] The Arctic Council—composed of Arctic coastal states, Arctic indigenous communities, and states with an interest in the Arctic—is the most competent body to create MPAs in the Arctic high seas. Although the Arctic Council established a framework for a Pan-Arctic network of MPAs, it has not made progress in implementing them. This is a negative consequence of the Arctic Council being a soft law organization and forming under a nonbinding treaty, contrary to the binding legal regimes in the Antarctic that have successfully implemented high seas MPAs. In addition to the work the Arctic Council can do, the Arctic coastal states must continue to implement MPAs in their exclusive economic zones (EEZ). Part II of this Comment discusses the background of the Arctic and the history of Arctic governing regimes. Part III discusses the benefits of MPAs in the Arctic, while Part IV covers the Antarctic Treaty System and successful MPAs in the Antarctic. Part V analyzes how Arctic coastal states implement MPAs in their EEZs. Lastly, Part VI discusses how the Arctic Council and Arctic coastal states should create an MPA in the Arctic high seas.[2]

II. THE ARCTIC

A. Background

There is no set definition for the Arctic because different organizations and States use different ones. The most common definition is north of the Arctic Circle (66°33'N).[3] The Arctic Monitoring and Assessment Programme (AMAP) defines the Arctic as "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," because the Arctic Circle line does not take into account variations in temperature, presence of mountain ranges and large bodies of water, and differences in permafrost occurrence.[4] This definition adds significantly more area to the Arctic than the first definition. The northern coordinates of the

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1. *See Framework for a Pan-Arctic Network of Marine Protected Areas*, PAME INT'L SECRETARIAT 7 (2015), http://www.pame.is/images/03_Projects/MPA/MPA_Report.pdf [hereinafter *Framework for a Pan-Arctic Network*].

2. Although fisheries are a vital aspect of the Arctic Ocean, this Comment will focus on the overarching features of the challenges and need to implement an MPA.

3. *All About Arctic Climatology and Meteorology*, NAT'L SNOW & ICE DATA CENTER (2017), https://nsidc.org/cryosphere/arctic-meteorology/arctic.html.

4. Assessment Report, ARCTIC MONITORING & ASSESSMENT PROGRAMME 9, 10 (1998).

Arctic are why it is particularly sensitive to climate change. Melting of Arctic ice contributes to redirecting migration patterns of fish stocks and might also lead the Arctic states to open up the Central Arctic Ocean as a second Arctic shipping route, the Northwest Passage being the first.[5] When the earth's surface starts to warm, increasing amounts of Arctic snow and ice melt, exposing more of the earth's surface, and continuing the cycle of warming.[6] If this cycle continues, it could impact storm tracks, severity of cold-air outbreaks near the Equator, and frequency and patterns of precipitation.[7]

Arctic ice melting in the high seas and warmer temperatures lead to an increase in tourism and business in the Arctic. These activities did not occur in previously frozen areas of the Central Arctic Ocean, but the melting ice brings ecotourism and oil drilling to it before it can adapt to the change in temperature. An MPA in the Arctic that does not allow these activities to occur is beneficial because it will let scientists evaluate the area and ecosystem to adapt to climate change before bigger changes, like ships and people, infiltrate the Arctic. The high seas are semi-protected by the United Nations Convention on the Law of the Sea, but the lack of a legally binding Arctic governance system and the fuzzy nature of international law pose problems for a high seas MPA.

B. Arctic Governance

The Arctic coastal states—Canada, Denmark, Norway, Russia, and the United States (the Arctic Five)—have left the Central Arctic under protected and susceptible to these issues because they have not created a binding legal regime. The Ilulissat Declaration, adopted in 2008, states that the existing international legal framework—the 1982 United Nations Law of the Sea Convention—is adequate enough to govern the Arctic.[8] However, the International Maritime Organization (IMO) recently implemented the Polar Code as an additional legal framework to govern Arctic shipping and prevent pollution in the Arctic.[9] Although the United States and Canada have MPAs in their EEZ, the lack of a uniform treaty

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5. INGVILD ULRIKKE JAKOBSEN, MARINE PROTECTED AREAS IN INTERNATIONAL LAW—AN ARCTIC PERSPECTIVE 299 (Malgosia Fitzmaurice et al. eds., 2016).

6. Mark Serreze, *Why Is the Arctic So Sensitive to Climate Change and Why Do We Care?,* NAT'L OCEANIC & ATMOSPHERIC ADMIN. (Aug. 28, 2008), http://www.pmel.noaa.gov/arctic-zone/essay_serreze.html.

7. *Id.*

8. *See* Arctic Ocean Conference, The Ilulissat Declaration (May 28, 2008), http://www.oceanlaw.org/downloads/arctic/Ilulissat_Declaration.pdf.

9. *Shipping in Polar Waters*, INT'L MAR. ORG., http://www.imo.org/en/mediacentre/hottopics/polar/pages/default.aspx (last visited Mar. 4, 2017) [hereinafter *Shipping in Polar Waters*].

between the Arctic Five presents challenges for implementing an MPA in the Central Arctic Ocean. On the other hand, the MPA recently implemented in the Ross Sea off of Antarctica could provide a legal framework for developing an MPA in the Arctic, which I will discuss in Part IV.

1. The Arctic Council

The Arctic Council is the primary intergovernmental body for open discussions on issues affecting the Arctic, carrying out its mandates in the form of Working Groups.[10] The Ottawa Declaration created the Arctic Council in 1996.[11] The Council's primary members are the Arctic States: Canada, Denmark, Finland, Iceland, Norway, the Russian Federation, Sweden, and the United States.[12] Its purpose is promoting "cooperation, coordination, and interaction" between not only the Arctic States, but Arctic indigenous peoples and other Arctic inhabitants on issues relating primarily to environmental protections and sustainable development in the Arctic.[13] The indigenous peoples organizations—the Aleut International Association, Arctic Athabaskan Council, Gwich'in Council International, Inuit Circumpolar Conference, Russian Association of Indigenous Peoples of the North, and the Saami Council—are permanent participants in the Arctic Council.[14] The "permanent participants" category opens a dialogue of active participation and consultation between the indigenous peoples and the Arctic States.[15] The last category of membership is of Observer status, reserved for those that the Council determines can contribute to its work.[16] These members consist of non-Arctic states, intergovernmental and inter-parliamentary organizations, and nongovernmental organizations.[17] The Arctic Council Chairmanship rotates every two years: Canada held the Chairmanship from 2013-2015, the United States from 2015-2017, with Finland taking over soon in May 2017.

