

ARTICLE

Article 234 of the United Nations Convention on the Law of the Sea: The Overlooked Linchpin for Achieving Safety and Security in the U.S. Arctic?

Stanley P. Fields*

* Lieutenant Commander, Judge Advocate, United States Coast Guard. Presently assigned as the Advanced Operational Law Fellow at The Judge Advocate General's Legal Center and School, Center for Law and Military Operations, United States Army, Charlottesville, Virginia. LL.M., 2015. The Judge Advocate General's Legal Center and School, United States Army, Charlottesville, Virginia. J.D., 2004, University of New Mexico; M.S., 2001, Eastern New Mexico University; B.S., 1997, Western New Mexico University. Previous military assignments include Staff Attorney, United States Coast Guard District 17, Juneau, Alaska, 2010–2014; Office of Claims and Litigation, Washington, D.C., 2009–2010; Office of Legal and Defense Services, 2007–2009, Arlington, Virginia. Additional legal assignments include Associate Attorney, Baxter Bruce & Sullivan, P.C., Juneau, Alaska, 2006–2007; Assistant Attorney General, Alaska Department of Law, Natural Resources Section, Juneau, Alaska, 2004–2006. Member of the bars of Alaska, the District of Alaska, Court of Appeals for the Armed Forces, and the Supreme Court of the United States. This article was submitted in partial completion of the Master of Laws requirements of the 63d Judge Advocate Officer Graduate Course. Special thanks to David H. Lee, LCDR, JAGC, USN, William G. Dwyer III, CDR, USCG, and The Judge Advocate General's Legal Center and School for their time and effort, without which this article would not have been possible.

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I am concerned that we as a nation are setting ourselves up for another 'Sputnik Moment,' but this time falling behind more than any other country with even non-Arctic nations like China and India investing in icebreakers and acknowledging the value of the region.

—U.S. Senator Lisa Murkowski¹

Introduction

A. Relying on Russia

“Without active heavy icebreakers, ‘the control of the Arctic is in the hands of Russia.’”² A vivid example of Russia’s control of the Arctic, including the U.S. Arctic, is the response to the fuel shortage in Nome, Alaska, during 2012.³ With the onset of an early freeze that closed the Port of Nome that year, the normal method of using a barge to bring fuel into the City of Nome could not be employed.⁴ There was no infrastructure, such as roadways, to get fuel to Nome, and airlifts would have been exorbitantly expensive.⁵ Winter was approaching, and winter on the doorstep of the Arctic Circle is a different kind of threat than in other parts of the U.S. The average temperature in January ranges from a high of 13.1 degrees to a low of -2.8 degrees Fahrenheit, which is almost 30 degrees colder than New York City.⁶

¹ Lisa Murkowski, U.S. Senator, R-Alaska, in Marina Koren, *Russia’s Militarization of the North Pole Has U.S. Lawmakers on Edge*, NAT’L J. (Sept. 11, 2014), <http://www.nationaljournal.com/congress/russia-s-militarization-of-the-north-pole-has-u-s-lawmakers-on-edge-20140911>.

² Ellen Knickmeyer, *Nation’s Last Big Icebreaker Endures Despite Age*, MILITARY.COM (Nov. 12, 2014), <http://www.military.com/daily-news/2014/11/12/nations-last-big-icebreaker-endures-despite-age.html> (quoting John Garamendi, U.S. Representative, D-Cal.).

³ There are additional examples of U.S. Government reliance on Russia for help in Arctic conditions, such as that the National Science Foundation in recent years has been relegated to seeking charter icebreaking services from Russia and Sweden in order to get to McMurdo Station in Antarctica. RONALD O’ROURKE, CONG. RESEARCH SERV., RL34391, COAST GUARD POLAR ICEBREAKER MODERNIZATION: BACKGROUND AND ISSUES FOR CONGRESS 17 (2014) (“Although Coast Guard polar icebreakers in the past have performed the annual McMurdo break-in mission, the NSF in certain recent years has chartered Russian and Swedish contractor-operated icebreakers to perform the mission . . .”).

⁴ Kathleen A. Duignan, *Partnerships in the Arctic*, 70 COAST GUARD PROC., Summer 2013, at 57, 59, http://www.uscg.mil/proceedings/archive/2013/Vol70_No2_Sum2013.pdf; Mike M. Ahlers, *Coast Guard mission to Nome exposes U.S. limits in ice-breaking capability*, CNN (Jan. 5, 2012), <http://www.cnn.com/2012/01/05/us/alaska-nome-icebreaker/>.

