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It's Getting Hot in Here, So Take Away All the Arctic's Resources: A Look at Melting Arctic and the Hot Competition for Its Resources

Andrew Van Wagner

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IT'S GETTING HOT IN HERE, SO TAKE AWAY ALL THE ARCTIC'S RESOURCES: A LOOK AT A MELTING ARCTIC AND THE HOT COMPETITION FOR ITS RESOURCES

I. INTRODUCTION

A “race to the bottom” is a concept commonly used in an environmental context to describe a nation’s apathetic mentality toward the destruction of the environment, if such destruction yields a particular benefit.\(^1\) For example, access to profitable natural resources that can only be obtained through the exploitation of the surrounding habitat incentivizes a nation to turn a blind eye to the habitat’s annihilation.\(^2\) Today, unfortunately, many nations acquiesce in such destruction for this exact purpose.\(^3\)

In the Arctic, global warming is inducing a series of aggressive and rapid melting trends in the Arctic sea ice, raising the eyebrows of many countries bordering the region.\(^4\) The interest, however, is not so much in the rapidly changing environment as it is in the discovery of large quantities of precious natural resources situated atop the earth.\(^5\) According to estimates by the United States Geological Survey (USGS), as much as one-quarter of the world’s undiscovered oil and natural gas reserves are currently located beneath the floor of the Arctic Ocean, buried underneath the once thick and prominent Arctic ice.\(^6\) As global warming continues to melt the region, this bountiful treasure chest of resources is becoming

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2. For a discussion of the effects on the Arctic and those nations seeking to profit from its destruction, see infra notes 20-208 and accompanying text.
3. For a discussion of certain nations acquiescing in the Arctic’s destruction, see infra notes 126-208 and accompanying text.
4. For a discussion of the impacts of global warming on the arctic, see infra notes 20-36 and accompanying text.
5. For a discussion of the resources available in the Arctic, see infra notes 103-25 and accompanying text.

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increasingly accessible, leading to vigorous territorial competition among bordering nations.\textsuperscript{7}

While the competition motors forward with intensity, the concern for the extreme environmental changes occurring in the Arctic has vanished in a puff of greenhouse gas.\textsuperscript{8} Instead of focusing their attention on becoming independent from oil – a prominent cause of the aggressive Arctic melt – these industrialized nations continue to compete for access to more of the resource.\textsuperscript{9} The total cost of such competition is unknown, but the consequences are predicted to be devastating.\textsuperscript{10}

Lost in the wake of this competition are the cries of indigenous Arctic peoples and citizens of small island states.\textsuperscript{11} Climate change is hitting these people and their communities the hardest, as their homes, lands and ways of life are being destroyed.\textsuperscript{12} Despite their pleas for help, industrialized nations continue to petition harder than ever to claim this territory before it disintegrates into the icy waters of the Arctic Ocean.\textsuperscript{13}

This comment looks at the effects of global warming on the Arctic and the recent territorial disputes arising from its destruction. Section II defines climate change and explains its significant contribution to global warming.\textsuperscript{14} Section III describes the effects of global warming on Arctic ecosystems and the human populations that reside in the region.\textsuperscript{15} Section IV discusses the economic factors motivating bordering nations’ desires for an ice-free Arctic.\textsuperscript{16} Section V provides examples of the differing territorial claims from

\textsuperscript{7} For a discussion of competing claims of territory for the Arctic see supra notes 112-208 and accompanying text.\textsuperscript{8} For a discussion of the effects of climate change on the Arctic and the international competition for its resources, see infra notes 126-208 and accompanying text.\textsuperscript{9} For a discussion of resources countries are vying for, see infra notes 112-25 and accompanying text.\textsuperscript{10} For a discussion of the effects climate change is having on Arctic, see infra notes 20-100 and accompanying text.\textsuperscript{11} For a discussion of the concerns of the Arctic’s indigenous people, see infra notes 52-93 and accompanying text.\textsuperscript{12} For a discussion of effects of climate change on small island states, see infra notes 52-93 and accompanying text.\textsuperscript{13} For a discussion of competing claims see infra notes 126-208 and accompanying text.\textsuperscript{14} For a discussion of the effect of climate change on global warming, see infra notes 20-36 and accompanying text.\textsuperscript{15} For a discussion of the effects of global warming on Arctic ecosystems, see infra notes 37-100 and accompanying text.\textsuperscript{16} For a discussion of economic factors motivating the desires for an ice-free Arctic, see infra notes 101-25 and accompanying text.
nations located within the Arctic Circle. Section VI lists several potential solutions to this international crisis. Finally, Section VII concludes that the Arctic is most certainly doomed, as it appears the race is in a dead sprint to reach the bottom of the Arctic Ocean.

II. CLIMATE CHANGE

The summer of 2007 brought the Arctic sea ice to its lowest recorded levels since satellite measurements began in 1979. The Intergovernmental Panel on Climate Change (IPCC) attributes this astonishing reduction in ice to the phenomenon known as global warming. In its latest assessment, the IPCC concluded human activity accounts for ninety percent of the Earth’s rapid temperature increase. 

Over the past two hundred years, the burning of fossil fuels and a high rate of deforestation have led to increasing concentrations of greenhouse gases in the earth’s atmosphere. Sunlight permeates through these gases in order to generate warmth for the earth. As these gases increase in concentration, they begin to trap the resulting heat, thereby preventing it from escaping back into the atmosphere. 

17. For a discussion of various territorial claims in the Arctic, see infra notes 126-208 and accompanying text.
18. For a discussion of various solutions to the Arctic crisis, see infra notes 209-53 and accompanying text.
19. For further discussion concerning the doomed state of the Arctic, see infra notes 254-61 and accompanying text.
22. See IPCC, supra note 21, at 21 (concluding rapidly accelerating increase in temperature is ninety percent result of human activity).
24. See id. (discussing how greenhouse gases induce climate change).
space. The more gas emitted, the more heat is trapped and, ultimately, the warmer the earth becomes. According to National Oceanic and Atmospheric Administration (NOAA) and National Aeronautics and Space Administration (NASA) data, these gases, which continue to accumulate at a rapid rate, have increased the earth’s average surface temperature “1.2 to 1.4 degrees Fahrenheit in the last hundred years.” More recently, the IPCC reported that, as of 2007, eleven of the last twelve years were the warmest on record since 1850.

The main concern surrounding the rise of the earth’s temperature lies in the staggering rate at which this increase has occurred. Carbon dioxide emissions increased by eighty percent between 1970 and 2004, while 2005 concentrations reached the highest level in 650,000 years. As these levels continue to rise and more heat is trapped, drastic changes in the earth’s climate are taking place. Even the most subtle change in the earth’s temperature can, and does, produce rising ocean temperatures and levels resulting in extreme weather events such as tsunamis, cyclones and hurricanes. Additionally, droughts, heat waves, rapidly melting snow and ice at both poles, and changes in rainfall, ocean salinity and wind patterns throughout the world are all attributed to rising global temperatures.

Already, these environmental changes have exacted a devastating toll on human life. Populations worldwide currently experi-
ence "reduced agricultural productivity, increased water insecurity, increased exposure to extreme weather events, collapsed ecosystems, increased health risk caused by water and vector-borne diseases, and increased vulnerability caused by malnutrition." As a result, United Nations Secretary-General Ban Ki-moon characterized climate change as "the moral challenge of our generation."