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10. *The Arctic Council: A Backgrounder*, ARCTIC COUNCIL, http://www.arctic-council.org/index.php/en/about-us (last visited Mar. 4, 2017).

11. Ottawa Declaration (Sept. 19, 1996), https://oaarchive.arctic-council.org/bitstream/handle/11374/85/EDOCS-1752-v2-ACMMCA00_Ottawa_1996_Founding_Declaration.PDF?sequence=5&isAllowed=y.

12. *Id.*

13. *Id.* art. 1(a).

14. *The Arctic Council: A Backgrounder*, *supra* note 10.

15. *Id.*

16. Ottawa Declaration, *supra* note 11, art. 3.

17. *Id.* art. 3(a)-(c).

The Arctic Council carries out its work in six Working Groups. The Arctic Contaminants Action Program encourages states to reduce emissions and releases of other pollutants.[18] The Arctic Monitoring and Assessment Program provides scientific data to governments to help fight climate change and monitors the Arctic environment, ecosystems, and human populations.[19] The Conservation of Arctic Flora and Fauna Working Group works to conserve the Arctic's biodiversity and ensure sustainability of Arctic living resources.[20] The Emergency Prevention, Preparedness and Response Working Group helps protect the Arctic from the threat or impact of a release of pollutants or radionuclides.[21] The Protection of the Arctic Marine Environment Working Group brings together the Arctic Council's activities for the protection and sustainable use of the marine environment.[22] Lastly, the Sustainable Development Working Group helps advance sustainable development and improve the conditions of the Arctic community.[23] These Working Groups produce studies such as Recommended Practices for Oil Spill Prevention, Identification of Arctic Marine Areas of Heightened Ecological or Cultural Significance, and the Circumpolar Biodiversity Monitoring Program Strategic Plan 2013-2017.[24]

The State that holds the Council Chairmanship is responsible for pushing through projects and mandates. A goal of the United States' chairmanship (2015-2017) has been continuing to create a Pan-Arctic Network of MPAs and creating an inventory of existing Arctic MPAs in coastal states' EEZs.[25] David Balton, the U.S. Chair of the Senior Arctic Officials, expressed his wish for the Arctic Council to move from "policy-shaping to policy-making" and emphasized the importance of the Arctic marine environment.[26] Finland takes over the Chairmanship in May 2017 and will focus on implementing the Paris Agreement on

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18. *The Arctic Council: A Backgrounder*,, *supra* note 10.
19. *Id.*
20. *Id.*
21. *Id.*
22. *Id.*
23. *Id.*
24. *Significant Products from Arctic Council Working Groups*, ARCTIC COUNCIL, http://www.arctic-council.org/index.php/en/our-work2/8-news-and-events/49-significant-products-from-arctic-council-working-groups (last updated July 16, 2015).
25. Arctic Law & Policy Inst. Univ. of Wash., *Arctic Law and Policy Year in Review: 2015*, 6 WASH. J. ENVTL. L. & POL'Y 71, 134 (2016).
26. *20 Years of the Arctic Council: Making a Positive Future Impact*, ARCTIC COUNCIL (Sept. 21, 2016), http://www.arctic-council.org/index.php/en/our-work2/8-news-and-events/419-20-years-balton-3.

Climate Change and the UN Sustainable Development Goals.[27] Finland intends to continue U.S. initiatives in the Arctic in regards to climate change, environmental protection, and sound scientific research.[28] Finland should continue the United States' work in further developing an MPA network.

Although each Chairmanship of the Arctic Council develops projects and mandates to further its goals, the Ottawa Declaration is nonbinding. The Arctic Council itself does not have power to give out, which complicates creating MPAs in the Central Arctic Ocean. The Arctic Council is not responsible for implementing and enforcing its own guidelines, assessments, or recommendations; each individual Arctic State must do so individually.[29] An additional downside of the Arctic Council is that it is only a forum, with no programming budget. Funding is voluntary, making long-term initiatives that require guaranteed funding difficult.[30] The projects must be sponsored by one or more Arctic States or other entities.[31] This does not make the Arctic Council an attractive vehicle for creating an MPA in the Arctic Ocean, but it is the forum most competent and willing to protect the Arctic seas.

While the Antarctic Treaty System (ATS) inspired the Arctic Council, there are notable differences between the two international bodies.[32] The ATS governs a continent and does not involve shared resources or sovereign nations, while the Arctic Council is made up of sovereign states that want to utilize the Arctic Ocean for shipping, living resources, and oil and gas. Additionally, the ATS developed from a treaty and the Arctic Council's declaration is not legally binding. For these reasons, it is more difficult to implement an MPA in the Arctic Ocean. The members of the Arctic Council have much more at stake in the Arctic Ocean than other bodies of the Antarctic Treaty System because of resource extraction, indigenous communities, and shipping. On the other hand, the MPAs in the high seas of the Antarctic waters provide confidence that the Arctic States may push towards an MPA, especially for reasons laid out in Part IV.

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27. *Finland's Chairmanship of the Arctic Council in 2017-2019*, MINISTRY FOR FOREIGN AFF. FIN. (Feb. 9, 2017), http://formin.finland.fi/public/default.aspx?contentid=356546.

28. Timo Soini, Minister for Foreign Affairs of Fin., Remarks at the Arctic Circle Conference (Oct. 7, 2016).

29. *The Arctic Council: A Backgrounder*,, *supra* note 10.

