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A "Chilling" Effect? – Geopolitical Incentivizing And The Environmental Ramifications For The Arctic Region

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**A “CHILLING” EFFECT? –
GEOPOLITICAL INCENTIVIZING AND THE
ENVIRONMENTAL RAMIFICATIONS FOR THE
ARCTIC REGION**

Bryan J. Harrison *

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I. INTRODUCTION

There is a cold war of sorts being waged at the top of the world. As a result of warmer temperatures, the Arctic ice caps are melting, exposing vast quantities of previously unreachable natural resources and opening previously unreachable shipping routes in the Northwest Passage.¹ No fewer than eight countries have territory in and political autonomy over areas in the Arctic region.² Many of

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¹ Lee Clark, *Canada's Oversight of Arctic Shipping: The Need for Reform*, 33 TUL. MAR. L.J. 79, 81-83 (2008). The Northwest Passage, for present purposes, “is the body of Arctic water, including the waters adjacent to the Canadian coastline between the Davis Strait and the Baffin Bay in the east and the Bering Strait in the west.” *Id.* at 83.; accord DONAT PHARAND, CANADA’S ARCTIC WATERS IN INTERNATIONAL LAW (R.J. Adie, et al. eds., Cambridge Univ. Press) (1988).

² See generally Arctic Environmental Protection Strategy, June 14, 1991, 30 I.L.M. 1627 (referring to territory possessed by the United States, Russia, Canada, Denmark (on behalf of Greenland), Iceland, Finland, Sweden, and Norway). Finland and Sweden have territory in the zone, but no direct access to the Arctic Ocean.

these countries have now begun vying, whether formally or informally, for pieces of the Arctic and, in particular, the seabed continental shelf found beneath the Arctic Ocean.³ Looming treaty deadlines for formal review of territorial claims and rising environmental costs against navigation and shipping through the Arctic have complicated this struggle. What remains clear, however, is that “[the issue] will not be decided by photo-ops or even by planting flags It will be decided by geologists, lawyers and diplomats.”⁴ As one commentator aptly notes, “[t]he plot is full of characters espousing the rhetoric of cooperation yet pursuing their self-interests . . .” which is transforming the Arctic “into a potential epicenter of world affairs.”⁵

This paper seeks to address a small portion of the nexus among environmental, legal, and geopolitical effects that such actors espouse. Part II frames the discussion by providing an overview of current geopolitical and environmental policies in the Arctic. Analysis begins by positing the theory of the commons, and how history has altered policies and prompted internationally recognized practices. Emphasis is on the ‘major’ Arctic players’ policies: namely the United States, Canada, and Russia.

Part III considers the similarities between the Arctic and Antarctica and then considers the need for Arctic law reform, drawing parallels to the Antarctic Treaty regime, which prohibits further national sovereignty assertions and actions in support of existing assertions. The regime also defers natural resource extraction and environmental degradation through efficient collaborative agreements, emergency response, and binding dispute resolution mechanisms.

Part IV then analyzes the challenges faced by the United States and Canada to reconcile competing interests concerning the

³ Press Release, Comm’n on the Limits of the Cont’l Shelf, Russ. Fed’n to Move to Establish Outer Limits of Its Extended Cont’l Shelf, U.N. Doc. SEA/1729 (Dec. 21, 2001); Editorial, *The Great Arctic Oil Rush*, N.Y. TIMES, Aug. 12, 2007, at WK 9. Moscow legislators navigated a small submersible vessel two miles under the polar ice cap to place a Russian flag on the seabed. *Id.* Canada and the U.S. have both dismissed the act. *Id.*

⁴ *The Great Arctic Oil Rush*, *supra* note 3.

⁵ Scott G. Borgerson, *The Great Game Moves North – As the Arctic Melts, Countries Vie for Control*, FOREIGN AFFAIRS, Mar. 25, 2009, <http://www.foreignaffairs.com/articles/64905/scott-g-borgerson/the-great-game-moves-north>.

Arctic. As shipping routes become more accessible, the potential for international disputes increases. One such area of conflict is that of shipping regulation through the Northwest Passage.

Finally, Part V concludes with an inquiry into the possible impact that any competing state interests may have on the indigenous communities in the Arctic.⁶

II. HISTORICAL AND THEORETICAL CONTEXT FOR RECENT ARCTIC DEVELOPMENTS

For the better part of history, the Arctic was treated as *res communis*, global commons not belonging to any individual states.⁷ For centuries, without a developed means of transport through the Arctic's exceptionally harsh conditions and without the sophisticated navigation technologies now available, the Arctic region was essentially ignored. It was not until 1905 that Roald Amundsen made the first recorded trip from the Atlantic Ocean to the Pacific by way of the Arctic Ocean.⁸ Since then, fewer than two-hundred ships have repeated the feat.⁹ During this same time, a combination of factors – including globalization, capitalism, and technological development – spurred a policy shift from *res communis* to *res nullis*,¹⁰ transforming the global commons into another paradigmatic example of the “tragedy of the commons.”¹¹

⁶ For the purposes of the discussion, “state” will refer to an entity which has a sovereign governing institution over a stable population within a defined territory. This definition is consistent with that prescribed generally by international law scholars. *See, e.g.*, 44B AM. JUR. 2D *International Law* § 22 (2009).

⁷ *See generally* Scott J. Shackelford, *The Tragedy of the Common Heritage of Mankind*, 28 STAN. ENVTL. L.J. 109 (2009).

⁸ Cyrus C. Adams, *Son of the Vikings Navigates the Northwest Passage*, N.Y. TIMES, Dec. 10, 1905, at SM3.

⁹ Arik Hesseldahl, *Who Owns Rights to Melting Arctic*, BUS. WK. ONLINE, Jan. 28, 2009, http://www.businessweek.com/bwdaily/dnflash/content/jan2009/db20090127_954391.htm.

¹⁰ The principle of *res nullis* is one in which the land or entity is treated as belonging to no one, therefore availing the opportunity for states to make territorial and sovereignty claims over those areas. *See* Shackelford, *supra* note 7, at 115.

¹¹ *See* Shackelford, *supra* note 7, at 115. The *res communis* model, also referred to as the Grotius model, allows for shared navigation and resource extraction. *See id.* at 122-23. Hugo Grotius published a 1609 treatise, later known as the Freedom of the Seas Doctrine, which argued that the oceans constitute a common resource. *Id.*

With the advent of the submarine and off-shore drilling techniques in the middle of the twentieth century, states discovered and seized the extensive natural resources on the deep seabed floor, hoping to reap the many strategic and economic benefits.¹² President Harry Truman, in the immediate aftermath of World War II, asserted that the United States had jurisdiction over all resources on its continental shelf.¹³ Other states quickly followed the United States' lead and, in short time, customary international law arose recognizing the validity of continental shelf claims.¹⁴ And so began Hardin's tragedy of the commons for natural resource extraction and right-of-way claims in the world's oceans.