III. THE CANARY IN THE COAL MINE: THE EFFECTS OF CLIMATE CHANGE ON THE ARCTIC AND ITS IMPLICATIONS THROUGHOUT THE WORLD

Researchers working to understand the effects of climate change are using the Arctic as the figurative canary in this warming coal mine. They believe the consequences of climate change are currently the most intense, and most readily displayed, at the North Pole. According to the National Snow and Ice Data Center (NSIDC), the melting season of 2007 brought the lowest Arctic sea ice levels ever recorded. The summer months of 2007 shattered the previous low, set in 2005, by almost twenty-three percent, demonstrating a level roughly "[thirty-nine] percent below the long term average from 1979 to 2000." Explaining these percentages with hard numbers, the Arctic sea ice level in 2007 dropped to approximately 1.2 million square miles, roughly 386,000 square miles


36. See John Crump, Snow, Sand, Ice and Sun: Climate Change and Equity in the Arctic and Small Island Developing States, 8 SUSTAINABLE DEV. L. & POL'y 8, 8 (2008) (quoting United Nations Secretary General Ban Ki-moon about problem of climate change).


38. See id. (stating effects of climate change are most apparent at Arctic Pole).

39. See NSIDC, supra note 20 (describing melting season of 2007 as worst on record).

40. See id. (explaining how melting season of 2007 brought about lowest ice levels ever). The NSIDC found in 2007 "that the average sea ice extent for the month of September was 4.28 million square kilometers . . . the lowest September on record, shattering the previous record for the month, set in 2005, by 23 percent." Id.
less than the previous record in 2005.\textsuperscript{41} The area lost was larger than Texas and Arizona combined.\textsuperscript{42}

Scientists attribute such a drastic retreat in ice to a self-perpetuating cycle of heating and melting fueled by global warming.\textsuperscript{43} As greenhouse gases accumulate and continue to heat the earth, Arctic sea ice melts, transforming into open water.\textsuperscript{44} Once exposed to direct sunlight, the open water absorbs the heat and energy previously reflected.\textsuperscript{45} The heated water is then carried by currents throughout the Arctic Ocean, causing faster melting and increased warming, "creating a self-reinforcing cycle by which global warming feeds on itself, amplifying and accelerating the warming trend."\textsuperscript{46}

The results, as illustrated in 2007, were record lows in the amount of Arctic sea ice and the highest surface temperatures ever recorded in the Arctic Ocean.\textsuperscript{47} With such extreme effects occurring at an accelerated rate, some scientific studies predict that the North Pole may be ice-free as early as 2030.\textsuperscript{48}


\textsuperscript{42} See The Select Committee on Energy Independence and Global Warming, Melting Arctic Circle Ice Drives Polar Bears Closer to Extinction, http://globalwarming.house.gov/impactzones/arctic (last visited Oct. 30, 2009) (comparing size of ice reduction to an area equal to Texas and Arizona combined). Such numbers indicate that the Arctic is warming at an unnaturally rapid rate, nearly twice as fast as the rest of the globe. See ACIA, \textit{supra} note 37, at 23 (explaining that Arctic is rapidly warming). As a result of the extensive melting, when the sea ice re-forms in the winter it is noticeably thinner, making it more fragile and easier to liquefy. See generally Crump, \textit{supra} note 36, at 10 (observing that current reforming sea ice is noticeably thinner).


\textsuperscript{44} See id. (reporting that melting Arctic ice is turning into open water).

\textsuperscript{45} See ACIA, \textit{supra} note 37, at 35 (discussing effect melting ice is having on Arctic Ocean).

\textsuperscript{46} See id. (explaining self-reinforcing cycle by which global warming feeds); see also Revkin, \textit{supra} note 43 (explaining why Arctic melting is tough problem to combat).

\textsuperscript{47} See NSIDC, \textit{supra} note 20 (explaining Arctic ice level in 2007 was lowest ever seen).

\textsuperscript{48} See Adam Mayer, \textit{Ice Loss Opens Northwest Passage}, \textsc{CNN}, Sept. 22, 2007, http://www.relocalize.net/cnn_com_ice_loss_opens_northwest_passage (discussing potential of ice-free arctic due to global warming); see also ACIA, \textit{supra} note 37, at 35 (stating ice-free Arctic could happen as early as 2050).
The havoc this rapid warming trend is wreaking on the Arctic Circle is incredibly disturbing and has dire local and global consequences.\textsuperscript{49} The rapid melting of ice is leading to rising sea levels, damaging vast infrastructures and creating excruciating stresses on various ecosystems.\textsuperscript{50} Furthermore, it is threatening the traditional ways of life for many of the Arctic’s indigenous cultures as well as other small island communities around the world.\textsuperscript{51}

A. Rising Sea Levels

According to the Arctic Climate Impact Assessment (ACIA),\textsuperscript{52} glacial melting, induced by global warming, contributes to rising sea levels across the world.\textsuperscript{53} Since 1961, the global sea level has risen “at an average rate of 1.8 [1.3 to 2.3] mm/yr and since 1993 at 3.1 [2.4 to 3.8] mm/yr. . . .”\textsuperscript{54} Scientists believe this rate is “ten to twenty times faster than the estimated rate of [sea level] rise over the past few thousand years.”\textsuperscript{55} This accelerated rise is the result of a change in both the density and the quantity of water in the ocean.\textsuperscript{56} When water warms, it expands, becoming less dense and ultimately taking up more space; this process is known as “thermal expansion.”\textsuperscript{57} Further exacerbating the problem is the fact that as glaciers and ice caps continue to melt, significantly more water flows into the ocean.\textsuperscript{58}

Despite contributing a miniscule amount of greenhouse gas emissions, small island states are the first to feel the detrimental


\textsuperscript{50} See Crump, supra note 36, at 8 (discussing profound global consequences of rising sea levels).

\textsuperscript{51} See id. (stating impacts on various indigenous cultures).

\textsuperscript{52} See ACIA, supra note 37. ACIA was a report produced by an international team of scientists at the request of an 8-nation intergovernmental forum. See id. (explaining ACIA report). The nations were Iceland, Denmark (via Greenland), United States, Canada, Russia, Sweden, Norway and Finland. See Crump, supra note 36, at 5 (explaining reasons for production of ACIA report and noting members of Arctic Council).

\textsuperscript{53} See ACIA, supra note 37, at 42 (stating glacier melting is contributing to sea level rise).

\textsuperscript{54} See IPCC 2007, supra note 49, at 2 (demonstrating annual sea level rise over last forty years).

\textsuperscript{55} See ACIA, supra note 37, at 42 (explaining that scientists believe sea level rise is ten to twenty times faster than it has ever been).

\textsuperscript{56} See id. (discussing expansion of water due to warming).

\textsuperscript{57} See id. (elaborating on thermal expansion theory).

\textsuperscript{58} See id. (explaining that melting Arctic caps and ice sheets are adding more water to oceans).
costs of climate change. These communities are the most vulnerable to the slightest variances in climate because of "[t]heir small size, remoteness, geographical dispersion, vulnerability to natural disasters, fragile ecosystems, constraints on transportation and communication, lack of natural resources, and limited freshwater supply. . . ."

High sea levels present many formidable problems for small island nations. For example, rising waters intensify inundation, storm surges and erosion, while also contributing to other coastal hazards that threaten vital infrastructures, settlements and communities of low-lying islands. Further, rising sea levels also increase the salinity of the bays and destroy low-lying ecosystems and wetlands that act as buffers between the ocean and habitable land. By forcing the wetlands further inland, coastlines are eroding, leading to dramatic increases in coastal flooding.

Accordingly, the impacts of climate change on these developing countries (and the Arctic) will only be aggravated by their lack of economic resources, as they do not have the ability to combat and protect themselves against many of these sudden problems. Small coastal communities located in the Pacific, Atlantic, Indian and Arctic Oceans will be hit hardest. Ultimately, islands all over the world will be adversely impacted by climate change.