30. *20 Years of the Arctic Council: What Are the "Big Questions" Ahead?*, ARCTIC COUNCIL (Sept. 20, 2016), http://www.arctic-council.org/index.php/en/our-work2/8-news-and-events/418-20-years-balton-2.

31. *The Arctic Council: A Backgrounder*, *supra* note 10.

32. Erik Molenaar, *Current and Prospective Roles of the Arctic Council System Within the Context of the Law of the Sea*, 27 INT'L J. MARINE & COASTAL L. 553, 572 (2012).

2. The United Nations Convention on the Law of the Sea

The United Nations Convention on the Law of the Sea (UNCLOS) provides a legal regime for the seas and ocean and promotes peace and security throughout.[33] UNCLOS provides a regulatory framework for a multitude of ocean management issues including marine living resource management, coastal-state management responsibilities, and pollution.[34] One year after sixty states ratified the Convention, it entered into force in 1993. As of September 23, 2016, there are 168 parties to UNCLOS.[35] The United States is the only Arctic state not a party to UNCLOS, but it acknowledges most parts of the Convention as customary international law.[36] Although UNCLOS provides a legal framework for the seas, including the Arctic Ocean, it comes with limitations on implementing an MPA in the Central Arctic Ocean, which is outside the jurisdiction of member states.

A coastal state retains certain duties and rights up to 200 nautical miles (nm) seaward from the state's coastline. The coastal state may invoke sovereignty in its territorial sea, extending 12nm from the coastline.[37] In its contiguous zone, extending 12nm to 24nm from the coastline, the state may prevent infringement on its customs, immigration, fiscal or sanitary laws within its territory and territorial sea, and punish infringement of those laws committed in its territory or territorial sea.[38] A coastal state's EEZ extends from the coastline to 200nm seaward.[39] In its EEZ, a coastal state may explore and exploit its resources but retains a duty to conserve and manage both the living and nonliving natural resources in the area.[40] Regarding living resources, UNCLOS provides that the coastal state has a responsibility to "ensure through proper conservation and management" that the living resources in the area are not overexploited and shall cooperate with competent

33. United Nations Convention on the Law of the Sea preamble, Dec. 10, 1982, 1833 U.N.T.S 397 [hereinafter UNCLOS].

34. Angie Lyne Fredrickson, Note, *The Ice-Free Arctic Is Coming: Why a Circumpolar Network of Marine Protected Areas Is Needed To Protect Arctic Fisheries from Climate Change*, 8 DREXEL L. REV. 185, 207 (2015).

35. *Chronological Lists of Ratification of, Accessions and Successions to the Convention and the Related Agreements*, OCEANS & L. SEA UNITED NATIONS (Sept. 23, 2016), http://www.un.org/depts/los/reference_files/chronological_lists_of_ratifications.htm#The%20United%20Nations%20Convention%20on%20the%20Law%20of%20the%20Sea.

36. *Id.*; Fredrickson, *supra* note 34, at 207.

37. UNCLOS, *supra* note 33, art. 2, 3.

38. *Id.* art. 33.

39. *Id.* art. 57.

40. *Id.* art. 56.

international organizations to achieve this.[41] UNCLOS further provides for specific regulations regarding fish stocks, marine mammals, and a coastal state's EEZ.[42] Because a coastal state retains control over its EEZ and is responsible for conservation measures, the state may easily utilize an MPA to protect its resources.

Challenges lie in creating an MPA on the high seas. The high seas are not owned or controlled by any state. UNCLOS defines high seas as "all parts of the sea that are not included in the exclusive economic zone, in the territorial sea or in the internal waters of a State, or in the archipelagic waters of an archipelagic state."[43] States may exercise freedom of navigation, fishing, and construction of artificial islands, but no state may exercise sovereignty over any part of the high seas.[44] States are entitled to lay pipelines and submarine cables on the high seas beyond the continental shelf.[45] Additionally, every state has the right to sail ships flying its flag on the high seas.[46] These provisions give states the freedom to engage in semi-unregulated activities that can harm the fragile marine environment in the Central Arctic Ocean.

Moreover, UNCLOS contains provisions regarding the management and conservation of living resources on the high seas. Many of these provisions pertain to fisheries management. While citizens of each state has the right to engage in fishing on the high seas, states also have a duty to take measures "as may be necessary" in the conservation of living resources on the high seas and cooperate with other States in taking these measures as well.[47] States that exploit living resources shall enter into negotiations with other states on the proper measures necessary for conservation.[48] States have a duty to apply these conservation measures to marine mammals as well.[49] Thus, while certain UNCLOS provisions give broad freedoms on the high seas, those freedoms are limited when it comes to the use of living resources.

UNCLOS gives coastal states the "right to adopt and enforce" laws and regulations for the "prevention, reduction and control of marine pollution from vessels in ice-covered areas."[50] The limitation of this

41. *Id.* art. 61(2).
42. *Id.* arts. 62, 64-68.
43. *Id.* art. 86.
44. *Id.* arts. 87, 89.
45. *Id.* art. 112.
46. *Id.* art. 90.
47. *Id.* arts. 116-17.
48. *Id.* art. 118.
49. *Id.* art. 120.
50. *Id.* art. 234.

provision is that it applies to coastal states' EEZs, not the high seas.[51] The ice-covered areas have "particularly climatic conditions," and ice-covered areas for most of the year create hazards to navigation; furthermore, the pollution could cause extreme harm or irreparable disturbance to the marine ecological balance.[52] These laws and regulations shall be based on the best available scientific evidence.[53] UNCLOS does not include MPAs as a specific requirement to comply with the obligations.[54] Because UNCLOS provides a special provision for ice-covered areas, the Arctic Council and the Arctic coastal states must take these provisions into consideration when discussing the implementation of an MPA in the Central Arctic Ocean. There must be a balance between shipping needs in the Arctic and environmental protection measures. An MPA only partially closed to shipping protects the Arctic ecosystem and facilitates the shipping economy at the same time.

