

Promoting Strong Arctic Governance and Ensuring an Aspirational Marine Resources Treaty's Effectiveness: The Case of the Agreement to Prevent Unregulated High Seas Fisheries in the Central Arctic Ocean

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By as early as 2035, the now-frozen Arctic Ocean may become completely ice-free each summer.¹ In winter, sea ice still covers nearly all the Arctic Ocean's 5.4 million square miles of water.² But during the warmer summer months, Arctic sea ice quickly recedes. In recent decades, more and more sea ice has melted away each summer. During the summer of 1980, sea ice melted to 2.7 million square miles of coverage; in summer 2020, sea ice shrank to a mere 1.9 million square miles.³ Over the last sixteen years, scientists have recorded the sixteen lowest extents of Arctic sea ice ever measured,⁴ with the lowest recorded extent occurring in the summer of 2012, when only 1.4 million square feet of sea ice remained.⁵

As Arctic sea ice melts, the Arctic's economic importance—and the need for effective regional governance—is increasing. The United States, China, Russia, and others are expanding their regional military capabilities and building infrastructure

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1. See Maria-Vittoria Guarino, Louise C. Sime, David Schröder, Irene Malmierca-Vallet, Erica Rosenblum, Mark Ringer, Jeff Ridley, Danny Feltham, Cecilia Bitz, Eric J. Steig, Eric Wolff, Julienne Stroeve, & Alistair Sellar, *Sea-ice-free Arctic During the Last Interglacial Supports Fast Future Loss*, 10 NATURE CLIMATE CHANGE 928, 928–32 (Aug. 10, 2020) (noting that, under some models, the Arctic Ocean could be ice-free by 2035, but under other, more conservative models, complete summer melting will take longer); see also RONALD O'ROURKE ET AL., CONG. RSCH. SERV., RL41153 CHANGES IN THE ARCTIC: BACKGROUND AND ISSUES FOR CONGRESS, 13–18 (2020), <https://perma.cc/C8HF-2VPK> (reviewing the best available science and noting that, although other potential outcomes are possible, many models predict seasonally open oceans by midcentury).

2. This winter sea ice coverage is a decrease from extents of up to 6.3 million square miles in 1980. And, in the long-term, winter ice may melt away, too. Ned Ostenso, *Arctic Ocean*, BRITANNICA (Nov. 7, 2022), <https://perma.cc/9KA7-3Q2J>; Alejandra Borunda, *Arctic Summer Sea Ice Could Disappear as Early as 2035*, NAT'L GEOGRAPHIC (Aug. 13, 2020); National Snow and Ice Data Center, *March and September Monthly Average Arctic Sea Ice Extent, 1979-2021*, ENV'T PROT. AGENCY (July 2022).

3. Borunda, *supra* note 2; National Snow and Ice Data Center, *supra* note 2.

4. 2022 *Arctic Sea Ice Tied for 10th Lowest on Record*, NASA (Sept. 22, 2022), <https://perma.cc/9Y2R-ZDNS>.

5. National Snow and Ice Data Center, *supra* note 2.

to develop the Arctic.⁶ Once impassible shipping routes are becoming viable; previously ice-capped ocean resources can now be studied and exploited.⁷ Fishing fleets from Arctic states and from around the world may soon have access to a portion of the Arctic Ocean on the high seas. At the same time, the region's ecosystem and local economies—in particular indigenous economies—are fragile. To realize the “peaceful, stable, prosperous, and cooperative” Arctic the United States National Strategy for the region envisions, the Arctic requires effective governance to restrain competitive pressures that could harm the region's ecology and economy.⁸

The need for effective governance is immediate and acute for Arctic high seas fisheries. The Arctic high seas, a region termed the Central Arctic Ocean, lie beyond the jurisdiction of any single nation.⁹ Though little is known of fisheries resources there, some predict that the region will become an abundant fishing ground. Fish stocks are moving northward as the oceans warm,¹⁰ the Arctic Ocean is becoming more photosynthetically productive,¹¹ and adjacent fisheries due south of the Arctic are highly lucrative.¹² Yet, this emerging Central Arctic Ocean fishery is uniquely susceptible to overfishing and overexploitation. The region lacks robust fisheries governance; the Law of the Sea right of access to high seas fisheries and associated rule of capture makes such a high seas fishery a global common.¹³ Central Arctic Ocean fishery resources remain largely unstudied; scientists with incomplete information can easily “underestimate fish mortality and overestimate population numbers.”¹⁴

Ineffective Central Arctic Ocean fisheries governance poses both environmental and national security risks. Without effective governance, Arctic fisheries could become a new front in the global fight against illegal, unreported, and unregulated fishing, practices which have caused fish stock collapses globally.

6. NATIONAL INTELLIGENCE COUNCIL, NATIONAL INTELLIGENCE ESTIMATE: CLIMATE CHANGE AND INTERNATIONAL RESPONSES INCREASING CHALLENGES TO U.S. NATIONAL SECURITY THROUGH 2040 8 (2021).

7. NASA, *supra* note 4.

8. THE WHITE HOUSE, NATIONAL STRATEGY FOR THE ARCTIC REGION 3 (2022).

9. The Central Arctic Ocean is both a political and geographic region. As a political region, it is defined by being an area of the high seas outside the jurisdiction of bordering states. Thus, the borders of this region are not fixed; if a neighboring state were to expand its jurisdiction northward into the Arctic Ocean, the Central Arctic Ocean's size, as a high seas size political region, would decrease. *See* Agreement to Prevent Unregulated High Seas Fisheries in the Central Arctic Ocean, art. 1(a), Oct. 3, 2018, 2021 Can. T.S. No. 11 (defining the Central Arctic Ocean agreement area as including only those areas beyond national jurisdiction).

10. *Climate Change Indicators: Marine Species Distribution*, ENV'T PROT. AGENCY (Feb. 2023), <https://perma.cc/YXD8-Y9VF>.

11. K. E. Frey, J. C. Comiso, L. W. Cooper, R. R. Gradinger, J. M. Grebmeier, & J.-É. Tremblay, *Arctic Report Card: Update for 2016*, NOAA ARCTIC PROGRAM (Feb. 2, 2017), <https://perma.cc/EJS6-YYKR>.

12. *The Changing Arctic*, NOAA FISHERIES, <https://perma.cc/CAT7-P5HN>.

13. United Nations Convention on the Law of the Sea, Dec. 10, 1982, 1833 U.N.T.S. 397, art. 87 [hereinafter UNCLOS].

14. *Id.*

The historical prevalence of illegal, unreported, and unregulated fishing in nearby waters suggests such practices would occur in an unregulated Central Arctic Ocean.¹⁵ Overexploitation could lead to a tragedy of the commons, upsetting regional ecosystems and indigenous ways of life, especially subsistence harvests, which depend on regional fisheries. Competitor countries may use their Arctic policy, including their Arctic fisheries policy, as a way of advancing their non-Arctic strategic aims; countries have used sub-Arctic and Antarctic fisheries bodies to punish each other for their positions on the Ukraine conflict.¹⁶ As non-Arctic states have fishing rights to this global common, the National Intelligence Council predicts “regional disputes” will occur between Arctic and non-Arctic states over fishing rights.¹⁷ Effective governance would provide a peaceful, stable mechanism for dispute resolution.

To avoid a tragedy of the commons, where fishers exploit a fishery to collapse, Arctic Council states and several other major fishing nations concluded a precautionary “Agreement to Prevent Unregulated High Seas Fisheries in the Central Arctic Ocean,” a first step towards creating effective fisheries governance in the Arctic.¹⁸ This agreement places a temporary moratorium on fishing so countries can study the region, share data, and establish science-based regulatory measures, an exceptional feat given the geopolitical tensions between the parties.

While groundbreaking, this new Agreement contains deficiencies that may hinder its ability to prevent overfishing and provide effective governance if Central Arctic Ocean fisheries become productive. These deficiencies stem from structural treaty design tradeoffs the parties confronted: tradeoffs between breadth of membership and depth of cooperation, between using cooperation and coercion to promote treaty compliance, and between short-term and long-term problem-solving. Because of the tradeoff compromises parties struck, the Agreement excludes relevant counties that may free ride, lacks strong enforcement mechanisms, may encourage cheating and competition, and is only a temporary step towards a stronger, multilateral agreement.

To reduce these environmental and national security risks, Arctic fishing nations should build on this Agreement to create a strong Arctic fisheries governance treaty, remedying the imbalanced tradeoffs in the Agreement and capitalizing on the short window of opportunity this Agreement has created. These

15. Mark Burnett, Natalia Dronova, Maren Esmark, Steve Nelson, Asle Rønning, & Vassily Spiridonov, *Illegal Fishing in Arctic Waters*, WORLD WILDLIFE FUND 2–23 (2008), <https://perma.cc/AW65-UCRG>.

16. See Joshua Goodman, *Fishing Feud at End of the World Split US and UK Over Russia*, ASSOC. PRESS (June 22, 2022), <https://perma.cc/R52Z-QL5J> (noting how Russia rejected catch limits for Chilean sea bass in the relevant international fisheries body in retaliation for western sanctions, thereby making western fishing for the species illegal under the relevant body’s convention); Martin Breum, *Greenland Halts Fisheries Quota Swaps with Russia*, ARCTIC TODAY (Dec. 14, 2022), <https://perma.cc/DV95-625L>.