The 1982 United Nations Convention on the Law of the Sea ("UNCLOS") seeks to reconcile sovereignty claims with *res communis*.¹⁵ Drawing together prior treaties and customary international law, UNCLOS establishes international property law *erga omnes*,¹⁶ providing coastal countries with extended, but limited jurisdiction of seabeds,¹⁷ while ensuring that the seabed and its mineral resources beyond those jurisdictions remain in the "common heritage

(discussing HUGO GROTIUS, THE FREEDOM OF THE SEAS OR THE RIGHT WHICH BELONGS TO THE DUTCH TO TAKE PART IN THE EAST INDIAN TRADE (Ralph Van Deman Magoffin trans., Oxford University Press 1916) (1608)), *see also* Garrett Hardin, *The Tragedy of the Commons*, 162 SCI. 1243, 1243-48 (1968) (arguing that, in the long term, communal resources become destroyed when persons act independently in an environment with limited resources). Hardin metaphorically uses a common land parcel for individual cow herders. He suggests that it is in the best interest of each individual herder to put as many cows on the commons as possible, maximizing the benefits of the land but minimizing the individual cost to that herder. As all herders begin to make this decision individually, the commons become depleted. *Id.* at 1244.

¹² Shackelford, *supra* note 7, at 123.

¹³ Proclamation No. 2667, 10 Fed. Reg. 12,305 (Sept. 28, 1945); Shackelford, *supra* note 7, at 124. This assertion came a mere twenty six days after the Japanese formally surrendered.

¹⁴ Penelope Warne, *Arctic Scramble: International Law and the Continental Shelf*, ABERDEEN PRESS AND J., Oct. 1, 2007, at 24.

¹⁵ *See* United Nations Convention on the Law of the Sea, 21 I.L.M. 1261, 1833 U.N.T.S. 397 (Nov. 16, 1994) [hereinafter UNCLOS].

¹⁶ For present purposes, *erga omnes* is defined as an obligation owed by a state to the international community as a whole. For a case discussing the principle of *erga omnes* in this context, *see, e.g., Barcelona Traction, Light & Power Co. (Belg. v. Spain)*, 1970 I.C.J. 3, 32 (Feb. 5, 1970).

¹⁷ UNCLOS, *supra* note 15, art. 77.

of mankind” that sustainably benefits all.¹⁸ While lauded as a significant achievement in the field of international law, UNCLOS is burdened by vagueness, financial shortcomings, bureaucratic obstacles, and major non-adhering parties – most notably, the United States.¹⁹

Scientific data suggests that the Arctic is warming and melting icecaps at an unprecedented rate.²⁰ Arctic sea ice coverage has reduced from an average of seven million square kilometers before the year 2000 to just over four million square kilometers in 2007.²¹ “Other signs – such as warmer deep-water ocean currents, greater albedo feedback loops, and massive ice shelves breaking free – point to further melting[,] . . . [potentially] disgorg[ing] millions of tons of methane, unleashing what some refer to as a ‘climate bomb’ . . . that could dramatically raise the planet’s temperature.”²² In July 2008, a United States Geological Survey (“USGS”) indicated that areas “north of the Arctic Circle ha[ve] an estimated 90 billion barrels of undiscovered, technically recoverable oil, [and] 1,670 trillion cubic feet of technically recoverable natural gas,” accounting for almost one-quarter of the undiscovered, recoverable gas and oil resources in the world.²³ Even if these estimates prove high, it is clear that previously inaccessible oil and gas reserves are now on the verge of becoming accessible, raising new concerns and requiring new policies by Arctic states.

A. The United States’ Arctic Policy

¹⁸ Peter Prows, *Tough Love: The Dramatic Birth and Looming Demise of UNCLOS Property Law (And What is to be Done About It)*, 42 TEX. INT’L L.J. 241, 244 (2007) (suggesting that the “necessity of consensus for international property law can also become an effective and constructive tool for encouraging countries to work together on managing the implementation, development and proliferation of the law of the sea”).

¹⁹ Prows, *supra* note 18, at 241, 245.

²⁰ See Borgerson, *supra* note 5.

²¹ Gerd Braune, *Countries Seek Piece of Pie*, SPIEGEL ONLINE, Mar. 23, 2009, <http://www.spiegel.de/international/world/0,1518,614900,00.html>.

²² Borgerson, *supra* note 5.

²³ Press Release, U.S. Dep’t of the Interior, U.S. Geological Survey, 90 Billion Barrels of Oil and 1,670 Trillion Cubic Feet of Natural Gas Assessed in the Arctic (July 23, 2008), *available at* <http://www.usgs.gov/newsroom/article.asp?ID=1980>.

While the United States has not ratified UNCLOS, it has engaged in its own extensive mapping and scientific data gathering in the Arctic. In January 2009, President Bush signed a directive laying the groundwork for the first revision of United States Arctic policy since 1994. The directive was “expected to call on federal agencies to better define the area of the Arctic seabed over which the U.S. could lay claim”²⁴ and stated that the United States is “an Arctic nation, with varied and compelling interests in that region.”²⁵ These varied interests include the United States’ and Canada’s sovereignty over the Northwest Passage.²⁶

To those ends, President Bush’s directive directly challenges the ambitious Canadian Arctic agenda by reiterating that the Northwest Passage is an international waterway and by claiming territory in the Beaufort Sea.²⁷ Furthermore, the directive indicates that “the United States has broad and fundamental national security interests in the Arctic region and is prepared to operate either independently or in conjunction with other states to safeguard these interests.”²⁸

While the Obama administration has yet to alter this directive, the United States Department of the Interior Secretary, Ken Salazar, has backed off other aggressive Bush Arctic plans, calling for an additional six months of commenting period on Arctic drilling proposals.²⁹ This shift is consistent with the Ninth Circuit’s recent ruling that the United States must further study and justify the environmental impacts of drilling in wildlife and indigenous communities before leased exploratory drilling can proceed in the Beaufort Sea.³⁰

²⁴ Stephen Power, *Bush Moves to Update U.S. Policy in Arctic Region*, WALL ST. J., Jan. 7, 2009, at B1.

²⁵ Presidential Directive on Arctic Region Policy, 45 WEEKLY COMP. PRES. DOC. 47, 48 (Jan. 9, 2009).

²⁶ See Doug Struck, *Harper Tells U.S. to Drop Arctic Claim*, WASH. POST, Jan. 27, 2006, at A19; see also discussion *infra* Part IV(B).

²⁷ Presidential Directive on Arctic Region Policy, *supra* note 25, at 48-49, 50.

²⁸ *Id.* at 48.

²⁹ Andrew C. Revkin, *Longer Comment Period on Energy Plan*, N.Y. TIMES, Feb. 11, 2009, at A17.