3. The International Maritime Organization

The International Maritime Organization (IMO) is a specialized agency of the United Nations that sets global standards on the safety, security, and environmental performance of international shipping.[55] The IMO has two key conventions that apply to the Arctic: the International Convention for the Safety of Life at Sea (SOLAS) and the International Convention for the Prevention of Pollution from Ships (MARPOL).[56] Under these conventions, the IMO adopted its first binding bipolar instrument, the International Code for Ships Operating in Polar Waters (Polar Code), which entered into force on January 1, 2017.[57]

The IMO developed the Polar Code to increase ship safety and lessen the impact on both the people and environment in the remote, vulnerable, and potentially harsh polar waters.[58] It recognized that polar waters impose navigational challenges on ships and that coastal communities and polar ecosystems in the Arctic are vulnerable to ship operations.[59] The Polar Code also recognized the difference between

51. *Id.*
52. *Id.* art. 234.
53. *Id.*
54. JAKOBSEN, *supra* note 5, at 10.
55. *Introduction to IMO*, INT'L MAR. ORG., http://www.imo.org/en/About/Pages/Default.aspx (last visited Mar. 8, 2017).
56. *List of IMO Conventions*, INT'L MAR. ORG., http://www.imo.org/en/About/Conventions/ListOfConventions/Pages/Default.aspx (last visited Mar. 8, 2017).
57. *See Shipping in Polar Waters, supra* note 9.
58. *See* International Code for Ships Operating in Polar Waters, IMO Doc. MEPC 68/21/Add.1, pmbl. art. 1 (Jan. 1, 2017).
59. *Id.* pmbl. arts. 3-4.

Arctic and Antarctic waters, taking into account the legal and geographical differences.[60] Part II-A of the Polar Code addresses mandatory environmental protections, such as a ban on the discharge of oil and oily mixtures and a prohibition on the discharge of food wastes onto ice.[61] Throughout the negotiations, environmental groups called to extend an existing ban on the use and carriage of heavy fuel oil already in place in the Antarctic and Arctic regions, but they recognized that the mandatory environmental provisions in the Polar Code were a good start.[62] Additionally, the safety provisions of the Polar Code are intended to benefit vessels will also enhance protection of the environment.[63]

However, although the Polar Code is binding, the IMO does not have a mandatory enforcement mechanism. Thus, it is up to individual states to comply with the Polar Code. For this reason, the Arctic Council is the international body best suited to enforce the Polar Code.[64] In the Arctic's Northwest Passage, there are five routes that the Arctic Council recognizes are not considered suitable for shipping but may be used by ships.[65] Because the IMO relies on voluntary state party enforcement, the Arctic Council states must be the voluntary enforcers of the Polar Code.[66] The Arctic coastal states, having an interest in what goes on in the Arctic waters they border, should implement an enforcement declaration between themselves. Although Polar Code noncompliance costs would be high for shipping lines, the Arctic Council would suffer minimal consequences because it already has provisions for mutual operations that enables them to cover their losses.[67] The IMO and Arctic Council could combine their expertise in their respective fields to work together and not only enforce the Polar Code but start implementing MPAs as well.

If the IMO and the Arctic Council worked together here, they could strengthen the Arctic Council's power to implement an MPA. However, the voluntary nature of the Arctic Council and the IMO do not suggest that the two organizations will work together to strengthen the Arctic Council's power. Although if Finland leads the Arctic Council to become

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60. *Id.* pmbl. art. 6.
61. *Id.* para. II-A, art. 1.1.1, art. 5.2.1.1.
62. *See* Stephanie Altman, *International Maritime Organization Adopts Polar Code*, 47 TRENDS 13, 15 (2016).
63. *Id.*
64. Richard O.G. Wanerman, *Freezing Out Noncompliant Ships: Why the Arctic Council Must Enforce the Polar Code*, 47 CASE W. RES. J. INT'L L. 429, 434 (2015).
65. *Id.* at 435-36.
66. *Id.* at 445.
67. *See id.* at 448.

a policy-maker, the policies will adapt to custom over time. Moreover, because international law already recognizes that certain environmental provisions are necessary in order to keep the Arctic open and preserved for future generations, international law may give the Arctic Council power to implement an MPA.[68] Finland can push for an addendum to the Ottawa Declaration that provides for an interpretation of international law to this extent, giving the Arctic Council both power to enforce the Polar Code and protect and preserve the Arctic high seas by implementing an MPA.

The IMO is also responsible for designating Particularly Sensitive Sea Areas (PSSA) that need special protection.[69] In order to be designated a PSSA, an area must meet certain criteria such as a critical habitat, spawning or breeding grounds, or scientific and educational criteria.[70] Previously designated PSSAs include the Great Barrier Reef (Australia), the Canary Islands (Spain), and the Baltic Sea area (Denmark, Estonia, Finland, Germany, Latvia, Lithuania, Poland, and Sweden).[71] Although the IMO recognizes the ecological importance of all oceans, it has yet to establish a PSSA outside of state territorial waters, making a PSSA in the Central Arctic Ocean a long shot.

III. BENEFITS OF A MARINE PROTECTED AREA

A Pan-Arctic Network of MPAs, including high seas MPAs, immensely benefits the Arctic. Similar to the lack of a globally accepted definition of the Arctic, there are no clear legal definitions of MPAs.[72] In 2008, the International Union for Conservation of Nature (IUCN) presented an updated definition for a protected area: "a clearly defined geographical space, recognized, dedicated and managed, through legal or other effective means, to achieve the long-term conservation of nature with associated ecosystem services and cultural values."[73] Additionally, the Convention on Biological Diversity defines a protected area as a "geographically defined area which is designated or regulated and managed to achieve specific conservation objectives."[74] The IUCN defines an MPA as "any area of intertidal or subtidal terrain, together

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68. *See id.* at 450.

69. *Particularly Sensitive Sea Areas*, INT'L MAR. ORG. [IMO], http://www.imo.org/en/OurWork/Environment/PSSAs/Pages/Default.aspx (last visited Feb. 12, 2017).