17. NATIONAL INTELLIGENCE COUNCIL, *supra* note 6.

18. Throughout, I will refer to this Agreement as the “Central Arctic Ocean Agreement.” Agreement to Prevent Unregulated High Seas Fisheries in the Central Arctic Ocean, art. 9, Oct. 3, 2018, 2021 Can. T.S. No. 11 [hereinafter Agreement].

nations must devise a strong, long-term regional regulatory body with trade- and infrastructure-based enforcement tools and reasonably open membership. In short, to avoid a tragedy of the commons and adequately protect the Arctic, any future agreement must be made broader, stronger, and forward-looking. Section I explains the ever-increasing security risks of ineffective Central Arctic Ocean governance. Section II provides background on the Arctic marine environment, climate change's Arctic impacts, and Central Arctic Ocean governance. Section III introduces the Central Arctic Ocean Agreement itself and analyzes three design tradeoffs in this Agreement's structure: tradeoffs between breadth of membership and depth of cooperation, between using cooperation and coercion to advance treaty goals, and between short-term and long-term problem-solving. Section IV then suggests reforms to this structure, as the current treaty permits free riding, promotes cheating, and will not resolve long-term competition.

I. THE NATIONAL SECURITY, ENVIRONMENTAL, AND SOCIOECONOMIC RISKS OF INEFFECTIVE CENTRAL ARCTIC OCEAN GOVERNANCE

As sea ice melts, the United States National Intelligence Council predicts that "Arctic and non-Arctic states will almost certainly increase their competitive activities" in the region, and that the "risk of miscalculation" may rise, with fishing rights and shifting fish stocks driving tensions.¹⁹ Weak governance cannot restrain these competitive pressures. Moreover, these competitive pressures could lead to a tragedy of the commons, collapsing Arctic fisheries and denying northern Alaska a new source of income.

A. *The National Security Risks of Increasing International Fisheries Competition*

While the United States seeks to "uphold international law, rules, norms, and standards" in the Arctic, achieving this goal will be difficult without strong regional governance and enforcement mechanisms, including in the fisheries context.²⁰ The Arctic is becoming a hotbed of international competition. Russia is "amassing unprecedented military might" along its Arctic coastline.²¹ In response, the United States is beginning to increase its own Arctic military presence.²² The U.S. Army's recent Arctic strategy, entitled "Regaining Arctic Dominance," highlights "increasing levels of great power competitor activities."²³ China has joined the verbal fray, declaring a thawed Arctic an integral

19. NATIONAL INTELLIGENCE COUNCIL, *supra* note 6.

20. THE WHITE HOUSE, *supra* note 8, at 13.

21. Nick Walsh, *Satellite Images Show Huge Russian Military Buildup in the Arctic*, CNN (Apr. 5, 2021, 6:42 AM), <https://perma.cc/ZV3N-25AR>.

22. Mike Baker, *With Eyes on Russia, the U.S. Military Prepares for an Arctic Future*, N.Y. TIMES (Mar. 27, 2022).

23. U.S. Army Public Affairs, *Army Announces Release of Arctic Strategy*, U.S. ARMY (Mar. 16, 2021), <https://perma.cc/4VJM-R4QX>.

third prong of its Belt and Road Initiative.²⁴ As competition increases, fisheries could become both another domain of contestation and a source of additional tension between competitors.

Arctic governance and fisheries management are becoming domains where countries advance their non-Arctic strategic military goals. During Russia's invasion of Ukraine, tensions spilt over into the Arctic, temporarily grinding Arctic governance to a halt. Russia was serving as the Arctic Council chair when it invaded Ukraine. As a result, all seven other members refused to travel to Russia for meetings and the Arctic Council announced it was "temporarily pausing" negotiations.²⁵ In other fisheries bodies, Greenland has denied Russia fishing privileges in retaliation for the invasion.²⁶ Despite four decades of cooperation in the Commission on the Conservation of Antarctic Marine Living Organisms, Russia upended Chilean Sea Bass regulations, demonstrating that "Russia's attempts to undermine the West have extended to even obscure forums normally removed from geopolitical tussles."²⁷

Even absent great power competition, U.S. officials see weak enforcement of fisheries laws as a security threat. Globally, illegal and unreported fishing activities net catches "in the billions, or even tens of billions, of dollars," making it one of the U.S. government's international environmental regulators' "top priorities."²⁸ Illegal fishing is often state-sponsored. For decades, the Soviet Union undercut global whaling rules, killing "at least 180,000 more whales than they reported between 1948 and 1973."²⁹

Effective governance and enforceable rules may help protect Arctic fisheries resources from becoming a pawn in broader conflicts and ensure Arctic fisheries conflicts do not further escalate Arctic competition and tensions. In the South China Sea, for example, the United States relies on international law as a basis for its objections to China's attempted maritime territorial expansion and to justify its freedom of navigation operations.³⁰ Similarly, in the Arctic, strong, clear rules could help the United States object to illegal fisheries actions. Strong enforcement mechanisms could incentivize states to follow their agreement obligations and disincentivize politicization of the underlying resources. After all, "a

24. Marisol Maddox, *Climate-Fragility Risk Brief: The Arctic*, WILSON CTR. 15 (2021), <https://perma.cc/25DR-Z9X6>.

25. Office of the Spokesperson, *Joint Statement on Arctic Council Cooperation Following Russia's Invasion of Ukraine*, U.S. DEP'T OF STATE (Mar. 3, 2022), <https://perma.cc/5V32-WKPH>.

26. Martin Breum, *Greenland Halts Fisheries Quota Swaps with Russia*, ARCTIC TODAY (Dec. 14, 2022), <https://perma.cc/DV95-625L>.

27. Goodman, *supra* note 16 (noting how Russia rejected catch limits for Chilean sea bass in the relevant international fisheries body in retaliation for western sanctions, thereby making western fishing for the species illegal under that body's convention).

28. *Understanding Illegal, Unreported, and Unregulated Fishing*, NOAA FISHERIES, <https://perma.cc/ZK28-2UQH>.

29. Charles Homans, *The Most Senseless Environmental Crime of the 20th Century*, PAC. STANDARD (Jun 14, 2017).

30. *China Says it "Drove Away" U.S. Warship on Anniversary of Tribunal Ruling*, REUTERS (July 12, 2021, 12:32 PM).

rules-based international order is aimed at constraining power and curbing the illegitimate use of power.”³¹

B. The Environmental and Socioeconomic Risks of a Tragedy of the Commons

Due to these competitive pressures in the Central Arctic Ocean, the existing legal regime could lead to a cycle of competitive overexploitation, which could in turn cause ecosystem collapse and thereby deny regional Arctic communities new revenues from an economically and culturally important industry. The tragedy of the commons is a model that analyzes a situation where multiple resource users, all self-interested, share one common resource pool. If managed carefully, the resource may provide long-term benefits to all. Without cooperation, each user maximizes their own use, fearful that others will do so at their expense, resulting in the resource’s complete exhaustion. As the model’s developer, Garrett Hardin, described:

Therein is the tragedy. Each man is locked into a system that compels him to increase his [use] without limit – in a world that is limited. Ruin is the destination toward which all men rush, each pursuing his own best interest in a society that believes in the freedom of the commons.³²

Thus, an impending tragedy of the commons features multiple self-interested resource users, fears of selfish resource user behavior, a shared, limited resource, and no restraining governance structures.

Central Arctic Ocean fisheries have all the hallmarks of a tragedy of the commons in the making. There are multiple resource users—both the individual fishers that make up the fishing fleets of different countries and the countries themselves—each operating under a separate system of regulation, if acting in accordance with the law at all. Militaristic maneuvering in a resource-rich region seems unlikely to foreshadow altruistic conservation of a shared resource. These competitors, fearful of one another’s intentions, all share the Central Arctic Ocean common resource pool. The Central Arctic Ocean, as an area beyond national jurisdiction, is definitionally a common; no one resource user possesses any greater right to fish its waters. Moreover, UNCLOS creates no rules capping fishing effort in areas beyond national jurisdiction. Indeed, the UNCLOS rule of capture encourages unsustainable resource use in the Central Arctic Ocean. To stop a fish—and the wealth that fish represents—from falling into the hands of a competitor, a country can either extract the fish, agree with other countries not to fish, or physically stop the competitor from extracting the fish.³³

31. Dewi Fortuna Anwar, *A Rules-Based Order in the Indo-Pacific: A View from Jakarta*, INDO-PAC. PERSP., <https://perma.cc/TY3B-3YXN>.

32. Garrett Hardin, *The Tragedy of the Commons*, SCI. (Dec. 13, 1968), at 1243-44.

33. This third option, stopping a country from taking fish by force, is not as far-fetched as it sounds. Canada has a history of using force to stop illegal fishing. See Anne Swardson, *Canada Frees Fishing Boat, But Dispute Persists*, WASH. POST (Mar. 16, 1995), <https://perma.cc/TCU6-NV8L> (detailing the Estai incident between Canada and Spain).