³⁰ See *Alaska Wilderness League v. Kempthorne*, 548 F.3d 815 (9th Cir. 2008) (remanding so that Minerals Management Service can conduct the ‘hard look’ analysis required by the National Environmental Policy Act with regards to the Beaufort Sea region because the analysis utilized lacked specific information about

Thus, the United States faces many domestic regulatory and policy hurdles before viably extracting natural resources from the Arctic. Some have argued that the United States' inaction towards asserting territorial claims is tantamount to "[falling] asleep at the wheel."³¹ It is imperative, given the strong domestic agendas of Russia and other Arctic states, for "those in Washington to take notice of the fast-changing politics on America's fifth coast."³²

B. Canadian Arctic Policy

Just as the United States must be cognizant of the geopolitical issues, so too must Canada be swift and timely in ensuring that its presence is preserved in the Arctic region. In addition to territorial disputes with the United States over the seabed under the Beaufort Sea and the Northwest Passage, Canada and Denmark dispute ownership of Hans Island.³³ These quarrels underlie the need for Canada to articulate its national security interests in the Arctic.

The Canadian government is working to develop programs mapping the Canadian Arctic in anticipation of international boundary disputes, to facilitate shipbuilding projects for the Canadian Navy and Coast Guard so as to ensure an active presence over the Northwest Passage, and to fund environmental research projects on the effects of climate change.³⁴ Additionally, in 2008, "Canada conducted its largest military exercise ever . . . block[ing] the sale of Canadian radar technology to a U.S. buyer on national security grounds."³⁵

Canadian Prime Minister Stephen Harper has pledged his government's commitment to defend Canadian sovereignty in the

future locations and did not address the impact on endangered bowhead whales and Inupiat subsistence activities).

³¹ See Borgerson, *supra* note 5; see also Editorial, *The Great Arctic Oil Rush*, *supra* note 3 ("We may never need a share of that oil, but it seems foolish not to keep it in reserve.").

³² Borgerson, *supra* note 5.

³³ George Kolisnek, *Canadian Arctic Energy Security*, ENSEC (Dec. 14, 2008), <http://www.ensec.org/index> (search site for "George Kolisnek and select "Canadian Arctic Energy Security). Hans Island is a small island between Greenland and Canada's Ellesmere Island.

³⁴ *Id.* Ironically, Canada is undertaking major hydrographical projects to map Arctic coastlines and seabeds. *Id.*

³⁵ Borgerson, *supra* note 5.

region, laying claims to expand Canadian territorial.³⁶ Harper has also transferred an additional one-thousand soldiers to the Arctic Ranger troops, and has invested more than \$3 billion in new ice breaker ships and a strategic naval patrol station at Nanisivik bordering the Northwest Passage.³⁷

Another significant concern for Canada is the melting ice cover in the Northwest Passage. Recently, both the United States³⁸ and the European Union ("EU") have alleged that the Passage, which cuts through some 16,000 archipelago islands, constitutes international waters. The EU Commission's Communication of November 2008 expresses the EU's intent "to explore and improve conditions for gradually introducing Arctic commercial navigation" while promoting "the principle of freedom of navigation and the right of innocent passage in the newly opened routes and areas."³⁹ Such assertions challenge Canada's jurisdictional claims that the Northwest Passage is internal Canadian waters. Harper rejects any such contention, claiming that "it is the Canadian people who [sic] we get our mandate from, not [anyone else]."⁴⁰

C. Russian Arctic Policy

Without a doubt, among the major countries involved, Russia has been the most active in asserting territorial claims, developing extensive military presence and infrastructure in the Arctic. The significance of Russian policy is intensified given the inextricable dependence that the EU has on Russia's state-owned oil conglomerate, Gazprom, to supply energy resources.⁴¹

Russia also has the benefit of a possible navigable route through the Northern Sea Route, coined the *Northeast Passage*. In

³⁶ *Id.*

³⁷ *Id.*

³⁸ See discussion *supra* Part II(A).

³⁹ *Communication from the Commission to the European Parliament and the Council – The European Union and the arctic region*, at 8, COM (2008) 763 final (Nov. 20, 2008) [hereinafter "Commission Communication"].

⁴⁰ See Struck, *supra* note 26.

⁴¹ See Andrew E. Kramer, *Eastern Europe Fears New Era of Russian Sway*, N.Y. TIMES, Oct. 13, 2009, at A1. Gazprom supplies Europe with roughly twenty-eight percent of its natural gas. Russia's ambitious plan to run a pipeline along the bed of the Baltic Sea has been met with criticisms as such leverage is utilizing natural gas as a way to play "pipeline politics." *Id.* at A12.

fact, Russia hopes that the melting ice and luring economic benefits will make its passage a summer competitor with the Suez Canal.⁴² Russia is hoping to promote the route and collect fees by charging for icebreaker escorts, navigation convoys, and permits for ships.⁴³ Russia created an international frenzy with its 2007 flag planting on the North Pole seabed and its pronouncement that the Arctic “has always been Russian and remains Russian today”⁴⁴ and “must become Russia’s main strategic base for raw materials[,]” the battle for which will “be waged with military means.”⁴⁵

Additionally, in 2008, Russia sent strategic bomber flights to the borders of American, Canadian, Norwegian and Danish airspaces, coupled with regular patrols of Arctic waters by the Russian navy.⁴⁶ Moscow has committed over a billion dollars to double the capacity of its northern port of Murmansk.⁴⁷ The government has plans to expand its nuclear icebreaker fleet, to build the world’s first floating nuclear power plant, and to have Gazprom extracting the first Arctic gas by 2013.⁴⁸

It is clear that the major Arctic nations, though purportedly willing to enter into cooperative diplomatic agreements, are not deterred from embarking on their own extensive research and military and political maneuvering. If an amicable solution is to be reached, it appears the interested states will have to look beyond UNCLOS.

⁴² Andrew E. Kramer & Andrew C. Revkin, *Arctic Shortcut, Long a Dream, Beckons Shippers as Ice Thaws*, N.Y. TIMES, Sept. 11, 2009, at A1. “The passage of [] two German ships appears to be the first true commercial transit of the entire Northeast Passage from Asia to the West.” *Id.* Such a passage through the route north of Russia would reduce the voyage from Japan to Rotterdam by about 4,450 miles. *Id.* at A3

⁴³ *Id.* at A3.

⁴⁴ Spiegel Staff, *The Last Gold Rush: Coastal Nations Grab for Ocean Floor Riches*, SPIEGEL ONLINE, June 4, 2008, <http://www.spiegel.de/international/world/0,1518,557487,00.html>.

⁴⁵ Matthias Schepp & Gerald Traufetter, *Riches at the North Pole: Russia Unveils Aggressive Arctic Plans*, Spiegel Online, Jan. 29, 2009, <http://www.spiegel.de/international/world/0,1518,604338,00.html>. Russian parliament member and the operator who planted the Russian flag on the ocean floor, Artur Chilingarov, claimed: “We are not prepared to give our Arctic to anyone [and] if these rights are not recognized, Russia will withdraw from [UNCLOS].” *Id.*

⁴⁶ Borgerson, *supra* note 5.