59. See Crump, supra note 36, at 8 (stating that small island developing states are first to feel consequences of climate change).
60. Cameron, supra note 34, at 6. Other factors contributing to the vulnerability of small island states to global warming are their susceptibility to natural disasters, delicate ecosystems, limitations on transportation and communication, shortage of natural resources, and limited supply of freshwater. Id. Specifically, with regard to rising sea levels, the low-lying countries with "gently sloping coastal lands, inland areas bordering estuaries, and coastlines that are subsiding due to tectonic forces, sedimentation, or extraction of oil or groundwater" are most at risk. See ACIA, supra note 37, at 43.
62. See id. (listing problems of rising sea levels).
63. See ACIA, supra note 37, at 42 (describing environmental impact of rising sea levels).
64. See id. at 43 (explaining problems of eroding wetlands).
65. See Crump, supra note 36, at 10 (stating that lack of resources only exacerbates problems of climate change).
66. See ACIA, supra note 37, at 43 (stating countries like Marshall Islands, Kiribati, Tuvalu, Tonga, Micronesia, Cook Islands, Antigua, Nevis, and Maldives will be affected most).
67. See id. (discussing the impact of climate change on small island states all over the world).
Low-lying island states are not the only ones affected if water levels continue rising at their current rate. Australia, for example, is already suffering considerable damage from rising ocean levels. Much of Australia is made up of low-lying coastal ecosystems, so it is no mystery why recent flooding has caused more damage in Australia than any previous natural disaster. Similarly, in Bangladesh, roughly seventeen million people live less than three feet above sea level and are experiencing a barrage of heavy flooding. Other problem cities include Bangkok, Mumbai, Dhaka, Calcutta and Manila; each contain over five million people and are located on very susceptible coastal low-lands. Even in the United States, scientists predict that, within the century, parts of Florida, Louisiana and New York will be completely engulfed by sea water.

B. The Human Impact of the Arctic Melt

The Arctic is home to roughly four million people, including over thirty different indigenous cultures. Unfortunately, the changing climate of the Arctic is exacting a significant human toll on those who call the Arctic home. In Alaska, "coastal villages of the Inuit people [who have lived there for over five thousand years] are [being] battered by winter storms that used to be deflected by protective sea ice along the shore." Bykovsky, Russia, a village of several thousand people, the shoreline is collapsing at a rate of fifteen to eighteen feet per year. Such a collapse is bringing the

68. See IPCC 2007, supra note 49, at 5 (listing effects other nations, besides small island developing states, will experience as result of climate change).


70. See id. (observing that flooding causes more damage in Australia than any other natural disaster, in terms of cost to community).

71. See ACIA, supra note 37, at 43 (stating problems in Bangladesh resulting from sea level rise).

72. See id. (noting cities such as Bangkok, Mumbai, Dhaka, Calcutta, and Manila are all experiencing flooding as result of rising sea levels).

73. See id. (listing potential problem areas in United States).


75. See generally Crump, supra note 36, at 8-10 (explaining effects of climate change on Arctic’s population).


icy ocean waters closer to houses, tanks of heating oil and roadways, and forcing many people from their homes.\textsuperscript{78} The 130,000 citizens of Vorkuta, Russia, claim the permafrost that the city was built on is melting.\textsuperscript{79} As a result, the city is experiencing extensive structural damage, forcing the community to undergo severe and costly renovations.\textsuperscript{80}

Physical damage is not the only problem, as changes in the environment are causing indigenous people to lose their way of life.\textsuperscript{81} The Inuit, for example, who have lived in the Arctic for several thousand years, use the ice for traveling, hunting, harvesting and communicating between villages.\textsuperscript{82} As the ice continues to melt, hunting and harvesting seasons become shorter and shorter.\textsuperscript{83} Fishing, an essential aspect of the Inuit way of life, is now a near impossible task.\textsuperscript{84} One Inuit activist characterized the effects brought on by climate change as human rights violations, stating that global warming is deteriorating and damaging “our rights to hunt, culture, health, subsistence, property, safety [and] security, which are all defined in the 1948 Universal Declaration of Human Rights.”\textsuperscript{85}

Moreover, melting ice and rising sea levels are displacing many communities.\textsuperscript{86} Coastal flooding caused by a changing Arctic climate forced Kivalina, Alaska, a coastal village, to relocate all of its

dence/earth/20arctic.ready.html (describing effect of melting permafrost in Russia).

\textsuperscript{78} See id. (discussing effect melting ice is having on many Arctic cities).

\textsuperscript{79} See id. (explaining city of Vorkuta’s misfortunes).

\textsuperscript{80} See id. (stating damage caused to infrastructure from melting permafrost).


\textsuperscript{82} See id. (describing how vital ice is to Inuit peoples).

\textsuperscript{83} See id. (describing effect of global warming on Inuit hunting and harvesting season). Even when the ice is formed it’s not strong enough to support the weight of the hunters, making it very dangerous to traverse. \textit{Id.}

\textsuperscript{84} See Clifford Krauss et al., \textit{As Polar Ice Turns to Water, Dreams of Treasure Abound}, N.Y. TIMES (Oct. 10, 2005), available at http://www.nytimes.com/2005/10/10/science/10arctic.html (explaining impact warming waters are having on fishing and indigenous people). Even fish and crab stocks are migrating northward following the warming waters and moving out of the reach of the Inuit. \textit{Id.}


citizens. As a result of their relocation, the citizens of Kivalina brought suit in federal court alleging that “five oil companies, fourteen electric utilities and the country’s largest coal company were responsible for the village’s woes.”

Displacement, caused by melting ice and permafrost, is an endemic problem not merely localized in the Arctic. People living on small islands throughout the world rely heavily on natural resources such as animals, fish and plants to sustain their way of life. Erosion, drought, storm surges and the increasing salinity of ocean water—all caused by warming Arctic waters—are destroying these vital natural resources, creating extreme stresses on the livelihood of these communities. If global warming and climate change continue at their current rate, the resulting predictions of human displacement are astounding. In fact, the Office of the United Nations High Commissioner for Refugees, the International Federation of Red Cross and Red Crescent Societies, and the Stern Review suggest that as many as “fifty million people worldwide will be displaced because of drought, desertification and rising sea levels.”

C. Melting Ice and the Ecological Impact

The Arctic region is also home to a multitude of diverse animal species and delicate ecosystems. Recently, significant reductions in the thickness and number of glaciers, ice sheets and sea ice are changing these natural ecosystems to the detriment of many organisms. Many of the Arctic’s species, particularly polar bears, seals

87. See id. (describing effects of sea level rise on Alaskan villages).
88. See id. (discussing lawsuit filed by Alaskan villages against potentially responsible parties).
89. See Crump, supra note 36, at 8-9 (explaining displacement is not localized to Arctic’s cultures).
90. See id. (explaining necessity of natural resources to people of Arctic and small island development states).
91. See id. (noting impact of rising sea levels on small island states).
92. See Cameron, supra note 34, at 3-4 (describing impact of rising ocean levels).
94. See ACIA, supra note 37, at 58 (explaining native species to Arctic).
95. See IPCC, supra note 21, at 15 (describing impact of melting ice on native Arctic species, particularly migratory birds, mammals and higher predators); see also Environmental Protection Agency, Climate Change Health and Environmental Effects, http://www.epa.gov/climatechange/effects/polarregions.html (last viewed Oct. 30, 2009) (pointing to numerous effects of climate change on Arctic species).
and migratory birds, depend on the sea ice as breeding and feeding grounds. As the ice continues to recede, these species are running out of a sustainable habitat to survive.

Overall, the damage global warming is exacting on the Arctic ecosystem extends far beyond the aforementioned species. Compared to warmer regions, arctic systems have fewer organisms filling more roles. Thus, when low-level arctic species are displaced, the consequences are magnified for higher-level arctic species. Further, as more complex arctic ecosystems are damaged, long-distance animal migration routes will be altered, changing habitat and food availability for the region and even the world. While no one can predict with absolute certainty the impacts of a fully melted arctic region, it appears the results will be catastrophic.