The risk of tragedy is more acute in understudied and changing Central Arctic Ocean fisheries, for fisheries there are a common of unknown size. Thus, as each fisher extracts, the fisher does so with little knowledge or warning of how their actions impact the broader ecosystem. Thus, the commons may reach an inflection point, where collapse is inevitable, without anyone realizing it. Similarly, as more fishers begin transiting the Arctic, increased human activity and risks from marine pollution will put pressure on Arctic ecosystems, where biodiversity is already under “pressure” from rapidly changing climate conditions.³⁴

This competitive dynamic can cause the collapse of entire fish populations, which can reverberate through regional ecosystems. Other nearby high seas regions, when left ungoverned, suffered fisheries collapses just as the tragedy of the commons predicts. Once, the “Donut Hole,” an area of high seas in the Bering Sea surrounded by United States and Russian waters, housed an extremely productive pollock fishery.³⁵ Peak (over)exploitation occurred in 1989, when the United States, Russia, Japan, China, Poland, South Korea, and Spain, among other countries, caught a collective 1.5 million tons of pollock.³⁶ Then, by 1992, the pollock fishery had collapsed, leading to the Convention on the Conservation and Management of the Pollock Resources in the Central Bering Sea’s signing in 1994.³⁷ By that time, the pollock population had already declined too far to save; decades later, the convention parties maintain a complete moratorium on pollock fishing.³⁸ Yearly stock assessments have found no signs of population recovery.³⁹ Alarmingly, the Donut Hole cautionary tale includes many actors who will likely fish the Central Arctic Ocean.

Ecosystem collapse would have devastating repercussions for rural and Native Alaskans living in the Arctic. The United States Strategy for the Arctic Region notes the national importance of promoting sustainable development in the United States’ Arctic north.⁴⁰ Central Arctic fisheries could serve as a new means to “expand economic opportunity” for Alaskans.⁴¹ Fishing is a major industry in Alaska: sixty percent of U.S. marine fish landings occur in that state alone.⁴² As sea ice melts, rural Alaskan communities in the Arctic stand poised to diversify their energy-dependent economies with fishing.⁴³ Collapse may also deny Alaska Natives the ability to access traditionally important subsistence harvests.⁴⁴

34. CHRISTINE MICHEL, MARINE ECOSYSTEMS, 488 (2013), <https://perma.cc/9H9V-KEHM>.

35. Kevin M. Bailey, *An Empty Donut Hole: The Great Collapse of a North American Fishery*, ECOLOGY AND SOC’Y, June 2011, at 1–13.

36. *Id.*

37. *Id.*

38. *Id.*

39. *Id.*

40. THE WHITE HOUSE, NATIONAL STRATEGY FOR THE ARCTIC REGION 11–13 (2022).

41. *Id.* at 11.

42. *The Changing Arctic*, NOAA FISHERIES, <https://perma.cc/4RCE-USBA>.

43. *Id.*

44. *Id.*

II. INSTITUTIONS AND LAW GOVERNING THE RAPIDLY WARMING CENTRAL ARCTIC OCEAN

Since the end of the Cold War, the states along the Arctic Circle have developed regional institutions like the Arctic Council to coordinate Arctic policy. However, as the Arctic rapidly warms, resource distributions and sea ice patterns are shifting quickly, straining historically cooperative Arctic governance. Additionally, other applicable international legal regimes, like the Law of the Sea, permit countries from outside the Arctic to traverse and extract from the Arctic high seas, meaning states outside the historically-limited Arctic club have legal rights to fish the Arctic.

A. *The Arctic Marine Environment: Rapid Change in an Understudied Ecosystem*

The Arctic is warming three times faster than the rest of the world, causing sweeping regional environmental changes.⁴⁵ The average Arctic temperature has increased more than three degrees Celsius when compared with 1971.⁴⁶ Summer temperatures in some areas have risen four to five degrees Celsius when compared with pre-industrial averages.⁴⁷ In comparison, the Paris Agreement aims to limit global temperate increases to 1.5 degrees (ideally) when compared to pre-industrial averages.⁴⁸ As rapid warming melts sea ice, sea ice melt promotes seawater uptake of carbon dioxide. Consequently, the Arctic Ocean is acidifying three to four times faster than any other ocean basin.⁴⁹

Rapidly changing oceanic conditions are altering the Arctic ecosystem and regional biodiversity. Habitat loss threatens large predators like polar bears that rely on ice for hunting.⁵⁰ While the Central Arctic Ocean now contains few lucrative commercial fish stocks, climate change may increase regional fish populations. As more sunlight reaches the water, photosynthetic phytoplankton populations are increasing, creating new food sources for other ocean species further up the food chain.⁵¹ Moreover, fish populations are increasingly shifting north, as ocean waters across the world warm. In the Bering Sea, for example, Alaskan pollock, snow crab, and Pacific halibut populations have drifted nineteen

45. RONALD O'ROURKE, CAITLIN KEATING-BITONTI, LAURA B. COMAY, JONATHAN L. RAMSEUR, JOHN FRITELLI, & PERVAZE A. SHEIKH, CONG. RSCH. SERV., R41153 CHANGES IN THE ARCTIC: BACKGROUND AND ISSUES FOR CONGRESS, 14 (2020), <https://perma.cc/A4T3-6LHU>.

46. *Id.*

47. Guarino et al., *supra* note 1, at 928–32.

48. The Paris Agreement also recognizes 2 degrees Celsius of temperature as a more realistic goal. Paris Agreement to the United Nations Framework Convention on Climate Change, art. 2, Dec. 12, 2015, T.I.A.S. No. 16-1104.

49. Di Qi et al., *Climate Change Drives Rapid Decadal Acidification in the Arctic Ocean from 1994 to 2020*, 377 SCI. 1544, 1544–1550 (2022).

50. Bianca Nogrady, *Polar Bear Population Discovered that Can Survive with Little Sea Ice*, NATURE (June 16, 2022), <https://www.nature.com/articles/d41586-022-01691-2>.

51. Frey, *supra* note 11.

miles to the north since 1980.⁵² This trend is even more pronounced in the north Atlantic Ocean, where the average biomass of economically important seafood species has shifted 113 miles to the north over the same period.⁵³

B. International Arctic Governance Institutions

Despite geopolitical discord elsewhere on the globe, Arctic countries have consistently reached environmental quality protection and data-sharing agreements. Arctic countries concluded some of the first wildlife protection treaties, including the 1911 Fur Seal Treaty, which, in response to overharvesting, banned seal hunting in international waters, barred violators from signatory ports, required signatories to patrol international waters, and exempted indigenous hunters.⁵⁴ The 1973 Polar Bear Agreement, signed by both the United States and the Soviet Union during détente, required signatories to coordinate polar bear management rules to conserve the species.⁵⁵ A soft law agreement, the 1991 Arctic Environmental Protection Strategy, signed in the twilight hours of the Soviet Union, encourages signatories to monitor Arctic pollutants, reduce pollution threats, conduct joint Arctic environmental research, and include indigenous voices in research processes.⁵⁶

The Arctic Council, established in 1996, grew from these efforts.⁵⁷ The Council provides a forum where eight Arctic states collaborate to advance “sustainable development and environmental protection” to benefit “Arctic States, Arctic Indigenous peoples, and other Arctic inhabitants.”⁵⁸ Explicitly a regional organization, the Council’s members must have territory above the Arctic Circle, and therefore includes only Canada, the United States, Russia, Finland, Sweden, Norway, Iceland, and Denmark.⁵⁹ While the Arctic Council has admitted thirteen observer nations, called “non-Arctic states,” including China, India, and the United Kingdom, only true “Arctic States” can vote.⁶⁰ However, the Council continues the longstanding Arctic norm of indigenous consultation, recognizing six indigenous associations as “Permanent Participants.”⁶¹ While “[d]ecisions at all levels . . . are the exclusive right and responsibility of the eight Arctic States with the involvement of the Permanent Participants,” observers are invited to make

52. ENV’T PROT. AGENCY, *supra* note 10.

53. *Id.*

54. Convention Between the United States and Other Powers Providing for the Preservation and Protection of Fur Seals, July 7, 1911, 37 Stat. 1542, T.S. No. 564.

55. Agreement on the Conservation of Polar Bears, Nov. 15, 1973, 27 U.S.T. 391.

56. Declaration on the Protection of the Arctic Environment by Canada, Denmark, Finland, Iceland, Norway, Sweden, the Union of Soviet Socialist Republics, and the United States, June 14, 1991, <https://perma.cc/ZC2Q-D434>.

57. *A History of the Arctic Council*, ARCTIC COUNCIL, <https://perma.cc/8U7G-CKFN>.

58. *About the Arctic Council*, ARCTIC COUNCIL, <https://perma.cc/XS2V-T9RV> [hereinafter *About the Arctic Council*].

59. *Id.*

60. *Arctic Council Observers*, ARCTIC COUNCIL, <https://perma.cc/NHD6-7XBV> [hereinafter *Arctic Council Observers*].

61. *About the Arctic Council*, *supra* note 58.

“relevant contributions.”⁶² In the environmental realm, Arctic States coordinate to reduce pollutants, protect the marine environment, conserve biodiversity, monitor environmental changes, and respond to environmental emergencies such as oil spills.⁶³

Tensions from the war in Ukraine have spilt over into historically cooperative Arctic governance. Russia had been serving as the chair of the Arctic Council when it invaded Ukraine; when the war began, the Council paused deliberations.⁶⁴ However, these tensions have not permanently blocked the Council’s functioning; in 2023, the Council resumed some work when Russia transferred its leadership position to Norway.⁶⁵

C. *The Law of the Sea and Arctic Fisheries*

All countries bordering the Arctic Ocean have jointly declared that the “law of the sea” should govern the delineation of maritime boundaries, maritime conservation, and maritime resource use.⁶⁶ All Arctic coastal states except the United States have signed the United Nations Convention on the Law of the Sea (UNCLOS), although the United States recognizes most of the convention’s terms as restatements of customary international law.⁶⁷ UNCLOS categorizes the ocean into jurisdictional zones; countries have diminished levels of sovereignty the further waters are from their shores. Between the shore and twelve nautical miles out to sea, states retain nearly full sovereignty,⁶⁸ with the proviso that foreign ships may “innocently” traverse these waters.⁶⁹ Innocent passage explicitly excludes “any fishing activity.”⁷⁰ Up to twenty-four miles from shore, a coastal state can exercise powers necessary to enforce certain health and border controls.⁷¹ Between fourteen and two hundred miles from shore, in an area called the Exclusive Economic Zone, (EEZ) the coastal state retains continental shelf and subsoil jurisdiction and may regulate the natural resources found there.⁷² States also retain the power—and duty—to manage the fisheries found in their EEZ.⁷³

62. *Arctic Council Observers*, *supra* note 60.