⁴⁷ *Id.*

⁴⁸ *Id.*

III. LESSONS FROM ANTARCTICA'S MADRID PROTOCOL APPLIED TO INTERNATIONAL ARCTIC POLICY

A. *Comparative View of the Arctic and Antarctica*

Logically, given some of the apparent similarities between Antarctica and the Arctic, and given the treaty successes in minimizing natural resource and sovereignty disputes over the South Pole, a question arises as to why a similar counterpart has not yet been developed for the Arctic.

Both the Arctic and Antarctica are rich in natural resources and wildlife. Both are cold-climate polar regions. Yet, there are significant differences between the two. Antarctica is managed as a global commons area and is a continent, unlike the Arctic. There is water, not land, found beneath the Arctic's ice, and the area falls almost entirely under the sovereignty of one of the eight nations' territories that extend into the Arctic Circle.⁴⁹ And perhaps most significantly, the Arctic contains numerous indigenous communities, unlike Antarctica where there are no true indigenous peoples.⁵⁰ As a result of these differences, efforts to protect the Arctic are guided mainly by national law; cooperative efforts are considered merely 'soft law,' which do not possess the strict characteristics of recognized enforceability and are non-binding, though they may evolve into binding customary law.⁵¹

However different the two regions may appear to be, it is prudent to consider the possibility of adopting similar governing regulations. It is even more prudent, given the success of the Antarctic Treaty and the 1991 Madrid Protocol thereto (collectively, the Antarctic Treaty System or "ATS"), to thwart international geopolitics and environmental degradation.⁵² The heightening of the Cold

⁴⁹ DAVID HUNTER ET AL., INTERNATIONAL ENVIRONMENTAL LAW AND POLICY 1152 (2006).

⁵⁰ *Id.* at 1153; see discussion *infra* Part V.

⁵¹ See discussion *infra* III(A). UNCLOS, however, does provide hard law for those states party to it, e.g., control of exclusive economic zones, protection of the marine environment, etc. See generally UNCLOS, *supra* note 15, arts. 55-75, 145.

⁵² See Antarctic Treaty, Dec. 1, 1959, 12 U.S.T. 794, 402 U.N.T.S. 71 (June 23, 1961); Antarctic Treaty Consultative Parties: Final Act of the Eleventh Antarctic Special Consultative Meeting and the Protocol on Environmental Protection to the Antarctic Treaty, Oct. 4, 1991, 30 I.L.M. 1455 [hereinafter Madrid Protocol]. The Madrid Protocol was the most significant amendment of the Antarctic Treaties.

War and the growing presence of both the Soviet Union and the United States in Antarctica made it imperative to develop an international agreement. The year 1959 marked the International Geophysical Year in Antarctica, and the successful cooperation of the twelve nations allowed ATS to address all of the major issues confronting Antarctica at that time.⁵³

The objective of UNCLOS mirrors that of ATS, which commits its parties to the “comprehensive protection of the Antarctic environment and dependent and associated ecosystems and . . . [which] designates Antarctica as a natural reserve, devoted to peace and science.”⁵⁴ ATS’ scope is far reaching: all activities are mandated to protect the Antarctic environment.⁵⁵ This prohibition extends to “any activity relating to mineral resources”⁵⁶ and also to any “acts or activities . . . [that] constitute a basis for assenting, supporting, or denying a claim to territorial sovereignty in Antarctica or create any rights of sovereignty in Antarctica.”⁵⁷ ATS specifically prohibits the assertion of any new territorial claims, including those pertaining to the enlargement of an existing claim.⁵⁸ Commentators have noted the reconciliation of sovereignty claims to be the “cornerstone of the Antarctic Treaty.”⁵⁹ Poignantly, both natural resource exploitation and sovereign territorial claims in the Arctic are contentious issues that remain generally unresolved under UNCLOS.

From a practical standpoint, Article 76 of UNCLOS contains numerous procedural mechanisms for the International Tribunal for the Law of the Sea and the International Seabed Authority to deter-

Among other things, the Protocol requires a 50 year moratorium on exploitation of mineral resources. *Id.* at art. 7.

⁵³ Donald R. Rothwell, *The Canadian-U.S. Northwest Passage Dispute: A Reassessment*, 26 CORNELL INT’L L.J. 331, 364 (1993). Incidentally enough, 2007 – 2009 again signals an International Polar Year.

⁵⁴ Madrid Protocol, *supra* note 52, art. 2.

⁵⁵ *Id.* at art. 3(1).

⁵⁶ *Id.* at art. 7.

⁵⁷ Antarctic Treaty, *supra* note 52, art. 4(2).

⁵⁸ *Id.*

⁵⁹ See Rothwell, *supra* note 53, at 365 (quoting Rolph Trolle-Anderson, *The Antarctic Scene: Legal and Political Facts*, THE ANTARCTIC TREATY REGIME: LAW, ENVIRONMENT AND RESOURCES 57, 59 (Gillian D. Triggs ed., 1987)). This cornerstone is also especially pertinent when seeking to resolve the Canadian-United States dispute over the Northwest Passage. See discussion *infra* Part IV.

mine and analyze disputing claims for expanded territories. However, these mechanisms are largely ineffective, whereas ATS contains numerous practical and effective articles requiring collaborative planning of activities in the region,⁶⁰ emergency response plans,⁶¹ and dispute resolution procedures.⁶² Together, these are critical areas of development in the Arctic.

B. Collaborative Planning

There are numerous UNCLOS articles encouraging international cooperation among parties to develop and publicly disseminate information.⁶³ However, these articles are vaguely constructed for particular sections. Simply considering Canada and Russia,⁶⁴ it is clear that these countries are conducting research, mapping the Arctic seabed, extracting soil samples, and developing policy on a national level without multinational cooperation. In marked contrast, Antarctic research is done through multinational research organizations and international agreements.⁶⁵ Given the potential for significant financial profiteering and natural resource exploitation in the Arctic, the ability of a country to freely expand seabed claims under Article 76 is dangerous in the tragedy of the commons context. Collaborative efforts are needed to discourage secretive domestic information-gathering and economic incentivizing.

C. Emergency Response Mechanisms

⁶⁰ Madrid Protocol, *supra* note 52, art. 6(1) (“The Parties shall co-operate in the planning and conduct of activities in the Antarctic Treaty.”); Antarctic Treaty, *supra* note 52, art. 6(2) (requiring that each party “share information that may be helpful to other Parties in planning and conducting their activities in the area, with a view to the protection of the environment and dependent ecosystems”).

⁶¹ Madrid Protocol, *supra* note 52, art. 15 (“[T]he Parties shall establish procedures for immediate notification of, and co-operative response to, environmental emergencies.”).

⁶² *Id.* at art. 18 (“If a dispute arises . . . the parties to the dispute shall, consult among themselves as soon as possible with a view to having the dispute resolved by negotiation, inquiry, mediation, conciliation, arbitration, judicial settlement or other peaceful means.”); *see also id.* at arts. 19, 20.