70. Int'l Mar. Org., A 24/Res.982 (Feb. 6, 2006).

71. *Particularly Sensitive Sea Areas*, *supra* note 69.

72. JAKOBSEN, *supra* note 5, at 6.

73. *The New IUCN Definition for 'Protected Area': Examining Its Effects on MPA Practice*, 10 MPA NEWS 5, 1 (Nov. 2008).

74. Convention on Biological Diversity, 1760 U.N.T.S. 79 (1992).

with its overlying water and associated flora, fauna, historical and cultural features, which has been reserved by law or other effective means to protect part or all of the enclosed environment."[75] In addition to those definitions, MPAs range from marine managed areas, which are not fully closed off from human activity all the time, to strict no-take areas.[76] MPAs enjoy a special status based on their stringent regulation of human activity (e.g., shipping or fishing), by one or more measures (e.g., the prohibition of anchoring or bottom trawling), for one or more purposes (e.g., the preservation of habitats or conservation for marine scientific research).[77]

MPAs "protect and preserve marine biodiversity, ecosystem function and special natural features, and preserve cultural heritage and subsistence resources."[78] A Pan-Arctic MPA network accomplishes those goals. The Arctic Council expressed its willingness to develop this system with an Arctic Marine Strategic Plan in 2004 and their Framework for a Pan-Arctic Network of Marine Protected Areas.[79] The Arctic Council is aware that MPAs do not permanently take anything away from use, as they are commonly thought to do, but provide for future long-term use of the resources found in that area.[80] The Arctic waters have an impact in moderating climate change, and therefore protecting and conserving the environment is an urgent matter.[81] Coastal communities in Alaska are worried about the impact of climate change on their livelihood—namely erosion, subsistence, flooding, and loss of permafrost—and the Arctic Council recognizes that a "well-designed MPA network" might improve regulatory predictability.[82]

A Pan-Arctic Network of MPAs benefits the Arctic in ecological resilience, culturally, and socio-economically. An ecologically resistant system gives the ecosystem the capability to resist a disturbance and recover from it quickly.[83] The ever-changing Arctic landscape and

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75. JAKOBSEN, *supra* note 5, at 7.

76. Douglas Fenner, *Criticism of Marine Protected Areas by Fisheries Scientists*, 108 MARINE POLLUTION BULL. 12, 12 (2016).

77. Erik J. Molenaar & Alex G. Oude Elferink, *Marine Protected Areas in Areas Beyond National Jurisdiction: The Pioneering Efforts Under the OSPAR Convention*, 5 UTRECHT L. REV. 5, 6 (2009).

78. *Framework for a Pan-Arctic Network, supra* note 1, at 5.

79. *Id.*

80. Interview by Hannah Hoag with Martin Sommerkor, *Marine Protected Areas Safeguard Future Use*, NEWS DEEPLY ARTIC DEEPLY (Dec. 8, 2015), https://www.newsdeeply.com/arctic/community/2015/12/08/marine-protected-areas-safeguard-future-use [hereinafter Hannah Hoag Interview].

81. *Framework for a Pan-Arctic Network, supra* note 1, at 6.

82. *Id.* at 7.

83. *Id.*

melting ice brings new disturbances—tourism and oil drilling—to the Arctic, and an MPA helps the ecosystem adapt to these changes. An MPA provides the Arctic with the ability to protect natural ecological values, provides refuge for marine species, and supports the marine community structure in fisheries.[84] While MPAs placed where fisheries are already established could have a negative consequence to the fishing economy, MPAs placed in undisturbed marine biodiversity ecosystems serve an important role in restoring or improving performance.[85] MPAs placed in undisturbed portions of the Central Arctic Ocean serve this purpose. Climate change causes species in the southern oceans to travel to the Arctic in search of colder waters, and it is important to make sure there is a way to connect the habitats and conserve biodiversity.[86] Change is rapidly approaching the Arctic, and it is imperative that the Arctic states, and the Arctic Council, are consistent and proactive in preserving this biological diversity.[87]

A Pan-Arctic Network of MPAs furthers several goals of the Arctic Council. These goals include: "conserving Arctic marine biodiversity and ecosystem functions; promoting the health and prosperity of all Arctic inhabitants; and advancing sustainable Arctic marine resource use."[88] These measures show that Arctic States have not just discussed implementing an MPA in the Central Arctic Ocean but are actively working on measures to make it possible. Additionally, an MPA will achieve goals set out in the Convention on Biological Diversity. Many countries in the Arctic are party to this convention and have committed themselves to establish 10% of their waters as MPAs.[89]

Furthermore, given the sensitive nature and hard to reach areas of the Arctic, an oil spill poses severely detrimental effects on the Arctic. Since the Arctic is a treacherous and hard to reach place, there is no way to prevent the impacts of a spill. The consequences on Arctic animals—such as walruses, polar bears, and belugas—would be devastating. For example, a study done on the effects of an oil well blowout in the U.S. Arctic Ocean, in the outer continental shelf of the Chukchi and Beaufort Seas off Alaska, shows that crude oil would spread for hundreds of miles

84. *Id.*

85. FLORA AKWILAPO, A COMPARATIVE STUDY ON MARINE PROTECTED AREAS BETWEEN AUSTRALIA AND TANZANIA 12 (2007).

86. Hannah Hoag Interview, *supra* note 80.

87. *Id.*

88. *Framework for a Pan-Arctic Network*, *supra* note 1, at 9.

89. Hannah Hoag Interview, *supra* note 80.

and "devastate Alaska's shorelines, as well as marine life."[90] An MPA preventing coastal states from oil and gas exploration and production activities is necessary to protect this fragile ecosystem and benefits the rehabilitation of this area in the long run. While the high seas MPA in Antarctica is focused on fishing and scientific research instead of oil and gas, the diligence the United States and New Zealand showed in agreeing to the Ross Sea MPA is an example the Arctic Council and Arctic coastal states should follow.