IV. BUT DOES ANYONE REALLY CARE? A RACE TO THE BOTTOM

The Arctic Ocean spans thirty million square kilometers and contains mostly uninhabitable ice. Yet, eight countries currently hold territory within the Arctic Circle. Only Canada, Norway, Russia, the United States and Denmark (via Greenland), however, possess territory on the Arctic Ocean’s shorelines. Recently, [M]osses and lichens are particularly vulnerable to warming. Because these plants form the basis of important food chains, providing primary winter food sources for reindeer/caribou and other species, their decline will have far-reaching impacts throughout the ecosystem. A decline in reindeer and caribou populations will affect species that hunt them (including wolves, wolverines, and people) as well as species that scavenge on them (such as arctic foxes and various birds). Because some local communities are particularly dependent on reindeer/caribou, their well-being will also be affected.

Id.

101. See id. (explaining further effects of global warming on Arctic ecosystems).

102. See Sloan, supra note 74, at 4 (discussing area covered by Arctic Regions).


these countries and others have begun to show an overwhelming interest in the thawing mass of floating ice that makes up the Arctic Circle. Their motive is unfortunately not the alarming rate of change in the environment, but rather in the opportunity to capitalize on the natural resources revealed by this change. According to the United States Geological Survey, nearly one-quarter of the world’s untapped oil and gas lie in the Arctic Ocean seabed. If the sea ice completely disappears, these resources will suddenly become easily attainable.

Additionally, as the sea ice continues to subside, water routes connecting North America and Europe are opening up waterways never thought accessible. This creates a problem, as these potential shipping lanes are located within the jurisdictions of several countries. As a result, Arctic changes are inducing a tug-of-war among nations both for the rights to natural resources and for territorial control.

A. Natural Resources

A USGS survey estimates that "ninety billion barrels of undiscovered technically recoverable oil, 1,670 trillion cubic feet of technically recoverable natural gas, and 44 billion barrels of technically recoverable natural gas liquids [are located] in twenty-five geologically defined areas [within the Arctic region]." These resources amount to nearly one-quarter of all of the undiscovered, recoverable resources in the world. As environmentalists grow more concerned by the melting trend, "shipping and energy companies are salivating at the prospect of smaller ice caps, which makes Arctic

(describing possible economic, environmental and political implications with current Arctic situation).

105. See Holmes, supra note 103, at 325-26 (listing countries interested in territory of Arctic).
106. See id. (discussing various countries’ interests in the Arctic’s resources).
107. See Arctic Oil and Gas, supra note 6 (discovering vast amounts of natural resources under Arctic seabed).
108. See id. (explaining accessibility of resources once ice melts); see also Krauss et al., supra note 84 (stating resources will be easily accessible).
109. See Roach, supra note 41 (observing opening waterways as result of melting ice).
110. See id. (discussing where new water routes are opening).
112. Arctic Oil and Gas, supra note 6.
113. See id. (demonstrating importance of Arctic resources).
drilling... easier.”114 The astonishing results of the USGS report have countries throughout the world, and their major energy and shipping corporations, scrambling to descend upon the virgin territory with hopes of claiming at least a part of the Arctic’s hundreds of billions of dollars in natural resources.115 Even nations that do not currently possess territory in the Arctic rim, like China, are taking an interest and setting up various research stations throughout the area to assess the potential flood of resources that may become available.116

B. The Northwest Passage

Another first occurred in the summer of 2007, when the Northwest Passage became ice-free for the first time since satellite records began in 1978.117 The Northwest Passage consists of a series of straits and channels through the Arctic Ocean that connect the Pacific and Atlantic Oceans.118 If this route becomes fully navigable, it could potentially shave over five thousand miles “off circumpolar sea voyages that otherwise would have to go through the Panama Canal to circumnavigate the Americas.”119 While it appears opening the route to commercial shipping is still a few years away, many countries are beginning to revamp and expand their fleets of large oceangoing ships known as “icebreakers.”120 As of 2007, however, the Northwest Passage remained “fully navigable” for only a few short weeks and was still extremely difficult to traverse.121

114. See Walton, supra note 111 (demonstrating difference between environmentalist interests and big business interests).
115. See Michael A. Becker, International Law of the Sea, 40 INT’L LAW 797, 801-02 (2008) (explaining chaos the Arctic’s resources are causing); see also Krauss, supra note 84 (stating interest in Arctic resources).
116. See Krauss et al., supra note 84 (showing other countries that are interested in Arctic resources).
117. See Becker, supra note 115, at 802-03 (describing opening of Northwest Passage as result of 2007 melting season).
118. See Christopher Mark Macneill, Gaining Command and Control of the Northwest Passage: Straits Talk on Sovereignty, 34 TRANSPL. J. 355, 360 (2007) (explaining make-up of Northwest Passage).
119. Id. (discussing potential benefits of navigating Northwest Passage).
121. See Roach, supra note 41 (describing Northwest Passage as an icy mess still very difficult to travel through).
As the ice continues to melt, sovereignty issues relating to control over this potentially high-trafficked area are surfacing. Canada claims the passage is a part of its “internal waters,” thus falling completely under Canadian law. The United States and the European Union however, fail to acknowledge Canada’s claim, arguing the Northwest Passage is an “international strait and that vessels have the right to navigate the passage without Canadian interference.” As the Passage becomes more navigable, the tensions surrounding this territorial dispute are becoming much like the Arctic Ocean—hotter.

V. Competing Claims

As one commentator aptly observed, “The current interest in the Arctic... is a perfect storm seeded with political opportunism, national pride, military muscle flexing, high energy prices and the arcane exigencies of international law.” While other nations are crying out to the world for help, the potential accessibility to vast amounts of natural resources and a legendary shipping route seem to be occupying all of the bordering nations’ attention. Territorial disputes among the Arctic nations, primarily between Russia, Canada and the United States, are complicating an already extremely slushy mess. To compound things further, the United Nations Convention on the Law of the Sea (UNCLOS), the primary body of international law “governing” these territorial disputes, provides no insight as to how such competing claims should be resolved.

122. See Mark Jarashow et al., UNCLOS and the Arctic: The Path of Least Resistance, 30 FORDHAM INT’L L.J. 1587, 1597 (2007) (describing rising competition for rights to Northwest passage); see also Becker, supra note 115, at 802 (stating United States interest in Northwest Passage).

123. See Jarashow, 30 FORDHAM INT’L L.J. at 1597 (discussing when Canada’s assertion of control over Northwest Territory).

124. See Becker, supra note 115, at 802 (stating United States’ belief about Canadian sovereignty over Northwest Passage).

125. For a discussion of the tensions surrounding the Northwest Passage, see infra notes 151-68 and accompanying text.


127. For a discussion of Russian, Canadian and the United States claims over the Arctic, see infra notes 126-208 and accompanying text.


129. For a further discussion of UNCLOS, see infra notes 109-30 and accompanying text.
A. An Overview of UNCLOS

The main body of relevant international law regarding the dispute over the Arctic is UNCLOS.\textsuperscript{130} Of the eight nations making up the Arctic Circle, only the United States has not ratified UNCLOS.\textsuperscript{131} While President Clinton signed the Convention, Congress has been dragging its feet and has not yet fully approved UNCLOS.\textsuperscript{132}

UNCLOS, often referred to as the “Constitution of the oceans,” became available for signatures in 1982, signifying the end of nearly a decade of negotiations.\textsuperscript{133} It governs nearly every aspect of maritime law, including “sovereignty limits, navigation, seabed mining. . . environmental protection. . . [and even] provides a legal framework for resolving ocean-related disputes."\textsuperscript{134} UNCLOS is regarded as one of the most momentous achievements in international law, representing “the culmination of thousands of years of international relations, conflict and nearly universal adherence to an enduring order for ocean space.”\textsuperscript{135} Since 1982, 158 countries have ratified and now abide by UNCLOS.\textsuperscript{136}

1. Sovereignty Delineation Under UNCLOS

The most relevant provision of UNCLOS regards sovereignty limits.\textsuperscript{137} UNCLOS prescribes that a country’s territory extends, as if it were land, twelve nautical miles from its coastal low-water mark, giving the country complete sovereignty over that space.\textsuperscript{138} Additionally, UNCLOS permits “exclusive economic zones” encompassing up to two hundred nautical miles from a country’s low-water

\textsuperscript{130} See generally Holmes, supra note 103, at 330 (explaining UNCLOS as primary body of international law relevant to issue at hand).