⁶³ *E.g.*, UNCLOS, *supra* note 15, arts. 197, 242, 244.

⁶⁴ *See* discussion *supra* Part II(B) and Part II(C).

⁶⁵ *See* Antarctic Treaty, *supra* note 52, art. 3; Madrid Protocol, *supra* note 52, art. 6.

As the Arctic becomes more accessible, one major concern is the lack of an effective emergency response program for maritime or mining disasters. The risk of a catastrophic spill is significant; the United States Minerals Management System ("MMS") predicts at least one major oil spill in the first fifteen years, in just the Beaufort and Chukchi seas.⁶⁶ While UNCLOS seeks to impose various duties on parties, such as to render assistance on the high seas,⁶⁷ to permit travel through sovereign passages,⁶⁸ to travel such passages with due care,⁶⁹ and to respect exclusive economic zones,⁷⁰ UNCLOS does not mandate an explicit duty to assist in the formulation and execution of an emergency response program. This is especially troublesome in the Arctic, given the "dearth of experience with producing oil in waters exposed to seasonal ice pack and the acknowledged inability to respond to or clean up any oil releases in the presence of ice,"⁷¹ which makes a major release of oil likely to be catastrophic.

Such a response mechanism is in place in the ATS. Article 15 of the Madrid Protocol mandates that each party "provide for prompt and effective response action to such emergencies which might arise"⁷² and to "establish contingency plans for response to incidents with potential adverse effects on the Antarctic environment."⁷³ Furthermore, parties must cooperate in the formulation and implementation of contingency plans and establish an intricate notification and response system to any emergencies.⁷⁴ What is particularly relevant for Arctic considerations is that an emergency response mechanism exists in Antarctica, where sovereignty claims and natural resource extraction are prohibited. Such a response plan for

⁶⁶ *Energy Development on the Outer Continental Shelf and the Future of Our Oceans: Joint Oversight Hearing Before the Subcomm. on Energy and Mineral Resources and Subcomm. on Insular Affairs, Oceans and Wildlife of the H. Comm. on Natural Resources*, 111th Cong. 84 (2009) (statement of Jeffery Short, Ph.D., Pacific Science Director, Oceana) [hereinafter "Energy Development on Ocean Testimony"].

⁶⁷ UNCLOS, *supra* note 15, art. 98.

⁶⁸ *Id.* at art. 44.

⁶⁹ *Id.* at art. 39.

⁷⁰ *Id.* at art. 58.

⁷¹ Energy Development on Oceans Testimony, *supra* note 66, at 84.

⁷² Madrid Protocol, *supra* note 52, art. 15(1)(a).

⁷³ *Id.* at art. 15(1)(b).

⁷⁴ *Id.* at art. 15(2).

the Arctic would assuage some of the opponents of resource exploration and also necessarily foster collaborative discussion among the Arctic countries.⁷⁵

D. Dispute Resolution Procedures

Article 279 of UNCLOS urges the parties to “settle any dispute between them concerning the interpretation or application of this Convention by peaceful means”⁷⁶ If the parties cannot reach an agreement within a “reasonable period of time,” remedial provisions of UNCLOS are invoked.⁷⁷ And even if agreement is reached, countries can opt out of binding dispute resolution provisions.⁷⁸ To date, Norway has been the only country to submit itself to the binding dispute resolution clauses of UNCLOS.⁷⁹

In contrast, under ATS, there is a binding system of dispute resolution. If collaborative dispute resolution fails, ATS requires resolution either through a submission to the International Court of Justice or the Arbitral Tribunal.⁸⁰ Given the nature of the disputes in the Arctic, a binding requirement may be a necessary component of any future international legal agreements between Arctic nations. With a binding dispute resolution system, countries cannot shun outcomes they deem to be disadvantageous to their national interests without consequence.⁸¹ Binding dispute resolution also fosters a

⁷⁵ Environmental advocacy groups often cite the Exxon Valdez disaster, recently marked by its 20th anniversary, as proof of the possible dangers that exist in the Arctic. By conservative estimates, cleanup and recovery cost \$2 billion and Exxon has paid at least \$1 billion in damages. The incident illustrates the inherent and unavoidable risks of drilling and shipping through the Arctic: ice, turbulent waters, ecological damage, outdated navigational maps, and shallow channel systems. Editorial, *Lessons of the Exxon Valdez*, N.Y. TIMES, Mar. 23, 2009, at A20.

⁷⁶ UNCLOS, *supra* note 15, art. 279.

⁷⁷ *Id.* at art. 83.

⁷⁸ *Id.* at art. 298.

⁷⁹ Stephanie Holmes, Comment, *Breaking the Ice: Emerging Legal Issues in Arctic Sovereignty*, 9 CHI. J. INT'L L. 323, 340 (2008).

⁸⁰ Antarctic Treaty, *supra* note 52, art. 19(1). Also, under Art. 20(1), if a year has passed without resolution, the dispute *shall* be referred in accordance with Art. 19(5), which provides that if parties to a dispute have not accepted means for settlement of a dispute, the dispute may be submitted only to the Arbitral Tribunal.

⁸¹ It seems this is the route to which Russia has committed itself with regards to their recent territorial claims, vowing to leave UNCLOS if their territorial requests are not met. See discussion *supra* Part II(C). Whether binding resolution would resolve such

sense of international legitimacy that may be absent in non-binding processes.

IV. CURRENT GEOPOLITICS AND THE NORTHWEST PASSAGE

The Northwest Passage (“Passage”) consists of “the marine routes between the Atlantic and the Pacific oceans along the northern coast of North America that open the straits and sounds of the Canadian Arctic Archipelago.”⁸² The allure of such a course is a significantly shorter and faster route: a 12,400 mile voyage from Japan to England is cut to less than 8,700 miles and saves two weeks of the travel time.⁸³ There is an even greater incentive today, as the current struggle for natural resources incentivizes the extraction and shipping directly from the Arctic region.

A. The Dispute in Territorial and Environmental Terms

With the receding ice caps, there are fewer navigational problems for vessels, and little doubt that such a route would hold great utility for industry. However, Canada has long attempted to assert that the Passage lies within its internal waters, thereby giving Canada the ability to set the parameters and means by which vessels can travel through the Passage. The United States has consistently maintained that the Passage is international waters, open to the freedom of navigation principle, and thus free from regulatory control by any particular state.

Canada claims sovereignty over the Arctic Archipelago, insisting that the waterways are internal. Canada’s claims are based on historical tradition; throughout the course of history, Canadian explorers regularly explored and traveled the straits.⁸⁴ During the twentieth century, Canada regularly asserted that the waters were Canadian and were “internal waters of Canada subject to Canadian

unilateral demands is unclear; however, the binding nature would likely lend itself to greater credibility.

⁸² Christopher Mark Macneill, *Gaining Command & Control of the Northwest Passage: Strait Talk on Sovereignty*, 34 *TRANSP. L.J.* 355, 368 (2007).