63. *Projects*, ARCTIC COUNCIL, <https://perma.cc/WSD6-SPD8>.

64. Trine Jonassen, *Arctic Council After Russia’s Handover: We Are Still Here*, HIGH N. NEWS, (Oct. 19, 2023, 10:35 PM), <https://perma.cc/X4AK-HLE8>.

65. *Id.*

66. By using this uncapitalized term, instead of referring to the United Nations Convention, the United States likely intended to reference only those doctrines it recognizes as customary international law while maintaining its traditional objections to UNCLOS. The Ilulissat Declaration of Canada, Denmark, Greenland, Norway, the Russian Federation, and the United States, May 28, 2008, <https://perma.cc/DNR6-7XPS>.

67. United Nations Convention on the Law of the Sea, Dec. 10, 1982, 1833 U.N.T.S. 397; Statement on United States Oceans Policy, 1 PUB. PAPERS 378-79 (Mar. 10, 1983), <https://perma.cc/Z8XW-ACQM>, [hereinafter 1983 United States Oceans Policy].

68. UNCLOS, *supra* note 13, at art. 3.

69. *Id.* at art. 17, 45.

70. *Id.* at art. 19.

71. *Id.* at art. 33.

72. *Id.* at art. 56, 57.

73. *Id.* at art. 61.

More than two hundred miles from shore lie areas beyond national jurisdiction, also known as the high seas.⁷⁴

States can lengthen their EEZ as far as their contiguous continental shelf extends, up to three hundred fifty nautical miles from the shore.⁷⁵ However, EEZ extension is controversial; disagreements about continental shelf determination procedures are a principal reason the United States has not signed UNCLOS.⁷⁶ Moreover, many Arctic coastal countries have overlapping continental shelf claims.⁷⁷ Russia, for example, claims nearly seventy percent of the Arctic high seas as its contiguous continental shelf.⁷⁸ If all current EEZ claims were recognized, the area of high seas in the Central Arctic Ocean would decrease substantially.⁷⁹

UNCLOS provides that any country's fleet is free to fish the high seas; the fact that the Central Arctic Ocean is completely enveloped by coastal state EEZs does not negate this right.⁸⁰ Nevertheless, several duties do qualify this right. States still must obey their treaty obligations and respect the rights of coastal states to manage certain fish stocks such as anadromous species.⁸¹ Fishing states additionally have duties to enact conservation measures and cooperate with other states to conserve species in high seas regions.⁸² States must also share fisheries management data.⁸³ Where fish stocks straddle a state's EEZ and the area beyond national jurisdiction, the coastal state and any fishing states must take steps to conserve that fish stock.⁸⁴ The quantity of capture is also bounded; states must, when determining catch limits and conservation measures for fisheries within their territorial jurisdiction, aim for "maximum sustained yield" as determined by the "best scientific evidence available."⁸⁵ Moreover, management must take account of ecological factors, including the impact of fishing on species "associated with or dependent on" the fished species.⁸⁶

The 1995 UN Fish Stocks Treaty further qualifies the right of capture in high seas fisheries, creating a framework for states to create regional fisheries

74. *Id.* at art. 86–90.

75. *Id.* at art. 76–77.

76. 1983 United States Oceans Policy, *supra* note 67.

77. Betsy Baker, *Arctic Overlaps: The Surprising Story of Continental Shelf Diplomacy*, 3 WILSON CTR. POLAR PERSP. 1, 1–13 (2020), <https://perma.cc/7ADB-P5LG>.

78. Martin Breum, *Russia Extends its Claim to the Arctic Ocean Seabed*, ARCTIC BUS. J. (Apr. 4, 2021), <https://perma.cc/SQY2-END8>.

79. *See* UNCLOS, *supra* note 13, at art. 116 (noting that this right is subject to some other rights coastal states have, including managing highly migratory, anadromous, and catadromous species).

80. *Id.* at art. 87.

81. Anadromous species, such as salmon, are born in freshwater, migrate to the ocean during adulthood, and return to freshwater to spawn and die. *Id.* at art. 116.

82. *Id.* at art. 117–18.

83. *Id.* at art. 119.

84. *Id.* at art. 63.

85. *Id.* at art. 199.

86. *Id.*

management organizations capable of setting enforceable rules.⁸⁷ UNCLOS had encouraged states to cooperate and form organizations to manage transboundary fish stocks,⁸⁸ However, the 1995 treaty declares states “shall cooperate” to create regional governance organizations when straddling and highly migratory species stocks require them.⁸⁹ No such regional organization governs the entire Central Arctic Ocean, but one organization, NEAFC,⁹⁰ does govern the Norwegian Sea “Banana Hole” and the Barent’s Sea “Loophole,” two other high seas regions above the Arctic circle.⁹¹ NEAFC also regulates a slice of the Central Arctic Ocean north of Greenland.⁹² Similarly, another organization, founded after the Donut Hole’s collapse,⁹³ governs that other high latitude high seas region bounded by U.S. and Russian EEZs.⁹⁴

III. THE AGREEMENT TO PREVENT UNREGULATED HIGH SEAS FISHERIES IN THE CENTRAL ARCTIC OCEAN

The United States Congress, spurred by Alaskan fisheries managers, first conceived of a multilateral treaty to govern Central Arctic Ocean fisheries. The current Agreement emerged from U.S. diplomatic efforts, and includes a broader membership roster than the Arctic Council’s Arctic states, requires fisheries information sharing between Agreement parties, and imposes a fishing moratorium. Nevertheless, the Agreement is likely insufficiently broad, inadequately coercive, and too short-term to protect Central Arctic Ocean fisheries.

A. *The Road to A Fishing Moratorium*

As early as 2006, the North Pacific Fishery Management Council, a domestic U.S. fisheries management organization charged with governing the U.S. Arctic EEZ, understood that the changing Arctic Ocean ecosystem would require new

87. See U.N. Conference on Straddling Fish Stocks and Highly Migratory Fish Stocks Sixth Session, *Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of December 10, 1982 Relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks*, U.N. Doc. A/CONF/F.164/37 (Dec. 4, 1995) [hereinafter 1995 UN Fish Stocks Treaty].

88. See, e.g., UNCLOS, *supra* note 13 at art. 65 (ordering states to cooperate “directly or through appropriate international organizations” to manage and conserve highly migratory species and requiring states to form organizations in “regions where no appropriate international organization exists”).

89. 1995 UN Fish Stocks Treaty, *supra* note 87, at art. 8.

90. THE N.E. ATL. FISHERIES COMM’N, <https://perma.cc/648L-8MPH>.

91. Similar to the Central Arctic Ocean, both of these high seas areas are not subject to any state’s jurisdiction. “The so-called ‘Loophole’ refers to a large body of water in the Barents Sea, which is surrounded by the Norwegian economic zone . . . and the Russian economic zone.” *The Loophole and the Banana Hole*, BARENTS WATCH (May 18, 2012), <https://perma.cc/NP7Y-DAVK>. “The ‘Banana Hole,[]’ . . . is an ocean area surrounded by Norway, Iceland, the Faroe Islands and Greenland’s economic zones.” *Id.*

92. *NEAFC Convention and Regulatory Areas*, N.E. ATL. FISHERIES COMM’N, <https://perma.cc/3EYK-HYNH>.

93. Convention on the Conservation and Management of Pollock Resources in the Central Bering Sea, June 16, 1994, 34 I.L.M. 67.

94. Bailey, *supra* note 35.

rules.⁹⁵ Therefore, it commissioned a study examining policy options to regulate fishing in the U.S. Arctic EEZ in a warmed, ice-free future.⁹⁶ One option included completely closing the U.S. Arctic EEZ to fishing.⁹⁷ The study noted, without advocating for a specific policy, that a “precautionary” closure in a situation where “resources are likely unable to sustain fishing pressure or are of unknown magnitude” would be “logical.”⁹⁸ The Council ultimately recommended banning commercial fishing in the Arctic EEZ.⁹⁹

In 2008, after this decision, Congress passed a Joint Resolution directing the federal government to work towards creating a Central Arctic Ocean fisheries treaty. Congress noted that a warming Arctic would likely see increased Arctic fish populations as well as increased economic activity. Alarmed at a situation where data is scarce, commercial fishing in several Arctic Ocean adjoining seas is increasing, and no governance structures are in place, Congress called for negotiating “agreements for managing migratory, transboundary, and straddling fish stocks in the Arctic Ocean and establishing a new international fisheries management organization or organizations for the region.”¹⁰⁰ Congress required that negotiators consult the North Pacific Fishery Management Council and indigenous groups and, drawing on the 1995 Fish Stocks Treaty, create an agreement with strong mechanisms for “sustaining future Arctic fish stocks such as “catch and bycatch limits, harvest allocations, observers, monitoring, data collection and reporting, [and] enforcement.”¹⁰¹ In the absence of such a treaty, Congress encouraged any steps to “halt the expansion of commercial fishing activities in the high seas of the Arctic Ocean.”¹⁰²

To fulfill Congress’s command, the United States began lobbying other Arctic countries to negotiate. Russia was particularly reticent, questioning the necessity of an agreement.¹⁰³ Yet, since avoiding a tragedy of the commons is in all Arctic coastal states’ best interests, these countries overcame geopolitical differences, including Russia’s 2014 Crimean annexation, to hold several rounds of negotiations.¹⁰⁴

These negotiations led to a joint 2015 “Declaration Concerning The Prevention Of Unregulated High Seas Fishing In The Central Arctic Ocean,”

95. Bill Wilson, *Fishery Management Options for the Alaskan EEZ in the Chukchi and Beaufort Seas of the Arctic Ocean*, 1 (N. Pac. Fishery Mgmt Council, Revised Discussion Paper No. 042607, 2007).