IV. ANTARCTIC REGIMES

Antarctica has a regional regime for its governance just like the Arctic. However, there is an immense difference between the two regions including a permanent population in the Arctic (indigenous peoples), different climate systems, and Antarctica being a continent while most of the Arctic is sea and ice. Thus, the regimes have different policy goals and ways of governing. This, however, does not mean that the Arctic governing system cannot learn from what the Antarctic Treaty System has accomplished: implementing an MPA in the Antarctic high seas.

A. Antarctic Treaty System

Countries whose scientists had been active in the area signed the Antarctic Treaty on December 1, 1959.[91] The treaty applies to the area south of 60° South Latitude and includes all islands and ice shelves.[92] There are now fifty-three parties to the treaty, including Argentina, Australia, Chile, France, New Zealand, Norway, Russia, and the United States.[93] The treaty emphasizes the importance of scientific research, investigation, and the sharing of results between states.[94]

Furthermore, the Protocol on Environmental Protection to the Antarctic Treaty emphasizes the importance of Antarctic marine life. This Protocol prohibits all activities related to Antarctic marine resources (except for scientific research) and puts forth the need for environmental

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90. Anne Hawke & Jacob Eisenberg, *NRDC Study Cites Huge Risk for Arctic Drilling, Supports Call for Permanent Ban*, NAT. RES. DEF. COUNCIL (Dec. 13, 2016), https://www.nrdc.org/media/2016/161213-0; MARK WEST, NAT. RES. DEF. COUNCIL, THE FATE OF THE ARCTIC IN OFFSHORE OIL BLOWOUTS (Dec. 1, 2016), https://www.nrdc.org/sites/default/files/fate-oil-arctic-ocean-blowouts-report.pdf.

91. *The Antarctic Treaty*, SECRETARIAT ANTARCTIC TREATY, http://www.ats.aq/e/ats.htm.

92. *Antarctic Treaty System*, SCI. COMMITTEE ON ANTARCTIC RES., http://www.scar.org/antarctic-treaty-system (last visited Mar. 4, 2017).

93. *The Antarctic Treaty*, *supra* note 91.

94. *Id.*

impact assessments.[95] There are two other relevant international agreements: the Convention for the Conservation of Antarctic Seals (1972) and the Convention on the Conservation of Antarctic Marine Living Resources (1980).[96] The three previously mentioned conventions, the Antarctic Treaty, and over 300 recommendations adopted by the Treaty parties, comprise the Antarctic Treaty System.[97] Parties to the Treaty have promulgated rules that allow the stringent implementation of legally binding provisions to regulate activities in Antarctica, helping states designate MPAs in the high seas.[98] This system had time to put these conventions in place and is much more developed than the newer Arctic Council.

B. Ross Sea Marine Protected Area

In October 2016, all member countries of the Commission for the Conservation of Antarctic Marine Living Resources agreed to a joint proposal between the United States and New Zealand to establish an MPA with an area of over one million square kilometers off the coast of Antarctica.[99] The proposal was originally put forth in 2011 and refined from 2012-2015 with scientific data to support the MPA and specific boundaries for the exact location.[100] The MPA will limit or entirely prohibit some activities to meet specific conservation, ecosystem monitoring, habitat protection, and fisheries management objectives.[101] Parts of the MPA will allow some harvesting of krill and fish for scientific research, but the majority (72%) of the MPA will be a no-take zone, forbidding all fishing.[102] The Ross Sea is considered one of Earth's last "pristine areas" and is relatively untouched by human activities.[103]

The establishment of the Ross Sea MPA in international waters provides hope that similar treaties can be ratified for other important

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95. The Protocol on Environmental Protection, art. 7-8 (Oct. 4, 1991).

96. *The Antarctic Treaty*, BRIT. ANTARCTIC SURV. NAT. ENVTL. RES. COUNCIL, https://www.bas.ac.uk/about/antarctica/the-antarctic-treaty/ (last visited Mar. 8, 2017).

97. *Id.*

98. *The Antarctic Treaty Explained*, BRIT. ANTARCTIC SURV. NAT. ENVTL. RES. COUNCIL, https://www.bas.ac.uk/about/antarctica/the-antarctic-treaty/the-antarctic-treaty-explained/ (last visited Mar. 8, 2017).

99. *CCAMLR To Create World's Largest Marine Protected Area*, COMMISSION FOR CONSERVATION ANTARCTIC MARINE LIVING RESOURCES (Jan. 5, 2017), https://www.ccamlr.org/en/news/2016/ccamlr-create-worlds-largest-marine-protected-area.

100. *Id.*

101. *Id.*

102. *Id.*

103. *Antarctic Ocean Breakthrough: Ross Sea To Become World's Largest Marine Protected Area*, INT'L UNION FOR CONSERVATION NATURE (Nov. 7, 2016), https://www.iucn.org/news/antarctic-ocean-breakthrough-ross-sea-become-worlds-largest-marine-protection-area.

areas of marine biodiversity in areas beyond national jurisdiction.[104] The Ross Sea MPA comes seven years after the Commission for the Conservation of Antarctic Marine Living Resources designated the first high seas MPA in the south Atlantic on the southern shelf of the South Orkney Islands.[105] The South Orkney Islands MPA was only designated after the boundaries were redrawn to exclude a commercial fishery in the region.[106] The parties found a balance between freedoms of the high seas and principles of environmental protection.