⁸³ See Hesseldahl, *supra* note 9.

⁸⁴ See Rothwell, *supra* note 53, at 334. These claims are disputed because they were not always accompanied by the raising of the sponsoring sovereign flag. *Id.* The Canadian claim is also based in various treaties, including the Treaty of Paris. *Id.*

control and regulation for safety and environmental purposes.”⁸⁵ Throughout all of this, the United States has maintained that the Passage is an international strait not subject to Canadian control.⁸⁶ The United States has been careful, however, not to dispute the Canadian territorial claims to the archipelago islands, but rather, only to dispute the claims to the waterway itself.⁸⁷ Thus, as framed, the debate between the United States and Canada rests on whether the water among the archipelago islands is international or internal.⁸⁸

In 2008, Canadian Prime Minister Stephen Harper bolstered sovereignty claims by announcing that all ships transiting Canadian waters would be required to register with Canada’s maritime traffic system.⁸⁹ Under this policy, Canada directed its Coast Guard to intercept vessels that fail to comply with reporting requirements and doubled the size of the regulatory zone in which the state can prohibit the deposit of waste from land or ship under domestic law.⁹⁰

⁸⁵ *Id.* at 342 (quoting *Canadian Practice in International Law during 1980 as Reflected Mainly in Public Correspondence and Statements of the Department of External Affairs*, 19 CAN. Y.B. INT’L L. 320, 322 (comp. L. H. Legault 1981)). Controversy arose in 1985 when the United States sailed the icebreaker *Polar Sea* through the Passage without seeking official Canadian permission. *Id.* at 343. Following the voyage, Canada reasserted its right of sovereignty over the waters of the passage. *Id.* at 344. Canada also declared that “[t]he policy of the Government is to exercise full sovereignty in and on the waters of the Arctic Archipelago We will accept no substitute.” *Id.* at 344 (quoting Canada, House of Commons, *Debates*, Vol. 5, at 6463 (Sept. 10, 1985)).

⁸⁶ *Id.* at 347.

⁸⁷ *Id.* at 360.

⁸⁸ One scholar aptly analogizes transit through the Passage to “hikers in the United Kingdom who can walk across country estates even though the aristocrat owns the land[;] the hikers have a right to transit over his property.” Interview by Kai Ryssdale with Michael Byers, Professor of International Politics, University of British Columbia, http://marketplace.publicradio.org/features/frozenassets/frozenassets_ryssdal_byers.html (last visited Nov. 2, 2009).

⁸⁹ Michael A. Becker, *Public International Law of the Sea*, 43 INT’L LAW 915, 920 (2009).

⁹⁰ *Id.* Additionally, this would potentially violate the right of transit through international straits guaranteed by UNCLOS. *Id.* at n.33. However, bordering states are allowed to prescribe traffic separation schemes where necessary to promote the safe passage of ships. *Id.* at n.33 (citing UNCLOS, *supra* note 15, art. 38).

UNCLOS provides that in archipelagic waters, there is a right of innocent, free passage.⁹¹ Further, UNCLOS delineates the archipelagic baselines in determining what is, or is not, an archipelago for sovereignty and international transit distinctions.⁹²

Part of the problem lies in defining whether the Northwest Passage falls within customarily recognized international law parameters. Following the *Corfu Channel Case*,⁹³ there are two primary determinations: 1) that the strait connect two parts of the high seas (geographic), and 2) that the strait be used for international navigation (function).⁹⁴ Some scholars suggest that the Passage is consistent with the geographic requirement because the Passage connects two areas of high seas and exclusive economic zones.⁹⁵ With

⁹¹ UNCLOS, *supra* note 15, art. 52(1).

⁹² *See id.* at art. 47. In relevant part:

1. An archipelagic State may draw straight archipelagic baselines joining the outermost points of the outermost islands and drying reefs of the archipelago provided that within such baselines are included the main islands and an area in which the ratio of the area of the water to the area of the land, including atolls, is between 1 to 1 and 9 to 1.
2. The length of such baselines shall not exceed 100 nautical miles, except that up to 3 per cent of the total number of baselines enclosing any archipelago may exceed that length, up to a maximum length of 125 nautical miles.
3. The drawing of such baselines shall not depart to any appreciable extent from the general configuration of the archipelago.
4. Such baselines shall not be drawn to and from low-tide elevations, unless lighthouses or similar installations which are permanently above sea level have been built on them or where a low-tide elevation is situated wholly or partly at a distance not exceeding the breadth of the territorial sea from the nearest island.
5. The system of such baselines shall not be applied by an archipelagic State in such a manner as to cut off from the high seas or the exclusive economic zone the territorial sea of another State.
6. If a part of the archipelagic waters of an archipelagic State lies between two parts of an immediately adjacent neighbouring State, existing rights and all other legitimate interests which the latter State has traditionally exercised in such waters and all rights stipulated by agreement between those States shall continue and be respected. *Id.*

⁹³ *Corfu Channel (U.K. v. Alb.)*, 1949 I.C.J. 4, 28 (Apr. 9, 1949).

⁹⁴ *Id.*

⁹⁵ *See* Rothwell, *supra* note 53, at 353-54.

regards to the function requirement, there has been “continuing emphasis . . . that . . . the strait through which the right of passage is being claimed be used for ‘international navigation.’”⁹⁶ The *Corfu Channel* Court was careful to emphasize that demonstrating potential use of a strait is not alone sufficient – *actual* use must be demonstrated.⁹⁷ Because UNCLOS lacks a sufficiently clear definition of the functional requirement, it can be argued that deference to *Corfu* should still apply, thereby requiring evidence proving that the strait is actually being used for relevant international navigation.⁹⁸ With the looming extraction of deep-sea resources, there is a strong likelihood that routes through the Passage will be more commonly utilized, thus opening the door to additional justifications for relevant international navigation.

There are also competing international interests in the Passage dispute between the European Union (EU) and Russia. The European Union’s position is to recognize that the Passage is an international strait.⁹⁹ This is not surprising given the economic interest of EU member states in using the Passage for transport.¹⁰⁰ To the contrary, and expectedly, Russia has supported Canada’s position that Canada has complete control over the territory.¹⁰¹ Naturally, Russia’s position supporting Canadian claims seems a calculated attempt at further legitimizing its claim to sovereignty over the Northeast Passage, where commercial shipping is already prevalent, and where Russia closely monitors and taxes vessels.¹⁰²

One of the central reasons Canada asserts control of the Passage is so it can provide stricter oversight and pollution controls permitted under Article 234 of UNCLOS and through Canadian maritime law.¹⁰³ Regular shipping through the Passage would both

⁹⁶ *Id.*

⁹⁷ See Tommy B. Koh, *The Territorial Sea, Contiguous Zone, Straits and Archipelagoes under the 1982 Convention on the Law of the Sea*, 29 MALAYA L. REV. 163, 178 (1987).