96. *See id.* at 1-2.

97. *Id.* at 1.

98. *Id.* at 20.

99. S.J. Res. 17, 110th Cong. (2008).

100. *Id.*

101. *Id.*

102. *Id.*

103. David Balton, *No. 9: The Arctic Fisheries Agreement Enters into Force*, WILSON CTR. POLAR INST.: POLAR POINTS (June 25, 2021), <https://perma.cc/HQ89-2QNR>.

104. *Id.*

which each country with an Arctic Ocean coastline signed.¹⁰⁵ In this joint declaration, these coastal states, noting their “obligation to apply the precautionary approach,” agreed to “implement appropriate interim measures to deter unregulated fishing in the future in the high seas portion of the central Arctic Ocean.”¹⁰⁶ Furthermore, the parties agreed to “authorize our vessels to conduct commercial fishing in this high seas area only pursuant to one or more regional or subregional fisheries management organizations,” as well as “establish a joint program of scientific research” and “promote compliance with these interim measures and with relevant international law, including by coordinating our monitoring, control and surveillance activities in this area.”¹⁰⁷ The group also acknowledged other states may have regional fishing interests. The parties intended “to continue to work together to encourage other States to take measures . . . that are consistent with these interim measures” and “look forward to working with them in a broader process to develop measures consistent with this Declaration that would include commitments by all interested States.”¹⁰⁸ Since these negotiations omitted many countries with large fishing fleets, negotiations towards a final Agreement began involving five other countries with interest in fishing and capacity to fish in the Arctic.¹⁰⁹

Indigenous groups have a large role in Arctic governance, and creating the Agreement was no exception. The Inuit Circumpolar Council, which represents indigenous peoples from across Russia, the United States, Canada, and Greenland, “enthusiastically” encouraged the 2015 Declaration. Indigenous groups lobbied negotiators to provide mechanisms for indigenous involvement in any final agreement and explained how indigenous knowledge could augment management decisions.¹¹⁰

B. The “Agreement to Prevent Unregulated High Seas Fisheries”

Building on the 2015 Declaration, on October 3rd, 2018, Arctic Council states and several other major fishing powers concluded the binding and precautionary “Agreement to Prevent Unregulated High Seas Fisheries in the Central Arctic Ocean,” establishing a temporary moratorium on fishing so countries can study the region and establish science-based regulatory measures.¹¹¹ Formerly reticent Russia was the first to ratify and, on June 25, 2021, with China’s ratification, the

105. Declaration Concerning the Prevention of Unregulated High Seas Fishing in the Central Arctic Ocean, July 16, 2015. These five include Canada, the United States, Russia, Norway, and Denmark (due to Greenland and the Faroe Islands).

106. *Id.*

107. *Id.*

108. *Id.*

109. These included South Korea, China, Japan, Iceland, and the European Union (all eventual signatories). Hannah Hoag, *Nations agree to ban fishing in arctic ocean for at least 16 years*, SCI. (Dec. 1, 2017), <https://perma.cc/GK8L-W8HM>.

110. See Peter Harrison et al., *How Non-Government Actors Helped the Arctic Fisheries Agreement*, 2 WILSON CTR. POLAR PERSP., Oct. 2020, at 6–8.

111. Agreement, *supra* note 18, at art. 9.

Agreement entered into force and will last for sixteen years, unless renewed.¹¹² The Agreement freezes nearly all fishing in the Central Arctic Ocean, aiming to avoid a tragedy of the commons by closing the common completely. It also creates a scientific cooperation framework and foreshadows future negotiations to create a Central Arctic fisheries management organization. Yet, the Agreement disclaims constituting a long-term fisheries governance system. Moreover, it sidesteps important geopolitical issues that threaten Central Arctic resources.

The Agreement recitals attempt to place it squarely within the existing UNCLOS framework and Arctic governance norms. The Agreement “recall[s]” the principles of UNCLOS and the 1995 Fish Stocks Treaty.¹¹³ It also “underlin [es] the importance” of cooperating with NEAFC, which has jurisdiction partly overlapping with the Agreement area. Making no pretense of replacing NEAFC, the Agreement calls the creation of other regional fisheries management organizations “premature.”¹¹⁴ Like the Arctic Council and prior Arctic environmental treaties, it explicitly recognizes the “Rights of Indigenous Peoples” and recognizes the “interests of Arctic residents, including Arctic indigenous peoples” and the importance of their involvement in decision-making.¹¹⁵

Although the Arctic Council serves a catalyzing role in creating Arctic environmental norms, this Agreement’s membership breaks from Arctic Council membership practice by including non-Arctic states. Signatories include the five states with Arctic coastlines: Canada, the United States, Russia, Norway, and Denmark (due to the Faroe Islands and Greenland). Iceland, a member of the Arctic Council without an Arctic Ocean coastline, also signed. Two other Arctic Council members (Finland and Sweden) are not signatories and are represented only due to their membership in the European Union, which is a signatory. China, Japan, and South Korea, with no territory north of Arctic Circle, are also signatories.¹¹⁶

Despite this broader membership, the Agreement still wrestles with some traditional Arctic governance membership norms. The Agreement recognizes that central Arctic Ocean coastal States (a subset of Arctic Council members excluding Finland, Sweden, and Iceland) have “special responsibilities and special interests.”¹¹⁷ It also concedes that Arctic residents overall benefit from healthy marine ecosystems. And while the Agreement incorporates select non-Arctic countries, it excludes all non-signatory countries from joining, unless the parties invite them.¹¹⁸

112. David Balton, *No. 9: The Arctic Fisheries Agreement Enters into Force*, WILSON CTR. POLAR INST.: POLAR POINTS (June 25, 2021), <https://perma.cc/HQ89-2QNR>.

113. Agreement, *supra* note 18, at pmb1.

114. *Id.*

115. *Id.*

116. *Id.* at art. 9.

117. *Id.* at pmb1.

118. *Id.* at art. 10.

The Agreement's core is the "Interim Conservation and Management Measures," at present imposing a temporary fishing moratorium.¹¹⁹ Parties are only authorized to fish under either "conservation and management measures for the sustainable management of fish stocks" promulgated by another regional organization or the "interim conservation and management measures" the Agreement parties establish.¹²⁰ Fishing encompasses "attracting, locating, catching, taking, or harvesting fish or any activity that can reasonably be expected to result in [such activities]."¹²¹ Exploratory fishing for "assessing the sustainability of future commercial fisheries" requires Agreement party authorization.¹²² Since no regional organizations currently authorize fishing, parties may not fish.

Yet, the Agreement envisions that this status quo will change. The Agreement provides for meetings at least biennially to review implementation and assess "all available scientific information" jointly developed.¹²³ Using the information, parties must decide "whether to commence negotiations" to create a regional fisheries management organization and "whether, once negotiations have commenced" and "the Parties have agreed on mechanisms to ensure the sustainability of fish stocks," the parties should then "establish additional or different interim conservation and management measures."¹²⁴ Also, the Agreement requires parties to create rules for exploratory fishing, permits parties a chance to comment on each other's exploratory fishing plans, and, importantly, mandates parties report their exploratory results to each other.¹²⁵ While the Agreement notes that all decisions should take into account the precautionary approach and ecosystem health, it lists these as examples of the many considerations parties must grapple with during decision-making, and never explicitly advocates for ecosystem-based management.¹²⁶

In exchange for complying with Agreement rules, parties can access shared scientific data on fish stocks.¹²⁷ Thus, in addition to reciprocal promises not to fish, parties also gain from membership in a joint scientific program. Parties agree to create a joint program to determine "whether fish stocks might exist in the Agreement Area," if these stocks can be harvested on a sustainable basis and the ecosystem impacts of such fisheries.¹²⁸ At the same time, parties must also create a "data sharing protocol" and shall share relevant data.¹²⁹ The parties will

119. *Id.* at art. 3.

120. *Id.*

121. *Id.* at art. 1.

122. *Id.*

123. *Id.* at art 5.

124. *Id.*

125. *Id.*

126. *Id.* at art. 3.

127. *Id.* at art. 4.