\textsuperscript{131} See id. at 330-31 (identifying countries that have signed on to UNCLOS).

\textsuperscript{132} See id. (stating that President Clinton signed UNCLOS treaty).

\textsuperscript{133} See Becker, supra note 115, at 802 (describing UNCLOS as Constitution of oceans).

\textsuperscript{134} Holmes, supra note 103, at 330-31; see also UNCLOS, supra note 128, at arts. 297-99, 397 (establishing current legal regime for UNCLOS).


\textsuperscript{137} See Holmes, supra note 103, at 335 (describing UNCLOS provision setting sovereignty limits as most relevant).

\textsuperscript{138} See UNCLOS, supra note 128, at arts. 2, 3 (explaining UNCLOS provision allowing for territory extension into ocean).
mark. While the United States is not a party to the UNCLOS treaty, it considers itself bound by the rules governing exclusive economic zones (EEZs), considering such zones as set international law.  

2. **Sea Bed Regulation**

Beyond this two hundred-mile marker, however, countries may extend their sovereignty over a particular area only if they can prove the continental shelf of their landmass is connected to the land in question. If proven, a country may claim jurisdiction up to 350 nautical miles from the coastal low-mark. A continental shelf is described as “the seabed and subsoil of the submarine areas that extend beyond its territorial sea throughout the natural prolongation of its land territory to the outer edge of the continental margin.” Under these sections of the treaty, a nation is allowed to express sovereignty over their continental shelves, and any natural resources found therein. Such sovereignty, however, does not extend to the seawater above. In considering ratification, the U.S. was primarily concerned with these provisions, feeling they restricted the freedom of seabed mining. When such regulations were not amended to the liking of the United States, it withdrew from the treaty negotiations and did not become a party to UNCLOS.

139. See Holmes, supra note 103, at 333 (defining exclusive economic zones). “UNCLOS defines a country’s exclusive economic zones as the area between twenty-four and two-hundred nautical miles from a nation’s low-water mark.” Id. A nation may “exercise sovereignty over the natural resources in, on, and below the seabed in its exclusive economic zone and maintains sole control over any other activities for the economic exploitation and exploration of the zone.” UNCLOS, supra note 128, at art. 56.

140. See Holmes, supra note 103, at 333 (discussing United States’ possession and sovereignty limits with respect to UNCLOS).


142. See generally UNCLOS, supra note 128, at arts. 76-77 (explaining a country may claim up to 350 additional nautical miles of territory).

143. Id. at art. 76 (explaining what constitutes a continental shelf).

144. See id. (describing which countries will receive control under UNCLOS).

145. Id. at art. 78 (explaining such sovereignty does not extend to seawater above).

146. See generally Holmes, supra note 103, at 331 (explaining why United States is not party to UNCLOS).

147. See id. (highlighting why United States initially did not sign on to UNCLOS).
3. **International Navigation**

While UNCLOS expanded countries’ territorial seas, it also created a safe passage for foreign vessels within foreign territories.\textsuperscript{148} Several provisions in UNCLOS govern the navigational rights in the oceans.\textsuperscript{149} These provisions establish the right of passage for all ships to travel through another country’s territorial seas and EEZs as long as the passage is “peaceful, continuous, and expedient.”\textsuperscript{150}

The UNCLOS provisions, however, do not regulate waters determined to be internal.\textsuperscript{151} Internal waters are subject to complete sovereignty by the coastal state.\textsuperscript{152} Other states are thereby forced to comply with the coastal state’s regulations within the territorial waters.\textsuperscript{153}

**B. Russian Claims of Territory**

In 2007, Russia took a preemptive strike in asserting its control over the Arctic territory, brazenly planting a titanium flag some 14,000 feet below the North Pole.\textsuperscript{154} This, however, was not Russia’s first attempt in claiming the Arctic region.\textsuperscript{155} In 2001, Russia sought to extend its 200 nautical mile EEZ to 350 nautical miles,\textsuperscript{156} the maximum amount of sea territory allowed under UNCLOS.\textsuperscript{157} The territory in question would encompass all of the North Pole and nearly half of the Arctic Ocean, an area consisting of approxi-
mately 1.2 million square kilometers.\textsuperscript{158} This claim was denied by the Commission on the Limits of the Continental Shelf (CLCS).\textsuperscript{159} Nevertheless, Russia was permitted to gather more information, revise and resubmit another claim in 2009.\textsuperscript{160}

Russia appears to remain optimistic.\textsuperscript{161} In 2007, in addition to planting a titanium flag in the seabed below the North Pole, Russia conducted an excursion on the Losmonosov Ridge.\textsuperscript{162} Hypothetically, the Losmonosov Ridge runs from the north of middle Russia, through the Arctic, to a Canadian island located between Canada and Greenland.\textsuperscript{163} Supposedly, the Russian expedition yielded scientific results, proving that the Losmonosov Ridge connects Russia’s continental shelf with the seabed territory in the Arctic.\textsuperscript{164} Under UNCLOS, Russia could extend its sovereignty over the ocean floor by proving that the continental shelf of its landmass is connected to the land in question.\textsuperscript{165} If Russia is granted sovereignty over this region, they may “exercise sovereignty over the natural resources in, on, and below the seabed. . . and . . . maintain sole control over any other activities for the economic exploitation and exploration of the zone.”\textsuperscript{166}

\textsuperscript{158} Jarashow, supra note 122, at 1587, 1595 (describing area over which Russia sought to extend its sovereignty).

\textsuperscript{159} See id. (explaining claim was denied by CLCS); see also UNCLOS, supra note 128, at art. 76 (designating the CLCS as reviewing body of sovereignty claims of countries wishing to extend their territory in ocean). The CLCS, while not an adversarial or judicial body, reviews the materials submitted by the coastal state and provides recommendations, based upon the location of the continental shelf, for the process in which the state can establish the outer limits of its territory. See id.

\textsuperscript{160} See Howard, supra note 155, at 851 (stating decision of CLCS).

\textsuperscript{161} See Gramling, supra note 154 (stating Russia seems positive about their claim over Arctic).

\textsuperscript{162} See id. (explaining why Russia is optimistic about sovereignty claim).


\textsuperscript{164} See Gramling, supra note 154 (explaining success of Russia expedition to Arctic). Under UNCLOS, a continental shelf is “the seabed and subsoil of the submarine areas that extend beyond its territorial sea throughout the natural prolongation of its land territory to the outer edge of the continental margin.” UNCLOS, supra note 128, at art. 76. Further, a nation is allowed to express sovereignty over their continental shelves, and any natural resources found therein. See id.

\textsuperscript{165} See UNCLOS, supra note 128, at art. 76 (explaining countries may extend territory over a particular area if they can prove the continental shelf of their landmass is connected to land in question).