⁹⁸ See, Rothwell, *supra* note 53, at 355 (citation omitted).

⁹⁹ Macneill, *supra* note 82, at 366.

¹⁰⁰ See *id.*

¹⁰¹ See *id.* (citations omitted).

¹⁰² See Kramer & Revkin, *supra* note 42, at A1, A2.

¹⁰³ See discussion *infra* Part IV(B). Recent collaborative efforts between the United States and Canada establishing emissions control areas is a significant building block towards resolving additional environmental and territorial disputes.

interfere with the rate of ice formation and breakup, and pose significant health risks to mammals.¹⁰⁴ Stricter Canadian regulation would mitigate these dangers. Another environmental concern is the significant harm that accidental pollution, such as an oil spill, could cause on the Arctic's low regenerative capacity.¹⁰⁵ If Canada exercises such control, Article 234 of UNCLOS would permit it to “adopt and enforce [its own] non-discriminatory laws and regulations for the prevention, reduction, and control of marine pollution from vessels . . . within the limits of the exclusive economic zone.”¹⁰⁶ Given the heightened environmental recognitions of the Canadian government and its citizenry, these proposed policies would likely provide strong environmental protections and minimize environmental risks and shipping dangers.

Canada regulates shipping in its Arctic waters primarily through its domestic Arctic Waters Pollution Act (“AWPPA”),¹⁰⁷ which prohibits the deposit of waste in the state's arctic waters.¹⁰⁸ The regulation also requires ships to have prescribed navigational,¹⁰⁹ inspection,¹¹⁰ and construction standards.¹¹¹ Violations of AWPPA are punishable by civil liability.¹¹² Problems are likely to arise when Canada seeks to assert sovereign ownership, either through AWPPA or under UNCLOS, when there is a dispute over the Passage's proper classification.

For the Northwest Passage, the distinction between *actual* and *potential* transport may be the decisive issue that resolves the debate. While the receding ice has raised the possibility of extensive utiliza-

¹⁰⁴ See D.M. McRae & D.J. Goundrey, *Environmental Jurisdiction in Arctic Waters: The Extent of Article 234*, 16 U.B.C. L. REV. 197, 200 (1982).

¹⁰⁵ *Id.* at 201 (citation omitted); see also Clark, *supra* note 1, at 84-85 (citation omitted). Clark's insistence for Canada to implement stricter emissions regulations for transport in coastal areas under a new national regulatory scheme, while appropriate at the time, may now be mooted by the agreement reached in cooperation with the United States. See also discussion *infra* Part IV(B).

¹⁰⁶ See UNCLOS, *supra* note 15, art. 234.

¹⁰⁷ See Arctic Waters Pollution Prevention Act [hereinafter “AWPPA”], R.S.C., ch. A-12 (1985). The legislation was designed to address deficiencies in marine pollution protection in international law.

¹⁰⁸ *Id.* at arts. 6, 18-19.

¹⁰⁹ *Id.* at art. 12.

¹¹⁰ *Id.* at art. 15.

¹¹¹ *Id.* at arts. 10, 12, 19.

¹¹² *Id.* at arts. 6, 18-19, 23-25.

tion of the Passage for shipping, expectations are that summer shipping routes will remain accessible for a period of only four to six weeks.¹¹³ The Canadian efforts to assert sovereignty over the waters in the Passage and the United States' insistence that the Passage is international has the two at an impasse. It is critical for the United States and Canada to amicably resolve the Passage dispute.

B. Possible Resolutions and Implications Applying Antarctic Treaty Considerations

Given the similarities between the Arctic and Antarctica, commentators suggest that an Antarctic Treaty-type solution is appropriate for the Arctic, as it would "allow the sovereignty issue to be resolved in favour of the existing sovereign, Canada, while permitting international navigation in the Passage without affecting the status of that sovereign."¹¹⁴ Furthermore, such a solution would allow the United States to use the Passage without requiring permission from Canada or otherwise implicitly acknowledging the Canadian claims to sovereignty of the Passage itself.¹¹⁵ The incorporation of ATS provisions may also facilitate the interests of both Canada and the United States. For the United States, UNCLOS expressly provides for the uninhibited right of innocent passage through the territorial sea¹¹⁶ and further prohibits the "impos[ition] of requirements on foreign ships which have the practical effect of denying or impairing the right of innocent passage."¹¹⁷ For Canada, Article 234 allows the coastal state to "adopt and enforce non-

¹¹³ Macneill, *supra* note 82, at 360.

¹¹⁴ Rothwell, *supra* note 53, at 368; *see* discussion *supra* Part III(A). Such a resolution necessarily involves the cessation of any claims of sovereignty or natural resource extraction. Both of these concerns were quashed in the Antarctic with the Antarctic Treaty System beginning in 1959. *Id.*

¹¹⁵ *Id.* at 369. An increasingly accessible Northwest Passage would also spur the increase in tourist and commercial cruise ships using the waters. Tourism and ecotourism are already two significant concerns for environmentalists in the waters off Alaska. Pollution levels have risen as the amount of tourist vessels frequenting these waters has increased. *See generally* Mary E. Edes, *Ecotourism in the Arctic Circle: Regional Regulation is Necessary to Prevent Concerned Environmentalists from Further Contributing to Climate Change*, 21 PAC. MCGEORGE GLOBAL BUS. & DEV. L.J. 251 (2008).

¹¹⁶ UNCLOS, *supra* note 15, art. 17.

¹¹⁷ *Id.* at art. 24(1)(a).

discriminatory laws and regulations for the prevention, reduction and control of marine pollution vessels in ice-covered areas.”¹¹⁸

Through such discussions, a workable solution may arise providing Canada with ample jurisdiction to enforce environmental and emissions standards for transit through the waters, and providing the United States (and other states) the guarantee of free navigation. Resolving the dispute increases multilateral policy-making, especially in terms of environmental and security concerns, and can help to “promote bilateral and multilateral Arctic cooperation” in other areas as well.¹¹⁹ One difficulty is recognizing the validity of interpretations made by Canada under UNCLOS and how these obligations will shape the United States’ discussions, especially if the United States remains a non-party to UNCLOS.

In a significant collaborative effort in March 2009, the United States and Canada submitted a joint request to the International Maritime Organization that would require emissions control areas in and around their collective coasts.¹²⁰ The restrictions would require large ships to use “low-sulfur fuel or new technology to ensure that they emit less sulfur dioxide, nitrogen oxide and soot.”¹²¹ Ships would be required to use fuel with no more than 1,000 parts per million of sulfur beginning in 2015, and beginning in 2016, new ships would be required to use advanced pollution controls.¹²² Further, “compared with current rules, the restrictions, which could be approved as early as next year, would cut allowable levels of sulfur in fuel by 98 percent, soot by 85 percent and nitrogen oxide pollution by 80 percent from current rules.”¹²³

Ships are currently burning fuel 1,800 times dirtier (in terms of high sulfur concentration) than diesel trucks.¹²⁴ Also, the emission control area would achieve a sulfur reduction to 0.1 percent – a

¹¹⁸ *Id.* at art. 234.