128. *Id.*

129. *Id.*

review collected data and, using “the best available scientific information” to provide timely scientific advice to inform Agreement decisions.¹³⁰

The Agreement does not elaborate any compliance measures. Parties “shall ensure compliance with the interim measures”¹³¹ and agree to encourage nonparties to “to take measures that are consistent” with the Agreement.¹³² Parties themselves will deter other nation’s vessels when those nations “undermine the effective implement of this Agreement.”¹³³ The Agreement also reiterates the Party’s previous commitments to marine ecosystem protection under UNCLOS and the 1995 Fish Stocks Agreement.¹³⁴

The Agreement disclaims resolving “any question relating to the law of the sea,” thereby subtly sidestepping thorny EEZ extension disputes.¹³⁵ The Agreement more explicitly omits any resolution of “rights and jurisdiction in the Arctic Ocean.”¹³⁶ It also subordinates the Agreement to other international fisheries legal instruments, including the Law of the Sea and the 1995 Straddling Stocks and Highly Migratory Species Agreement.¹³⁷ Moreover, it does not apply to sedentary species on the ocean floor, but merely to species in the water column.¹³⁸ Yet, a party’s lawful EEZ expansion would not necessarily undermine the Agreement. Although the “Agreement Area,” defined dynamically in relation to where other countries exercise jurisdiction,¹³⁹ would shrink, “coastal state parties” must cooperate and make compatible their domestic fisheries conservation rules “for fish stocks . . . within and beyond national jurisdiction” to protect “those stocks in their entirety.”¹⁴⁰

Parties individually have significant power within the Agreement framework. Any decisions involving “questions of substance,” which include any question any party deems “of substance,” requires unanimity and “the absence of formal objection.”¹⁴¹ After the initial Agreement period of sixteen years, any party’s timely “formal objection” to the Agreement’s continuation will end the Agreement.¹⁴² Likely due to the power each party possesses, only listed parties

130. *Id.*

131. *Id.* at art. 3.

132. *Id.* at art. 8.

133. *Id.*

134. *Id.* at pmb1.

135. *See id.* at art. 14.

136. *See id.*

137. *Id.*

138. The water column stretches from the water’s surface to the seabed; it excludes the seabed itself and the air above the water. *Why do we explore the water column?*, NOAA OCEAN EXPLORATION, <https://perma.cc/G8Q4-JLTP>.

139. *See id.* at art. 1.

140. *Id.* at art. 3.

141. *Id.* at art. 6.

142. *Id.* at art. 13 (“Following the expiration of the initial period specified in paragraph 1 above, this Agreement shall remain in force for successive five-year extension period(s) unless any Party presents a formal objection to an extension of this Agreement at the last meeting of the Parties that takes place prior to expiration of the initial period or any subsequent extension period.”).

are allowed to join the Agreement freely.¹⁴³ Mirroring language from the 1995 Fish Stocks Agreement, the parties may invite only those states with a “real interest” to join.¹⁴⁴ The Agreement leaves ambiguous what level of party support an invitation may require.¹⁴⁵

Through striving to apply “precautionary conservation and management measures” to Central Arctic Ocean fisheries,¹⁴⁶ the Agreement itself recognizes that it is an incomplete step toward this goal. Instead, it is designed to “prevent the start of unregulated fishing,” not manage the high seas common.¹⁴⁷ Indeed, the Agreement labels itself a mere “part of a long-term strategy.”¹⁴⁸ Throughout, the Agreement envisages and encourages further efforts.¹⁴⁹ It urges regular reconsideration of “the need for additional conservation and management measures.”¹⁵⁰ It also disclaims any prejudice towards the rights of parties to create new “regional or subregional fisheries management organizations or arrangements.”¹⁵¹

C. Assessing The Agreement: The Beginnings of a Cooperative Framework Or An Unstable Armistice?

To escape the tragedy of the commons, in Hardin’s view, requires “mutual coercion mutually agreed upon.”¹⁵² In the anarchy of international relations, mutual coercion requires countries create voluntary coercive agreements. Designing such agreements requires balancing different, conflicting goals, such as attracting signatories while also engaging in ambitious and effective problem-solving. Any Arctic agreement must also weigh preexisting Arctic governance norms of collaboration, consensus-driven decision-making, and exclusivity. Due to these tensions, creating an effective Arctic fisheries agreement requires balancing three major tradeoffs: the tradeoff between breadth of membership and depth of cooperation, between using cooperation and coercion to advance treaty goals, and between short-term and long-term problem-solving. The way negotiators balanced these tradeoffs, however, has created an Agreement that still permits free riding, may promote cheating, and will not resolve long-term competition. Additionally, it is an incomplete step towards comprehensive Arctic fisheries governance.

143. *See id.* at art. 10.

144. *Id.* *See also* 1995 UN Fish Stocks Treaty, *supra* note 87, at 8 (“States having a real interest in the fisheries concerned may become members of such organization or participants in such arrangement.”).

145. *See id.*

146. *Id.* at art. 2.

147. *Id.* at pmb1.

148. *Id.* at art. 2.

149. *See, e.g., id.* at art. 5 (requiring the parties to consider whether to begin negotiations for new regional fisheries management organizations).

150. *Id.* at pmb1.

151. *Id.* at art. 14.

152. Hardin, *supra* note 32, at 1243.

1. The Breadth vs Depth Tradeoff: Despite Striking A Careful Balance, The Agreement Excludes Potential Free Riders

International agreements often face an important breadth-depth tradeoff.¹⁵³ An agreement limited to a small set of like-minded countries, with similar interests, will likely be easier to negotiate and can be more ambitious. Moreover, given that consensus-driven decision-making is an Arctic and regional fisheries management organization norm, narrow membership reduces the risk of obstructionist members. In contrast, the larger the set of countries incorporated into an agreement, the more diverse a set of viewpoints the agreement must appease and the lower the common denominator of palatable agreement provisions. Yet, some solutions, to effectively solve a problem, require broad participation. For example, no matter how ambitious the agreement's provisions, an air quality treaty needs enough polluters to sign on for the provisions to make a difference. Likewise, an agreement to prevent a tragedy of the commons needs major potential free riders in compliance with the agreement, for otherwise these free riders could still deplete the commons.

This Agreement, by including non-Arctic Council parties and parties lacking any Arctic coastline, made a necessary rupture with Arctic governance custom. Unlike the history of multilateralism in Antarctica,¹⁵⁴ Arctic countries have jealously limited participation in Arctic governance. Indeed, given the millions of residents Arctic states have in the region and their plausible EEZ extension claims, many Arctic states are loathe to allow outsiders influence in a region squarely in their back yards and rich in resources.

This Agreement requires a broader membership because it governs a common created by the Law of the Sea, which grants a right of capture to all countries, a purpose broader than the Arctic Council's regional purpose of promoting sustainable development. The Agreement's negotiating process recognized this. For example, in their 2015 joint statement, the five Arctic coastal states noted that they "look forward to working with [other states] in a broader process to develop measures consistent with this Declaration that would include commitments by all interested States."¹⁵⁵ The negotiating process gradually expanded to include non-Arctic countries with large fishing fleets.

The Agreement's membership, although broader than previous Arctic governance agreements, still excludes potential free riders, which risks undermining the Agreement. Since the Agreement seeks to regulate a global common;

153. *But see* Michael Gilligan, *Is There a Broader-Deeper Trade-Off in International Multilateral Agreements?*, 58 INT'L ORG. 459, 459 (2004) (arguing that, although many believe this tradeoff exists, some classes of cooperation agreements do not feature this tradeoff). However, those treaties Gilligan argues lack this tradeoff also solve collective action problems where parties can set their own policies at non-identical levels, and so may be different than the treaty here.

154. *See Parties*, SECRETARIAT OF THE ANTARCTIC TREATY, <https://perma.cc/Y3YW-HL4S>.

155. Declaration Concerning the Prevention of Unregulated High Seas Fishing in the Central Arctic Ocean by Canada, the Kingdom of Denmark, the Kingdom of Norway, the Russian Federation and the United States (July 16, 2015), <https://perma.cc/ADD5-B54J>.

nonmembers can free ride; in such a scenario, the Arctic coastal states, by agreeing to a moratorium, would effectively cede the Central Arctic Ocean's resources to more distant countries. Although only the United States and Russia bound a similar high seas region, the Bering Sea Donut Hole, numerous nonadjacent countries fished the region. Thus, the convention to regulate that region included countries as far flung as Poland; to regulate a common, a solution should regulate as many users as possible.¹⁵⁶

The Agreement excludes both countries with large fishing fleets and countries with flags of convenience. In the Central Arctic Oceans, analysts have noted that Peru, Indonesia, Chile, and the Philippines all possess fishing fleets that could undermine the Agreement.¹⁵⁷ Countries that are members of Arctic-adjacent regional fisheries management organizations, and thus are already fishing nearby, could potentially begin fishing in the Arctic, but are excluded.¹⁵⁸ For example, NEAFC, which manages the Norwegian Sea Banana Hole and the Barent's Sea Loophole, two other high seas regions above the Arctic circle, includes Panama and the Bahamas, states with flags of convenience many fishing vessels worldwide fly.¹⁵⁹ Importantly, ships flagged in these countries are already traversing the Arctic Ocean. Last year, ships flagged in 42 different countries shipped goods using Arctic seaways; 312 ships transiting the region were flagged in non-Arctic states.¹⁶⁰

However, on the other hand, though fewer nonparties will lead to fewer free riders, more members may also lead to an impotent Agreement. Parties to the Agreement have enormous power; each can force any decision to be made unanimously. In effect, each country can exercise a veto. With a larger pool of participants, a larger pool of diverse viewpoints increases the risk of decision-making paralysis. Unanimous decision-making has led many regional fisheries management organizations to appease objecting countries and make suboptimal conservation decisions.¹⁶¹

The Agreement does include an important set of non-state actors usually unrepresented in international treaties: indigenous groups. Arctic governance has a strong norm of indigenous inclusion, such as in the Arctic Council, and this Agreement is no exception. Indeed, indigenous groups were even involved in the treaty's drafting process. In this regard, this Agreement may serve as a model, for actors below the state level matter in governance, too.