\textsuperscript{166} See Holmes, supra note 103, at 333 (discussing countries’ exclusive economic zones); see also Howard, supra note 155, at 855 (describing Russia’s legal claim under UNCLOS).
Other nations, like Greenland and Denmark, are also attempting to prove the Losmonsov Ridge connects their countries to the Arctic seabed, but have not yet gathered adequate scientific evidence.\textsuperscript{167} Russia, therefore, will likely be the first to submit its claim over this Arctic territory.\textsuperscript{168} Considering Russia has gathered the necessary scientific data and complied with all of the obligatory requirements set forth in UNCLOS, it would be highly unprecedented for the CLCS to rule against Russia.\textsuperscript{169} If Russia has, in fact, complied with all of the proper formalities, countries bound by the UNCLOS regime may have to abide by CLCS’s recommendation.

A recommendation, however, is all CLCS can make.\textsuperscript{170} CLCS cannot force other countries to comply with its ruling as such rulings are non-binding and CLCS is not a legal body.\textsuperscript{171} CLCS could hold off on its recommendations if Greenland and Denmark come forward soon with scientific evidence that the ridge also connects their nations to the Arctic.\textsuperscript{172}

Further, Russia and Norway have also submitted competing territorial claims over two other large Arctic regions known as the Barents Sea Loop and the Western Nansen Basin.\textsuperscript{173} But Norway is not pursuing this claim as aggressively as Russia, admitting that “its continental shelf does not extend to the North Pole.”\textsuperscript{174} It appears that both Russia and Norway are working amicably toward negotiating boundaries over both territories; therefore it is unlikely this dispute will test the ability of UNCLOS to settle territorial clashes.\textsuperscript{175} If such negotiations are successful, however, they could act as a model for the peaceful resolution of future territorial disputes over the volatile Arctic region.

\textsuperscript{167} See Walton, supra note 111 (stating that other countries are also attempting to prove Losmonsov Ridge connects them to Arctic).

\textsuperscript{168} See id. (noting Russia’s extensive efforts to claim region).

\textsuperscript{169} See Howard, supra note 155, at 856 (explaining that CLCS rules based on validity of scientific information).

\textsuperscript{170} See id. at 850 n.108 (citing to Div. for Ocean Affairs & the Law of the Sea, Off. of Legal Affairs, 23 The Law of the Sea Bulletin 29 (1993)).

\textsuperscript{171} See id. at 850 (discussing that CLCS is not a legal body); see also Prows, supra note 135, at 243 (introducing background motivations for UNCLOS).

\textsuperscript{172} See Howard, supra note 155, at 848-49 (identifying importance of quickly staking claim).


\textsuperscript{174} Holmes, supra note 103, at 389 (stating that Norway is not aggressively pursuing territorial claim).

\textsuperscript{175} See id. (forecasting probable outcome).
C. Canadian Claims of Sovereignty

In 2007, a route known as the Northwest Passage opened for the first time in recorded history.\textsuperscript{176} The route links the North Atlantic and the North Pacific Oceans via the Arctic Archipelago.\textsuperscript{177} The Arctic Archipelago "is a group of 36,563 islands and contains ninety-four islands greater than 130 square kilometers, including three of the world's largest islands. With the exception of Greenland. . . [it] is the world's largest high-arctic land area."\textsuperscript{178}

Canada boldly reaffirmed its 100-year sovereignty claim over the Northwest Passage in 2007, citing security concerns about the potentially open international waterway.\textsuperscript{179} Using the straight baseline theory, Canada claimed that the route was effectively enclosed within the Arctic Archipelago and was within its "internal waters."\textsuperscript{180} The straight baseline theory, first established in the Fisheries Cases in 1951, allows a country to claim coastal waters as "internal."\textsuperscript{181} This action subjects all foreign ships wishing to use the waterway to the laws of that state encompassing the waterway.\textsuperscript{182} The straight baseline theory initially did not allow other nations the right of passage through another state's enclosed waters.\textsuperscript{183}

Canadian claims of sovereignty hinge on whether it has met all requirements of the "internal" test; if it fails, the waterway will be deemed an international strait.\textsuperscript{184} In 1949, the International Court

\textsuperscript{176} See Becker, supra note 115, at 801-03 (describing opening of Northwest Passage resulting from retreat of polar ice cap in 2007).

\textsuperscript{177} See id. at 802-03 (explaining importance of Northwest Passage, which trims route from Atlantic to Pacific Ocean by thousands of kilometers).

\textsuperscript{178} Macneill, supra note 118, at 358 (describing Arctic Archipelago).

\textsuperscript{179} See Jarashow, supra note 122, at 1597 (discussing when Canada first asserted sovereignty over Northwest Passage and Arctic Archipelago).

\textsuperscript{180} See id. (explaining Canada's sovereignty argument).


\textsuperscript{182} See Jarashow, supra note 122, at n.41 (citing Fisheries Case (U.K. v. Nor.), 1951 I.C.J. 116 (Dec. 18)) (explaining effect of straight baseline theory). According to the test,

[s]tates can claim that coastal waters are internal waters provided the baselines do not depart to any appreciable extent from the general direction of the coastline, the waters lying within the baselines are closely linked to the coastal State's domain and the enclosed waters represent the economic interests which are particular to the region and which have an importance evidenced by a long history of use.

\textit{Id.}; see also Fisheries Case (U.K. v. Nor.), 1951 I.C.J. 116 (Dec. 18) (defining straight baseline method).

\textsuperscript{183} See Jarashow, supra note 122, at 1599 (describing inequitable ramifications of original baseline test).

\textsuperscript{184} See Macneill, supra note 118, at 372-73 (discussing strengths of Canada's claims).
of Justice (ICJ) created two criteria in determining what constitutes an international strait: "geography, meaning the strait connected either two areas of high seas or EEZs; and . . . functionality, the usage or traffic traveling across the strait’s waters."185 If the Northwest Passage is considered an international strait, all ships can pass through peacefully and without interference from the Canadian government.186 Unfortunately, UNCLOS provides no assistance in resolving this issue as it does not define "international straits."187 UNCLOS, however, does permit nations to use such internal waters under the "right of innocent passage, so long as those waters were previously territorial waters or listed as high seas."188

Most commentators believe that the value derived from a fully navigable Northwest Passage would automatically make the waterway an international strait, thereby permitting access to all.189 Conversely, Canada is advancing a comprehensive argument for sovereignty under the straight baseline theory.190 All three of the criteria seem to be satisfied: (1) the archipelago conforms with the coast; (2) the waters are frozen for most of the year, attaching themselves to the Canadian coastline; and (3) over 20,000 Canadian Inuit currently live and have lived for centuries on the Arctic Archipelago.191 If the Northwest Passage is deemed "internal Canadian waters," then an argument could be advanced under the right of innocent passage exception, allowing international use of the sea route.192 Should this argument fail and Canada be allowed sovereignty over the route, all who travel through the passage would be subject to Canadian law.193

185. Jarashow, supra note 122, at 1605 (articulating two requirements to determine an international strait); see also Corfu Channel, 1949 I.C.J. 4, 30-49 (Apr. 9) (defining international strait).
186. Jarashow, supra note 122, at 1605 (indicating the Northwest Passage could be an international strait).
187. See id. at 1645 (stating that UNCLOS failed to define international strait).
188. Id. at 1599 (explaining right of innocent passage).
189. See id. at 1605 (asserting Northwest Passage as an international strait).
190. See id. at 1601-02 (evaluating Canada’s claims).
191. See Jarashow, supra note 122, at 1601-02 (looking at Canada’s claims through three criteria).
192. See id. at 1603-04 (stating options for international use of passage if deemed Canadian internal waters).
193. See id. at 1604 (explaining potential result if Canada is granted sovereignty over Northwest Passage).
D. The United States Protecting Its Interests