V. MARINE PROTECTED AREAS IN ARCTIC COASTAL STATES' WATERS

Although there is no duty to implement an MPA in Arctic high seas, coastal states have a duty under UNCLOS to protect and preserve the environment in their exclusive economic zones. The coastal state retains sovereign rights in the natural resources of waters superjacent to the seabed, and of the seabed itself, and its subsoil, which includes the continental shelf.[107] Furthermore, UNCLOS provides that coastal states may adopt laws and regulations in the EEZ for the "prevention, reduction and control of pollution from vessels" conforming to accepted international rules and standards.[108] These rules on vessel pollution must conform to the prescriptive and enforcement jurisdiction of the coastal state.[109]

However, these rules do conflict with the rights and duties of other states in the EEZ that UNCLOS lays out: "all States, whether coastal or landlocked, enjoy . . . the freedoms . . . of navigation and overflight and of the laying of submarine cables and pipelines, and other internationally lawful uses of the sea related to these freedoms."[110] Although coastal states may enforce their rules, they are subject to the freedoms given to other states in Article 58. Rules of pollution conflict with freedoms of navigation because one provides for protection and the other lends a freedom.[111] Some scholars believe that establishing an MPA in a coastal state's EEZ is a territorial claim that infringes on other states' freedom of

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104. *Id.*

105. *CCAMLR To Create World's Largest Marine Protected Area, supra* note 99.

106. Karen N. Scott, *Conservation on the High Seas: Developing the Concept of the High Seas Marine Protected Areas*, 27 INT'L J. MARINE & COASTAL L. 849, 855 (2012).

107. UNCLOS, *supra* note 33, art. 56(1)(a).

108. *Id.* art. 211(5).

109. *Id.* art. 220; JAKOBSEN, *supra* note 5, at 36.

110. UNCLOS, *supra* note 33, art. 58(1)(a).

111. JAKOBSEN, *supra* note 5, at 38.

navigation.[112] However, UNCLOS directs states to "protect and preserve" the marine environment and gives them sovereign rights over living resources.[113] Additionally, while Article 194(4) directs states to take measures to prevent, reduce, or control pollution of the marine environment, it also prohibits states from interfering with rights for activities carried out by other states, including freedom of navigation. However, Article 194(5) directs states to take necessary measures to protect rare or fragile ecosystems, and the Arctic ecosystem certainly qualifies as one that needs more protection and less pollution from shipping.

The United States and Canada committed to significant progress in the protection of Arctic waters in their jurisdiction. In December 2016, the United States and Canada agreed to work together to protect the Arctic region they share.[114] The United States agreed to limit offshore oil and gas in the majority of U.S. waters in the Chukchi and Beaufort Seas, while Canada agreed to "designate all Arctic Canadian waters as indefinitely off limits to future offshore Arctic oil and gas licensing, with a review every five years."[115] In addition to the science-based approach to oil and gas, both countries will begin the first processes ever to identify sustainable shipping lanes throughout their shared Arctic waters.[116] The U.S. Coast Guard will launch a "Port Access Route Study" in order to establish vessel routing measures with traffic separation schemes, recommended routes with low impact, and Areas To Be Avoided.[117] Lastly, the United States committed to support and strengthen existing commercial fisheries and to conduct scientific research to improve our understanding of the Arctic.[118] The United States and Canada expressed hope that the other Arctic coastal states and the Arctic Council body will take initiative towards similar goals and set the stage for deeper partnerships with the other Arctic states.[119]

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112. UNCLOS, *supra* note 33, arts. 56, 192-194; JAKOBSEN, *supra* note 5, at 39.

113. UNCLOS, *supra* note 33, arts. 56, 192-194; JAKOBSEN, *supra* note 5, at 39.

114. Jake Schmidt, *Canada and U.S. Announcement on Arctic Oil Drilling Is a Win*, NAT. RESOURCES DEF. COUNCIL: EXPERT BLOG (Dec. 21, 2016), https://www.nrdc.org/experts/jake-schmidt/canada-and-us-announcement-arctic-oil-drilling-win.

115. *Id.* (internal quotation omitted).

116. Press Release, The White House—President Barack Obama, United States—Canada Joint Arctic Leaders' Statement (Dec. 20, 2016), https://obamawhitehouse.archives.gov/the-press-office/2016/12/20/united-states-canada-joint-arctic-leaders-statement.

117. *Id.*

118. *Id.*

119. *Id.*

The Arctic Council set a goal to establish a network of MPAs, but production was halted in 2004 until a state stepped up to take initiative.[120] This was not picked up again until the 2015 Framework for a Pan-Arctic Network of MPAs.[121] This Framework focuses on a network of MPAs in coastal state EEZs, with a possible link to the high seas. However, it will not provide a framework for MPAs in areas beyond national jurisdiction.[122] In addition to the efforts by Canada and the United States, Norway has submitted marine parts of seven protected areas in its EEZ to join an MPA network.[123] This Framework provides an important tool to obtain Arctic MPAs that can be used in establishing MPAs in the high seas.

VI. MARINE PROTECTED AREAS IN THE HIGH SEAS

International law does not provide a consistent legal framework on creating MPAs in the high seas. The high seas cover roughly 64% of the total ocean surface, meaning many of the fragile ecosystems may remain unprotected.[124] While there are some ecosystems located onshore or within a coastal state's EEZ, there are marine formations such as submarine canyons and hydrothermal vents that are most likely located in the high seas and subject to a lack of protection.[125] Although MPAs in the high seas are a complicated matter, given the lack of adequate implementing treaties and differences in opinions by states, they are possible, as seen through two MPAs implemented in Antarctic waters: the Ross Sea and the South Orkney Islands. These MPAs are products of international cooperation and persistence on the parts of the United States and New Zealand (regarding the Ross Sea). With the cooperation of the Arctic coastal states, and the persistence of the United States, Canada, and Norway to implement MPAs in their EEZs, a high seas MPA in the Central Arctic Ocean is attainable.

Two regimes within UNCLOS govern this part of the oceans: the high seas regime and Part XI, applicable to the Area Beyond National Jurisdiction (ABNJ). These two regimes overlap, and there is not a consensus on whether the living resources within the Area are covered by the high seas provisions or Part XI on the common heritage of

120. JAKOBSEN, *supra* note 5, at 235.

121. *See Framework for a Pan-Arctic Network*, *supra* note 1.

122. JAKOBSEN, *supra* note 5, at 237.

123. *Framework for a Pan-Arctic Network*, *supra* note 1, at 18.