156. Bailey, *supra* note 35.

157. Ted Bromund, *The Central Arctic Ocean Fishing Agreement: A Challenge for U.S. Diplomacy*, HERITAGE FOUNDATION (Apr. 16, 2021).

158. N.E. ATL. FISHERIES COMM'N, *supra* note 90.

159. *Id.*

160. *New Report Released On Flag States Of Ships In The Arctic*, ARCTIC COUNCIL (Dec. 19, 2023), <https://perma.cc/VL6U-3FYB>.

161. Antonia Leroy & Michel Morin, *Innovation in the Decision-Making Process of the RFMOs*, 97 MARINE POL'Y, Nov. 2018, at 156 (2018).

2. The Cooperation vs Coercion Tradeoff: Prioritizing Cooperation Without Coercion, the Agreement Invites New Types of Free Riding and Competition

The choice of creating a treaty based on cooperation or coercion is not mutually exclusive like the other two tradeoffs, yet treaties often tack further to one side than the other. For example, the Paris Agreement prioritizes cooperation (through voluntary, nationally determined emission reductions) over requiring coercive measures like the Montreal Protocol (which subjects parties to binding phase-out limits of controlled substances and imposes trade restrictions on non-compliant nonparties).¹⁶² Cooperative targets are easier to agree to, for states give up less and can more easily cheat. In contrast, coercive measures require states commit to changing their behavior, or, in the case of the Montreal Protocol, remain outside the protocol and suffer penalties.¹⁶³

However, the tragedy of the commons exists because cooperation fails. Because this Agreement prioritizes cooperation over coercive measures (indeed, lacking any coercive measures to ensure compliance), it fails to prevent free riding. Moreover, information-sharing cooperation within a tragedy of the commons may even accelerate the common's collapse.

In this Agreement, all countries agree to obey all Agreement measures, deter others from inconsistent actions, and ensure their own compliance. While this moratorium removes some pressure to fish by lessening competition, it does not remove incentives to fish in the first instance. Fishing is still economically valuable and detection of cheating is unlikely. Although all Agreement parties have high levels of state capacity, they face extraordinary hurdles to patrolling for compliance. The Central Arctic Ocean is large and remote; it still lacks sufficient search and rescue and emergency environmental response infrastructure.¹⁶⁴ Thus, there is still an incentive to cheat that the Agreement does not remove.

Most importantly, this treaty demonstrates how cooperation without any coercion may worsen free riding and competition. The Agreement's information-sharing requirements pose their own, internal free riding issues. Obviously, countries can simply withhold data from one another. Parties, particularly those with smaller fishing fleets, may feel incentivized to withhold data, since data will reveal potential fishing grounds to all competitors. The more valuable the data, the greater the incentive to hide it. The treaty's language neglects to require sharing all exploratory data.

Some cooperation, without any coercion, may even be worse than no cooperation at all. Most threateningly, if countries do share information, this information

162. Compare Paris Agreement to the United Nations Framework Convention on Climate Change, art. 4, Dec. 12, 2015, T.I.A.S. No. 16-1104 ("Each Party shall prepare, communicate and maintain successive nationally determined contributions.") with Montreal Protocol, art. 2, Sept. 16, 1987, 1522 UNTS 3, 26 ILM 1541 ("Each party shall ensure that . . . its calculated level of consumption of the controlled substances . . . does not exceed.").

163. Montreal Protocol, *supra* note 162, at art 4.

164. Malte Humpert, *Coast Guard Icebreaker Healy Reaches North Pole As Part of Greater US Arctic Engagement*, HIGH N. NEWS (Oct. 6, 2022, 9:07 PM), <https://perma.cc/7DEV-PT5C>.

could hasten a tragedy of the commons. Before the Agreement, although the commons were unregulated, no party knew where to find fishery resources. Now, the joint scientific program will ensure that all parties know where to find fisheries resources, closing that information gap. Without resource information sharing, countries could keep their discoveries secret. Now, with information sharing, two situations become more likely. First, countries with easy access to a stock and who can no longer keep a stock's location secret may seek to exploit it before other countries can. Second, if the Agreement were to collapse, all countries would know where to fish, and could therefore more quickly exploit fish and collapse the fishery, particularly if stocks are limited.

3. The Short-term vs Long-term Tradeoff: The Agreement Prioritizes Short-term Governance, Potentially Missing an Important Window of Opportunity

Negotiators also balanced signing a short-term agreement, with good-enough governance against creating—through a more difficult, drawn-out process—a true framework for future governance. A short-term agreement requires less political capital. None of the Arctic coastal states currently can fish in the Central Arctic Ocean, and some, like the United States, already ban the practice. Moreover, some countries, like Russia, question the need for any agreement, given the future fish stocks' uncertain location. Thus, in agreeing to a moratorium, the parties gave up little and did not have to convince reticent parties to buy into ambitious reforms.

On the other hand, creating a long-term framework agreement would require parties to make difficult compromises, convince reticent countries to sign on, and perhaps even tackle geopolitical issues like EEZ demarcation. But, drafting a long-term framework agreement will only become more difficult as resources become exploitable; right now, countries have no concrete fisheries interests, so can negotiate under a veil of ignorance. A framework treaty negotiated before it becomes necessary can be more ambitious. For example, the Antarctic Treaty froze any new sovereignty claims during the Cold War, decades before viable resource development become possible; since parties gave up little, they could agree to more.¹⁶⁵

This Agreement is explicitly short-term, punting framework-making to future negotiations. Yet, a governance void already exists that requires management now. The Agreement's implicit claim that forming a regional fisheries management organization is premature is at odds with party responsibilities under the Agreement. Under the Agreement, parties determine, implement, and enforce rules to explore and protect fisheries resources. Parties also conduct stock assessments and share that information to inform future management decision-making. Even if exploratory fishing efforts fail to show any valuable fish stocks, marine resources must still be protected, and the Arctic Council cannot alone govern a

165. The Antarctic Treaty, Jan. 12, 1959, 402 U.N.T.S. 71.

region where non-Arctic Council states have a right to extract. This Agreement is a stopgap already governing.

IV. A STRONGER AGREEMENT: A BROADER, ENFORCEABLE, LONG-TERM GOVERNANCE SYSTEM

While an important step towards ensuring sustainable Central Arctic Ocean fisheries management and a groundbreaking invocation of the precautionary approach, the Agreement is but a step. The Agreement must strike better breadth, coercion, and long-term-planning tradeoffs to improve its effectiveness. As Arctic fishing becomes possible, the incentives for noncompliance will increase, and the Agreement lacks needed coercive compliance tools. Excluded potential free riders may begin fishing, so the Agreement needs sufficiently large membership. And, although the Agreement punts designing a long-term governance framework to the future, designing a framework will be easier now under a veil of ignorance than when ice melts and competition begins in earnest. Only with these reforms will the Agreement parties have the tools to counteract the destabilizing incentives the tragedy of the commons creates.

A. To Include Potential Free Riders, The Parties Should Broaden Membership To All Likely Arctic Fishing Nations

To resolve the breadth-depth tradeoff, the Agreement should combine a reasonably broad membership with loosened voting rules. The Agreement's drafters made the important decision to include non-Arctic Council members in this Agreement. This Agreement should further expand to include all parties that could meaningfully impact the Central Arctic Ocean commons. Although the Central Arctic Ocean is a global common open to all, not all countries can reasonably use it. Normally, regional fisheries management organizations look to history to determine membership, and require states possess a "real interest" in the governed fishing region to enter.¹⁶⁶ Regional fisheries management organizations are not multilateral democracies; they limit decision-making to current resource users.

The Central Arctic Ocean, having never been fished, cannot rely on history or actual economic interest as a limiting principle. Many distant countries, such as India, have expressed interest in the Arctic. Yet, since fewer non-Arctic coastal states have fished seas abutting the Arctic Ocean, such as the Barents and Bering Seas, a history of "real interest" near the Arctic could principally limit membership. Under this rule, a country like Japan or China would have the right to membership in an Arctic regional fisheries management organization and thus to a catch allocation. In contrast, India would not, unless its fishermen exploited northern waters on a heavy and sustained basis or began participating in other regional organizations near the Arctic. Broader membership has the added benefit

166. See 1995 UN Fish Stocks Treaty, *supra* note 87, at 8 ("States having a real interest in the fisheries concerned may become members of such organization or participants in such arrangement.").

of diluting any claims non-Arctic Council parties may have as Arctic states. China has declared itself a “near-arctic state,” which China hawks fear is part of a plan to unjustifiably insert itself in Arctic governance.¹⁶⁷

To counter the negotiating difficulties broader membership may cause, the Agreement should include looser voting rules. Other regional fisheries management organizations suffer paralysis under unanimous voting rules. Moreover, Russia, an integral part of this Agreement, has leveraged its effective veto in Antarctic fishing agreements for geopolitical purposes.¹⁶⁸ Now, any question of substance under the Agreement requires unanimous decision-making. This rule could be softened, to require only three quarters of members to approve conservation regulations, as the International Whaling Commission requires.¹⁶⁹ These looser voting rules have allowed that Commission to balance broad membership with ambitious action, effectively banning whaling despite some vociferous party objections.¹⁷⁰

B. To Coerce Compliance, The Parties Should Leverage Arctic Remoteness And Create A Trade and Infrastructure-Based Enforcement System

To create Hardin’s “mutual coercion mutually agreed upon” in a state of anarchy, this Agreement must make it in states’ best interests to cooperate with one another. Describing why some environmental treaties are effective, Scott Barrett noted that an effective treaty “requires a pull: countries must believe that they will be better off if they coordinate.”¹⁷¹ Yet, in his view, success “also requires a push: countries must understand that, if most other countries coordinate, those that do not will be worse off.”¹⁷² For this reason, the Montreal Protocol “succeeded,” because “it changed incentives. Rather than just ask countries to limit . . . Montreal made it in the interests of states.”¹⁷³

Applying Barrett’s advice to the Arctic fisheries context, this treaty begins to pull parties in through scientific information sharing and decision-making power. Yet, it lacks a coercive push to ensure that, once parties join, they comply.