By becoming increasingly dependent upon oil and natural gas, the United States has an enormous interest in the vast resources an ice-free Arctic could yield.194 The United States is in an extremely unique situation, as it is the only country bordering the Arctic that has not ratified UNCLOS.195 A core group of Senators, who are mostly responsible for UNCLOS remaining unratified, claim that any limitations on national sovereignty would lead to the potential under-exploitation of available resources.196

As an alternative, the group is advocating for privatizing the seabed, which they believe will create economic incentives for owners to protect the long-term value of their property.197 Nevertheless, in failing to ratify the treaty, the U.S. is essentially shooting itself in the proverbial foot.198 As a non-signatory, the United States cannot make appointments to any committees established under UNCLOS, nor can it submit a claim to the CLCS, potentially putting at risk thousands of square miles of resource-rich continental shelf and leaving its interests out in the cold.199

Presently, the United States is not letting its non-signatory status deter it from attempting to protect its Arctic Ocean interests.200 The potential economic consequences of controlling such extensive amounts of petroleum has fueled Congressional conservatives to push for increased offshore oil and gas drilling to solve the nation’s many energy woes.201 In fact, in 2007, the U.S. Coast Guard


195. See Holmes, supra note 103, at 331 (demonstrating United States is not party to UNCLOS).


197. See id. (providing alternative arguments proposed by Senators).

198. See Jarashow, supra note 122, at 1640 (stating U.S. is at disadvantage as non-signatory).

199. See id. (discussing the peculiar situation of the U.S.).


201. See id. (explaining increasing pressures in Congress for increased offshore drilling). The impacts of said drilling, however, have been estimated by the Department of Energy to barely impact the prices of oil long-term. See ENERGY INFO. ADMIN, DEP’T ENERGY, IMPACTS OF INCREASED ACCESS TO OIL AND NATURAL GAS RESOURCES IN THE LOWER 48 FEDERAL OUTER CONTINENTAL SHELF (2007), http://www.eia.doe.gov/oiaf/aeo/otheranalysis/ongr.html.
dispatched its research icebreaker, the USCGC Healy, for the purposes of mapping the extent of the continental shelf north of Alaska. As stated previously, however, any claims of sovereignty regarding the shelf are hindered by the failure of the U.S. to ratify UNCLOS.

Additionally, the U.S. has rejected outright Canada’s claim of sovereignty over the Northwest Passage and wishes to prevent Russia from acquiring their requested territory. Essentially, the lack of teeth in UNCLOS and its failure to be ratified leaves the United States unhindered to do what it wishes with the Arctic region; allowing the nation the necessary wiggle room to legally dismiss any other countries’ formal assertions of sovereignty. Moreover, some scholars suggest that the United States will most likely argue in favor of the international precedent set by the Convention on the High Seas because it remains liberated from UNLCS. Under this treaty, any country not bound by UNCLOS should be able to freely navigate, fish, lay submarine cables and pipelines, and freely fly over the high seas. Thus, even if the CLCS formally determines Russia to be the sole possessor of the Arctic region, the lack of applicability of the UNCLOS process and the nonbinding recommendations of the CLCS would effectively denote that the United States does not have to recognize any region of the Arctic as Russian territory.

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202. See Graff, supra note 126 (describing efforts U.S. is taking to assert sovereignty claim over Arctic).
203. See Jarashow, supra note 122, at 1640 (believing U.S. is disadvantaged as non-signatory).
205. See Howard, supra note 155, at 860-62 (explaining why United States is able to reject principles set forth by UNCLOS).
206. See id. (stating potential arguments by United States).
208. See Howard, supra note 155, at 861-62 (describing reasons United States will not recognize Russian claims).
VI. Potential Resolutions to the Problems of the Arctic

Several available options exist to resolve the current issues facing the Arctic region. The first would be remedial actions for territorial disputes based on the framework set by UNCLOS. The second is some variation of a multilateral agreement modeled after the Antarctic Treaty System. Finally, there may be some form of relief sought in the ICJ.

A. Establishing a Legitimate Claim Under UNCLOS

UNCLOS provides the framework under which an impending sovereignty claim can be resolved. UNCLOS permits a nation to extend its territory beyond its EEZ if the nation can prove that a certain territory is a physical extension of the nation’s continental shelf. A continental shelf contains “the crucial nexus separating the extent of coastal [s]tate jurisdiction over seabed natural resources from the common heritage beyond.”

Once a claim is made on a territory, Article 76, Section 8 of UNCLOS establishes that the country claiming sovereignty shall submit its findings to CLCS, within ten years of UNCLOS coming into action in that country. CLCS, while not an adversarial or judicial body, reviews the materials submitted by the coastal state and provides recommendations based upon the location of the continental shelf for the process in which the state can establish the outer limits of its territory. After this process is complete, the coastal state establishes its extension, which is final and binding under UNCLOS. Since CLCS is not a legal entity, the state itself

209. For a discussion of the options facing the Arctic, see infra notes 213-53 and accompanying text.
210. For a discussion of remedial actions set forth in UNCLOS, see infra notes 213-28 and accompanying text.
211. For a discussion of the Antarctic Treaty System, see infra notes 229-45 and accompanying text.
212. For a discussion of the International Court of Justice, see infra notes 245-53 and accompanying text.
213. See Dubner, supra note 141, at 10 (discussing framework under UNCLOS).
214. See UNCLOS, supra note 128, at art. 76 (explaining how nations can prove their territory beyond their exclusive economic zone).
216. See Becker, supra note 115, at 823 (stating purpose of the Commission on the Limits of the Continental Shelf).
218. See Andrew King, Note, Thawing a Frozen Treaty: Protecting United States Interest in the Arctic with Congressional-Executive Agreement of the Law of the Sea, 94 HAS-
establishes its boundary in compliance with the CLCS recommendations.\textsuperscript{219}

If, however, there are competing claims over a single territory, UNCLOS is vague as to how the dispute should be resolved.\textsuperscript{220} Because CLCS is not a legal body, it possesses no power to decide such disputes.\textsuperscript{221} In fact, Article 76 does not provide for any dispute settlements regarding territory claimed by more than one state, thereby essentially precluding CLCS from ruling in the event of such disputes.\textsuperscript{222} Furthermore, even if UNCLOS allowed an area to be the sovereign territory of two nations, the drawing of sovereignty lines would be extremely complicated and vague, thus it would be almost impossible to distinguish one territory from the other.\textsuperscript{223}

While UNCLOS does not expressly state how to resolve continental shelf disputes, it does provide several remedial provisions for the disputing parties.\textsuperscript{224} Article 279 states that parties should try to informally settle disputes through negotiations.\textsuperscript{225} If the parties are unable to compromise, Article 287 states the parties may use the International Tribunal for the Law of the Sea, the ICJ, or one of two arbitral tribunals.\textsuperscript{226} Article 298, however, permits any nation to decline to accept any of the prescribed methods of dispute resolution.\textsuperscript{227} Any potential resolution is thus left to the sole discretion of the disputing parties.\textsuperscript{228} The Arctic is one of the only remaining unclaimed territories left on the planet, but the sudden interest of multiple nations for possession of its resources and waterways demands UNCLOS come up with an answer.

\begin{footnotesize}
\begin{enumerate}
\item Tings Const. L.Q. 329, 334 (2007) (discussing final step in process of UNCLOS continental shelf extension).
\item Howard, supra note 155, at 850-51 (citing to Div. for Ocean Affairs & the Law of the Sea, Off. of Legal Affairs, 23 The Law of the Sea Bulletin 29 (1993)).
\item Howard, supra note 155, at 849-52 (explaining vagueness in UNCLOS over territorial disputes).
\item See id. at 850 (stating that CLCS is not a legal body).
\item See id. (demonstrating lack of processes under UNCLOS for deciding territorial issues).
\item See id. at 857 (defining sovereignty).
\item See UNCLOS, supra note 128, at arts. 279, 287 (explaining remedial provisions under UNCLOS).
\item See id. at art. 279 (explaining that parties should try to negotiate problems).
\item See id. at art. 287 (explaining potential legal bodies for disputing parties to take their claims).
\item See id. at art. 298 (stating any nation can deny ruling of overseeing legal bodies).
\item Howard, supra note 155, at 852 (explaining lack of enforcement in UNCLOS).
\end{enumerate}
\end{footnotesize}
B. Antarctic Treaty System