124. Tullio Scovazzi, *Marine Protected Areas on the High Seas: Some Legal and Policy Considerations*, 19 INT'L. J. MARINE & COASTAL L. 1, 1 (2004).

125. *Id.*

mankind.[126] Freedoms on the high seas include fishing and navigation, while Part XI is more restrictive, setting up rules for protecting the marine environment from impacts of mining activities.[127] Scholars argue that this provision gives the International Seabed Authority (the competent legal body in charge of the Area) the power to establish a high seas MPA.[128] However, the majority of discussions for ABNJ MPA implementation occur in the Ad Hoc Open-Ended Informal Working Group established by the United Nations in 2004.[129]

UNCLOS directs states to cooperate on both a global and regional basis in formulating international rules and standards for the protection and preservation of the marine environment; therefore, establishing an MPA on the high seas must cooperate with this provision.[130] Given the freedoms of the high seas that UNCLOS provides for all states, a treaty for an MPA must not infringe on said freedoms and the states must carefully decide which area they want to protect.[131] An additional challenge to a high seas MPA is that a treaty would only be binding to the states who sign it.[132]

State practice supports creating MPAs on the high seas. The 1946 International Convention on the Regulation of Whaling protects over 30% of the oceans with whale sanctuaries and several regional fisheries management organizations closed high seas to fishing or particular types of fishing.[133] Additionally, the Convention for the Protection of Marine Environment of the North-East Atlantic (OSPAR Commission) established the first network of six high seas MPAs in the Northeast Atlantic in 2010 to support spatial and ecosystem-focused management.[134] Nevertheless, challenges still exist when an area supported by a regional sea organization does not have a multilateral legal basis supporting the designation.[135]

Although rare, the Arctic Council is capable of putting forth legally binding instruments. They have agreed to two so far: the Agreement on Cooperation on Aeronautical and Maritime Search and Rescue in the Arctic (SAR) and the Agreement on Cooperation on Marine Oil

126. Molenaar & Elferink, *supra* note 77, at 7.
127. UNCLOS, *supra* note 33, art. 145.
128. Molenaar & Elferink, *supra* note 77, at 8.
129. *Id.* at 11-12.
130. UNCLOS, *supra* note 33, art. 197; JAKOBSEN, *supra* note 5, at 53.
131. JAKOBSEN, *supra* note 5, at 53.
132. Vienna Convention on the Law of Treaties art. 34, May, 23, 1969, 115 U.N.T.S. 331.
133. Scott, *supra* note 106, at 851-52.
134. *Id.* at 853.
135. *Id.* at 855.

Pollution Preparedness and Response in the Arctic (MOPPR).[136] Although the Arctic Council is mainly a discussion forum for Arctic issues, the Norwegian ministers were able to achieve these binding agreements by mandating Task Forces to develop an international instrument for cooperation.[137] While the SAR Agreement applies to the territorial limits of states' waters, the MOPPR Agreement directs states to monitor activities to identify pollution incidents not only in their jurisdiction but in adjacent waters beyond the jurisdiction of any state, where feasible.[138] This provision illustrates how the Arctic Council can develop its framework to overcome the challenges of implementing a high seas MPA. By putting together a Task Force, Finland (the next chair of the Arctic Council) can continue the framework development of an MPA network—the main goal in both states' EEZs and the high seas. The chairman should think about putting in a provision similar to MOPPR's stating that coastal states should, while complying with UNCLOS, aim to protect and initiate measures to implement a high seas MPA in their adjacent waters.

The Arctic coastal states are capable of producing a binding legal initiative in the high seas, as seen by the Declaration Concerning The Prevention of Unregulated High Seas Fishing in the Central Arctic Ocean (Oslo Declaration).[139] The Oslo Declaration recognizes the effect of climate change on the Arctic ecosystem and that human activities are more present in the Arctic now than ever.[140] The Oslo Declaration continues, recognizing that fish stocks occur in the Arctic high seas and that ice in the high seas is continuing to melt.[141] The Oslo Declaration implements interim measures to monitor fishing and perform scientific research in the high seas entirely surrounded by waters of each of the Arctic coastal states.[142] These measures do not infringe on other international legal obligations, such as UNCLOS and regional fisheries management agreements. Following this framework, the Arctic coastal states can start discussions on creating a high seas MPA that does not infringe on international law.

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136. *Agreements*, ARCTIC COUNCIL (Sept. 16, 2015), http://www.arctic-council.org/index.php/en/our-work/agreements.

137. *Id.*

138. Agreement on Cooperation on Marine Oil Pollution Preparedness and Response in the Arctic art. 7(1), ARCTIC COUNCIL (May 15, 2013).

139. Declaration Concerning the Prevention of Unregulated High Seas Fishing in the Central Arctic Ocean (July 16, 2015), https://www.regjeringen.no/globalassets/departementene/ud/vedlegg/folkerett/declaration-on-arctic-fisheries-16-july-2015.pdf.

140. *Id.*

141. *Id.*

142. *Id.*

VII. CONCLUSION

The push for MPAs in Arctic waters is far from over. While Arctic coastal states—the United States, Canada, and Norway—work together to establish joint protected areas in their EEZs, an MPA in the Arctic high seas is still needed. With climate change moving at a fast pace and the possibility of shipping lanes opening up, the Arctic Council must work with other competent legal bodies, such as the International Maritime Organization and the International Seabed Authority, to strive to put together a legally binding instrument that establishes an Arctic high seas MPA. Despite the differences between the Arctic and Antarctic systems, Arctic governance can learn from the Antarctic Treaty System. By adopting legally binding provisions, the Arctic Council can work towards emulating the Antarctic System to implement a high seas MPA. This initiative must come from the Arctic coastal states, which can use the Arctic Council as a forum to work together to agree on establishing high seas MPAs, as they did with the Oslo Declaration to combat illegal fishing. These features certainly will not come overnight, but the Arctic Council, with Finland in the Chairmanship, must continue discussions on the necessary protection of the Arctic environment before the ecosystem deteriorates.