167. Ted Bromund, *The Central Arctic Ocean Fishing Agreement: A Challenge for U.S. Diplomacy*, HERITAGE FOUND. (Apr. 16, 2021), <https://perma.cc/47H6-ZL4P>.

168. Breum, *supra* note 26.

169. International Convention for the Regulation of Whaling, art. 3, Dec. 2, 1946, 62 Stat. 1716, 1616 U.N.T.S. 72.

170. Dennis Normile, *Why Japan’s Exit from International Whaling Treaty May Actually Benefit Whales*, SCI. (Jan. 10, 2019), <https://perma.cc/2ACA-7VXL>.

171. Scott Barrett, *Coordination vs. voluntarism and enforcement in sustaining international environmental cooperation*, 113 PROC. OF THE NAT’L ACAD. OF SCI., 14515, 14521 (2016).

172. Barrett also recommends treaties require states coordinate to solve problems, instead of requiring states volunteer to provide a global public good. Although I do not address this in the text of this paper, my recommendations comply with this recommendation. Additionally, while Barrett in this quote may be referring to convincing free riders to join multilateral agreements, this advice is equally true for countries already party to treaties determining whether to comply; the role a noncompliant party fulfills in solving a problem is functionally equivalent to a nonparty in terms of environmental harm caused, if not legal status. *Id.*

173. *Id.*

Likewise, it also lacks any tools to coerce nonparties into following Agreement measures, even if they do not join.

Coercive measures must combat the threat data-sharing abuse poses to treaty stability. If data-sharing is conditional on compliance with all interim measures, the Agreement's joint scientific program could transform from a potential cause of instability into an enforcement mechanism. However, data-sharing as a compliance measure may be insufficient to coerce compliance, particularly once countries have already shared fisheries information. Likewise, it would do little to prod nonparties into compliance, either.

The Wellington Convention could offer Arctic fisheries governance lessons on how to both ensure continued party compliance and prod nonparties into compliance on the high seas through well-designed coercion. To reduce harmful driftnet use in the South Pacific, countries in the region created a treaty in which they all agreed not to use driftnets and to deter other countries from using the technology.¹⁷⁴ To add teeth to this agreement, the parties prohibited "transshipment of driftnet catches within its fisheries jurisdiction," the "landing of driftnet catches within its territory," driftnet catch processing, and driftnet product importation.¹⁷⁵ Lastly, they also agreed to "restrict port access and port servicing facilities" for any ships using driftnets.¹⁷⁶ This Convention makes it costly for nonparties to engage in prohibited conduct. It also reduces incentives for participants to engage in the prohibited conduct too, by increasing the costs of noncompliance (no party resources can be used to aid prohibited conduct). Making access to party ports and processing resources conditional on Agreement compliance (for both parties and nonparties) may provide additional coercive force in the Arctic fisheries context. Given the Arctic's remoteness (any Agreement nonparty port is well over one thousand miles from the Arctic Ocean's border, and even further from the Central Arctic Ocean),¹⁷⁷ many fishers will be reliant on party infrastructure. Therefore, barring noncompliers from regional infrastructure would serve as a strong deterrent to fishing.

Moreover, since all nonparties must pass through party waters to access the Central Arctic Ocean, this means parties could concentrate enforcement patrols in the narrow entrances to the Arctic Ocean. It is impossible to sail north from the Pacific into the Arctic Ocean without passing through any party's twelve nautical mile territorial sea, where a country still exercises full sovereignty.¹⁷⁸ Following the norms of the earliest Arctic environmental treaties, any on-water enforcement responsibilities can be collective. Collective enforcement drove the very first

174. Convention for the Prohibition of Fishing with Long Driftnets in the South Pacific, Nov. 29, 1989, 29 I.L.M. 1454.

175. *Id.*

176. *Id.*

177. See *Maritime Boundaries Map Interface*, MARINEREGIONS.ORG, <https://perma.cc/JTL8-Q68A>.

178. *Id.*

Arctic environmental treaty; the Fur Seal Treaty required signatories to patrol international waters and report violators to each other.¹⁷⁹

C. Ambitious Action Is Practical Within A Narrow Window

Resolving the short-term versus long-term tradeoff is easy. Since a full-fledged fisheries management framework is not pressing right now, now is the time to create one. As competition increases and the issue becomes more urgent, creating a framework will only become more difficult. Now, states need give up little, as they do not yet have concrete fisheries interests.

As the Arctic Council resumes deliberations and Central Arctic Ocean fisheries remain understudied, there is a narrow window during which ambitious action is possible. The parties have already productively ruptured Arctic norms by including non-Arctic states and opening a closed governance club for an issue where doing so is necessary.¹⁸⁰ The parties even agreed that they look forward to working with other, non-Arctic nations, recognizing that, since international law grants all states rights to the high seas, any effective agreement must regulate non-Arctic states too.

More importantly, the currently unknown distribution of resources means that parties now negotiate under a veil of ignorance. No country desires fisheries collapse, and all want to stop potential competitors from exhausting Arctic resources that could be their own. Since parties do not know in advance what their precise interests in Arctic fisheries will be, they have additional flexibility to negotiate for rules that promote effective resource governance, as effective resource governance is their current national interest.

A stumbling block for ambition may nevertheless be non-Arctic geopolitics. Although Arctic and Antarctic cooperation has been less impacted by tensions and war elsewhere on the globe than other areas of cooperation—and the Arctic Council has resumed functioning—the current Russian-Ukrainian war did spill over into Arctic governance. After Russia's invasion, the seven other members refused to travel to Russia for meetings and the Council, for nearly two years, was “temporarily pausing” deliberations.¹⁸¹ In another fisheries organization, Greenland has denied Russia fishing privileges in retaliation for the invasion.¹⁸² Similarly, despite four decades of cooperation in the Commission on the Conservation of Antarctic Marine Living Organisms, Russia upended Chilean Sea Bass regulations, demonstrating that “Russia's attempts to undermine the

179. Convention Between the United States and Other Powers Providing for the Preservation and Protection of Fur Seals, July 7, 1911, 37 Stat. 1542, T.S. 564.

180. For issue sets without this peculiar feature of international law permitting open access to all, the admonition against limiting Arctic governance to Arctic states and excluding non-Arctic states need not apply. For example, there is no reason non-Arctic states need be included in the Arctic Council's Arctic regional development initiatives. See, e.g., *About the Arctic Council*, *supra* note 58 (outlining the Arctic Council's regional initiatives, none of which *require* non-Arctic support to succeed).

181. Media Note, U.S. Dep't of State, Office of the Spokesperson, Joint Statement on Arctic Council Cooperation Following Russia's Invasion of Ukraine (Mar. 3, 2022), <https://perma.cc/X5Y7-BURP>.

182. Breum, *supra* note 26.

West have extended to even obscure forums normally removed from geopolitical tussles.”¹⁸³

V. CONCLUSION: ENSURING AN ASPIRATIONAL TREATY’S EFFECTIVENESS

When, in 1569, Gerardus Mercator made his famous navigational map, he knew nothing of the Central Arctic Ocean besides its existence; Mercator’s map showed a giant magnetic mountain, whirlpools, and four-foot-tall pygmies dancing in its waters.¹⁸⁴ Today, though we know far more of the far north, our knowledge, especially of marine life beneath the ice, remains quite incomplete. We do know, however, that the Central Arctic Ocean is rapidly changing, unique, and fragile. Though it may not contain mountains, whirlpools, and pygmies, it is an irreplaceable ecosystem like nowhere else. From other nearby commons, we know that collapse is swift, and recovery takes generations. To adequately protect the Arctic, this Agreement must be stronger. So we do not misstep, given how little we still know and how much the region will likely change, Arctic countries cannot simply aspire to a precautionary approach, as the current Agreement does; they must enforce it.

Although the Agreement is a laudable, hard-fought diplomatic victory and a unique point of cooperation among competitors, it neither enforces its norms nor heeds Congress’s call for a strong treaty. To avoid a tragedy of the commons, the Agreement cannot simply wish away the free-riding dynamics that lead to over-exploitation and collapse; it must harness competition to combat them. Through broader breath, the Agreement can pull potential free riders into its regulatory reach. Through a coercive enforcement mechanism, the Agreement can harness competition to incentivize adherence and compliance. And by creating a long-term governance framework, the Agreement can bring stability to region of great national security importance and protect these fisheries resources becoming either being a tool of geopolitical conflict or the source of conflict itself. The earlier parties act, the easier creating a new, stronger governance structure will be. Once the ice melts, and resource allocations become apparent, parties will no longer be negotiating under a veil of ignorance.

183. Goodman, *supra* note 16.

184. Cara Giaimo, *The Mysteries of the First-Ever Map of the North Pole*, ATLAS OBSCURA (Feb. 27, 2017), <https://perma.cc/NT7Y-VN63>.