In 1959, twelve nations created and entered the Antarctic Treaty.229 Fueled by various hostile claims of sovereignty and threats of military action, the treaty acted swiftly to bring tranquility to the area; it did so by suspending all nations’ rights to the Antarctic and holding that countries could only use the continent for peaceful purposes and scientific research.230 While this language seems vague, it essentially forced all competing nations to quit their petty bickering and focus on more important problems facing Antarctica, like pollution control, scientific exploration and limiting natural resource exploitation.231 Further, by allowing scientific investigation of the region, the treaty also promotes cooperation among the researching nations.232 Thirty years later, the Madrid Protocol expanded the original Antarctic Treaty, designating Antarctica as a “natural reserve,” thereby halting all mining activities within the continent.233 The protocol was enacted to ensure that the fragile ecosystem of the Antarctic be maintained.234 Since its inception fifty years ago, there have been no sovereignty disputes over the continent.235

The formation of a multilateral treaty modeled after the Antarctic Treaty System would be ideal given the Arctic’s current situation.236 The Antarctic Treaty postponed territorial disputes, shielded the region against natural resource exploitation, prevented sovereignty claims and enacted many environmental safeguards protecting the region.237 If all eight of the Arctic Nations could form such a treaty with haste—providing some combination of overlapping sovereignty, peaceful cooperation and environmen-

229. See Jarashow, supra note 122, at 1638 (discussing formation of Antarctic Treaty)
231. See Jarashow, supra note 122, at 1638 (discussing Antarctic Treaty’s formation and effect treaty had on states involved).
232. See Antarctic Treaty, supra note 230, at arts. 2-3 (stating importance of cooperation among countries with regard to scientific research).
234. See id. at art. 3(b)(i)-(vi) (stating environmental goals of Madrid Protocol).
235. See Jarashow, supra note 122, at 1638 (discussing how Antarctic Treaty has led to stability in region and prevented territorial disputes).
236. See id. at 1649 (discussing potential application of Antarctic Treaty to Arctic).
tual safeguards—it may be possible to slow the melting, reduce the effects of global warming and save the Arctic region.\textsuperscript{238}

The stark differences between the polar regions mean that the feasibility of such a treaty remains unclear.\textsuperscript{239} The Antarctic is an uninhabited, isolated landmass, far removed from the rest of the world, making it very difficult to claim or use the region.\textsuperscript{240} The Arctic, alternatively, is an occupied, ice-filled ocean, completely surrounded by industrialized nations.\textsuperscript{241} While these nations sought to preserve the Antarctic, they are currently chomping at the resource-rich bit, interested in using the Arctic region for fishing, mining, navigation and defense.\textsuperscript{242} It is therefore unlikely that any of the surrounding countries would give up their territorial claims in exchange for the environmental stability of the Arctic.\textsuperscript{243}

Furthermore, the Antarctic system adopted a wait-and-see approach, not permitting any claims of sovereignty for fifty years.\textsuperscript{244} It is most likely that such a timeline would not be plausible as most predictions expect there to be nothing left of the Arctic within the next few decades.\textsuperscript{245} As previously discussed, the rate at which the region is disappearing is staggering, and given the availability of resources lying beneath the ice, this watery result may be what many of these resource-hungry nations' desire.

C. The International Court of Justice

The ICJ has the sole function of settling "legal disputes [in accordance with international law] submitted... by States and to give advisory opinions on legal questions referred to it by authorized United Nations organs and specialized agencies."\textsuperscript{246} The effectiveness of this route, however, is predicated on the assumption that all

\begin{footnotesize}
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\item See id. (discussing potential success of Arctic Treaty modeled after Antarctic Treaty).
\item See Holmes, supra note 103, at 348 (discussing differences between Antarctic and Arctic).
\item See id. (explaining difference between Antarctic and Arctic regions).
\item See id. (describing differences between polar regions).
\item See id. (discussing nations' interests in Arctic).
\item See Holmes, supra note 103, at 348 (discussing effect of the Antarctic treaty).
\item See id. (explaining why Arctic Treaty will not work).
\end{enumerate}
\end{footnotesize}
nations involved in Arctic territorial disputes will honor an ICJ ruling and will consent to the jurisdiction of the ICJ. Assuming both parties consent and such a decision is honored, ideally all sovereignty disputes could be clearly resolved and the Arctic could be divided up in accordance with ICJ rulings.

With regard to the devastation a melting Arctic may cause on small island states, the ICJ could serve as an effective platform in gaining international attention. In order for the ICJ to have jurisdiction, both parties must be states and must be members of the United Nations. Currently, the United Nations Department of Economic and Social Affairs lists fifty-two small island states as members of the United Nations. Theoretically, one of these nations could bring suit against the world’s largest polluters, forcing some sort of legal action in reducing climate change. This scenario would require consent of jurisdiction of both states; obtaining such consent is highly unlikely. As for all the Arctic’s indigenous people, they are unfortunately already citizens of nations competing for the Arctic’s resources, like Russia and Canada, making it almost impossible to seek relief via the ICJ.

**VII. Conclusion**

"An effective response to climate change will depend on creating the conditions for international collective action." Unfortunately, the extensive melting conditions of the Arctic have only fostered an international race to the bottom of the ocean, creating a hostile tug-of-war for territory and a plethora of natural resources. The undeniable fact is that the Arctic is melting; it is no


248. *See id.* (describing process ICJ must go through to be effective).

249. *See id.* (discussing potential ICJ as potential platform for small island states).

250. *See International Court of Justice, supra* note 246 (listing requirements for ICJ jurisdiction in contentious cases).


253. *See id.* (discussing improbability of such action).


255. For a discussion of various countries’ claims of sovereignty over Arctic territory see *supra* notes 126-208 and accompanying text.
longer hypothetical, nor speculation.\textsuperscript{256} If the international community continues on their current course, this fragile ecosystem will be destroyed along with countless other communities around the world.\textsuperscript{257} Currently, however, it appears those causing the change could care less, as they continue to take advantage of and exploit the same resources that have caused this catastrophe.\textsuperscript{258}

Moreover, this situation completely embodies the vast disconnect between powerful nations' economic interests and small nations' struggles for survival.\textsuperscript{259} The cries of the small are falling on deaf ears, while the interests of the powerful are seeking a way to be divvied up.\textsuperscript{260} Finally, it appears that international law is currently of no help in deciding who gets what once the ice has vanished.\textsuperscript{261}

\textit{Andrew Van Wagner*}

\textsuperscript{256} For a discussion of changes occurring in Arctic as result of global warming see \textit{supra} notes 37-100 and accompanying text.

\textsuperscript{257} See ACIA, \textit{supra} note 37, at 43 (discussing impact of climate change on small island states all over the world).

\textsuperscript{258} For an extensive discussion of the resources becoming accessible in Arctic see \textit{supra} notes 112-25 and accompanying text.

\textsuperscript{259} For a discussion of the challenges facing small island states see \textit{supra} notes 52-93.

\textsuperscript{260} For a discussion of the impact of climate change on small island states compared to the interests of many larger nations see \textit{supra} notes 52-93 and 126-208 and accompanying text.

\textsuperscript{261} For a discussion on the ineffectiveness of international law regarding this situation see \textit{supra} notes 209-53.

* J.D. Candidate, 2010, Villanova University School of Law; B.A., 2006, University of California, Davis.