¹¹⁹ See Rothwell, *supra* note 53, at 372.

¹²⁰ See Juliet Eilperin, *U.S., Canada Propose Pollution Control Zones for Ports*, WASH. POST, Mar. 31, 2009, at A2.

¹²¹ *Id.*

¹²² *Id.*

¹²³ *Id.*

¹²⁴ *U.S. and Canada Seek International Approval of Air Pollution Reduction Zone for Ships*, Mar. 30, 2009, <http://www.foe.org/us-and-canada-seek-international-approval-air-pollution-reduction-zone-ships> [hereinafter “U.S. and Canada Seek International Approval”].

marked improvement, though still 66 times dirtier than ultra low diesel.¹²⁵ Additionally, a study by the National Oceanic and Atmospheric Administration indicates that merchant ships alone are responsible for emitting as much pollution as three hundred million cars.¹²⁶ Sulfur emissions are a major contributor to particulate matter pollutants (which create carcinogenic and other health risks to humans and wildlife), and, moreover, they accelerate the melting of Arctic ice, thereby exposing fragile ecosystems to shipping routes and natural resource extraction.¹²⁷

This collaborative effort is a notable step forward and may provide an impetus for future discussions regarding the Passage.

V. FUTURE IMPLICATIONS

One of the most often ignored implications of expanding Arctic resource extraction and transport is the incontrovertible result that such processes are having on the environment and the indigenous communities. Much of the discussion focuses on the legitimacy of claims or the historical assertions of traditional spatial use, but rarely is the focus on the development of collective efforts to protect the indigenous populations.

Moving forward, assessing the impact on the Arctic's indigenous communities must be a priority. Significantly, unlike Antarctica, the Arctic is home to numerous indigenous populations, whose very existence and normative structures are dictated by the

¹²⁵ *Id.*; see also UNITED STATES ENVIRONMENTAL PROTECTION AGENCY, REGULATORY ANNOUNCEMENT: PROPOSAL OF EMISSION CONTROL AREA DESIGNATION FOR GEOGRAPHIC CONTROL OF EMISSIONS FROM SHIPS, (Mar. 2009), available at <http://www.epa.gov/otaq/regs/nonroad/marine/ci/420f09015.htm>. A study by the National Oceanic and Atmospheric Administration found that globally, ships emit 0.9 teragrams, or about 2.2 million pounds, of particle pollution each year. Chemical Sciences Division, Earth System Research Laboratory, NOAA, *Study Quantifies Pollutant Emissions from Ships* (Mar. 27, 2009), <http://www.esrl.noaa.gov/csd/news/hotitemFY09.html> [hereinafter NOAA]. Emission Control Area standards will lead to an 86 percent reduction in sulfur in ships' fuels, as well as a cut in emissions of particulate matter by 74 percent and nitrous oxide by 23 percent. UNITED STATES ENVIRONMENTAL PROTECTION AGENCY, *supra*.

¹²⁶ NOAA, *supra* note 125.

¹²⁷ See Elizabeth Shogren, *EPA Unveils New Ports Emissions Plan* (National Public Radio Broadcast Mar. 30, 2009), available at <http://www.npr.org/templates/story/story.php?storyId=102524660>.

Arctic environment. The European Union's recent Communication epitomizes the majority view towards indigenous groups. Though it recognizes the need "[to] engage Arctic indigenous peoples in a regular dialogue, [to] provide opportunities for self-driven development and [for] the protection of their lifestyle,"¹²⁸ in the end, it denies the indigenous groups any real bargaining power.

While organizations like the Arctic Council¹²⁹ have worked to address such shortcomings, commentators have noted the difficulty – under current policies – of the continued viability of the indigenous populations.¹³⁰ The Arctic Council's "inadequate membership and inability to completely fight and prevent pollution" precludes the organization from providing effective protection of the Arctic environment and its peoples.¹³¹ Harmonization of the fragmented regime of multilateral and bilateral accords would assist in augmenting the Arctic Council's efficacy, as would financing of an Arctic fund for researching, monitoring, preserving indigenous lands, and most significantly, executing environmental regulation.

Further complicating international cooperation is the fact that some indigenous groups are in favor of Arctic expansion, viewing the prospect of increased commercial activity to be economically favorable.¹³² Thus, any further discussions must include substantive considerations for the protection of these groups. One possible resolution for indigenous communities would be the creation of a "functional multilateral regime guaranteeing tribal sovereignty over indigenous tracts of Arctic tundra [and] pledges of binding multi-

¹²⁸ Commission Communication, *supra* note 39, at § 2.2.

¹²⁹ An intergovernmental forum encouraging cooperation among Arctic states and indigenous communities. Sophie Theriault, *Northern Frontier, Northern Homeland: Inuit People's Food Security in the Age of Climate Change and Arctic Melting*, 15 SW. J. INT'L L. 223, 247 n.110 (2009).

¹³⁰ *See id.* at 224. One of the often overlooked problems is the devastating effect the changing Arctic environment has on the indigenous peoples. *See id.* at 231, 233-34.

¹³¹ Barry Hart Dubner, *On the Basis for Creation of a New Method of Defining International Jurisdiction in the Arctic Ocean*, 13 MO. ENVTL. L. & POL'Y REV. 1, 18 (2005) (also arguing that it is imperative for states to give up certain sovereignty in order to protect the Arctic region).

¹³² *See* Andrew C. Revkin, *Countries Agree to Talk, Not Compete, Over the Arctic*, N.Y. TIMES, May 29, 2008, at A10. However, many Inuits strongly oppose any expansion due to the likely threat posed to their traditions and their use of natural resources for subsistence. *See id.*

lateral cooperation.”¹³³ The viability and protection of indigenous groups has been merely an afterthought to many of the countries involved in the sovereignty struggle.

VI. CONCLUSION

Taken collectively, there are major international apprehensions over the current race for the Arctic seabed. It has been coined “the last great land grab.”¹³⁴ As the Arctic becomes more accessible, economic incentives have subsumed cooperative agreements and environmental initiatives. Finding a compromise between energy exploitation and environmental protection is the paramount priority. Without clear environmental protection and regulations over resource extraction and shipping, the negative effects of climate change will only be aggravated. The future of a protected Arctic – and the extent to which international collaboration will play a role in shaping Arctic policy – rests upon the willingness of the Arctic states to develop a multilateral agreement that recognizes both sovereign rights *and* the need for strict environmental regulations and the protection of indigenous populations.

The year 2009 marked the fiftieth anniversary of the International Polar Year, a year in which an elaborate and successful agreement was reached to protect Antarctica. With the constant dialogues involving climate change and energy independence, now is a symbolic and the opportune time to reexamine domestic and international policies governing the Arctic.

¹³³ See Shackelford, *supra* note 7, at 140.

¹³⁴ Rothwell, *supra* note 53.