⁵ Ahlers, *supra* note 4 (“[I]t would have taken more than 300 flights, each carrying 4,000 to 5,000 gallons, to meet the town’s needs Shipping costs would have added \$3 or \$4 to the price of a gallon of gasoline, which already approaches \$6 a gallon . . .”).

⁶ NAT’L CLIMATIC DATA CENTER, NAT’L OCEANIC AND ATMOSPHERIC ADMIN, U.S. DEP’T OF COMMERCE, DATA TOOLS: 1981–2010 NORMALS, <http://www.ncdc.noaa.gov/cdo-web/datatools/normal>.

Fortunately for the citizens of Nome, there was a Russian ice tanker that could transport the fuel, but using it would require a Jones Act⁷ waiver from the Secretary of Homeland Security.⁸ The Secretary granted the waiver, and the Russian ice tanker, with assistance from U.S. Coast Guard Cutter HEALY (WAGB-20), delivered fuel to the citizens of Nome, thereby avoiding a potential humanitarian crisis.⁹ Unfortunately, at the time of this writing, it is questionable whether the Russians would be as motivated to assist the U.S. citizens residing in Alaska if a similar situation arose today due to situations in Eastern Europe and Syria. In light of increasing human activity in the U.S. Arctic, it is equally unfortunate that the U.S. Government has failed to develop any substantive strategy addressing this situation.¹⁰

It is hard to believe that the U.S. Government would be unable to assist its own citizens in a potentially life-threatening situation anywhere else in the United States. By way of example, it is difficult to imagine the citizens of New York City being in need of emergency federal waivers and action from other nations to ensure they have fuel to heat their homes in the winter. This disparity is just one example that the Arctic, and the U.S. citizens residing there, appear to be an afterthought to the U.S. Government. This must change. The U.S. Government cannot simply abdicate its sovereign responsibilities in the U.S. Arctic. The people living there need and deserve at

⁷ 46 U.S.C. § 55102 (2012).

⁸ Ahlers, *supra* note 4. It should be noted that USCGC HEALY assisted with the Nome, Alaska, fueling operation by helping to break ice for RENDA. HEALY's deployment was extended by nearly two months to ensure the operation was successful. *Id.*

⁹ Daniel Velez, *Arctic Regulations*, 70 COAST GUARD PROC., Summer 2013, at 42, 45, n. 2; Ahlers, *supra* note 4.

¹⁰ See, e.g., Seth Borenstein, *Coast Guard Proposes Bering Straits Shipping Route*, MILITARY.COM (Dec. 5, 2014), <http://www.military.com/daily-news/2014/12/05/coast-guard-proposes-bering-straits-shipping-route.html>; Valerie Insinna, *Military Challenged by Changing Arctic Landscape*, NAT'L DEF. MAG., Feb. 2014, <http://www.nationaldefensemagazine.org/archive/2014/February/Pages/MilitaryChallengedbyChangingArcticLandscape.aspx>; Kathrin Keil, *Evaluation of the Arctic Shipping Season 2013*, THE ARCTIC INST. (Jan. 13, 2014), <http://www.thearcticinstitute.org/search?q=evaluation+of+2014+shipping+season>; Trude Pettersen, *Fifty percent increase on Northern Sea Route*, BARENTS OBSERVER (Dec. 3, 2013), <http://barentsobserver.com/en/Arctic/2013/12/fifty-percent-increase-northern-sea-route-03-12>; U.S. COAST GUARD, ARCTIC STRATEGY 5, 7 (May 2013), http://www.uscg.mil/seniorleadership/DOCS/CG_Arctic_Strategy.pdf; Denise Michels, *Arctic USCG Base Needed*, INST. OF THE NORTH (2012), http://www.institutenorth.org/assets/images/uploads/articles/Arctic_USCG_Base_Needed_By_Mayor_Denise_Michels.pdf; Michael Byers & Suzanne Lalonde, *Who Controls the Northwest Passage?*, 42 VAND. J. TRANSNAT'L L. 1133, 1136-38 (2009) (identifying forecasts for more time ice-free, shorter shipping distances, adventure cruises, natural resources).

least the minimum level of protection and services provided to people living elsewhere in the United States.¹¹

Article 234 of the United Nations Convention on the Law of the Sea (UNCLOS) provides the authority and opportunity for the U.S. to establish and sustain its sovereignty in the Arctic. Unfortunately, the current U.S. interpretation of Article 234 inhibits the U.S. from exercising its authority in its own Arctic territory. This paper will examine the U.S. interpretation of Article 234, and how the current interpretation is incorrect and counterproductive to U.S. interests in the Arctic. The Canadian and Russian interpretations of Article 234 will be examined and contrasted to the U.S. interpretation. This article argues that the Canadian and Russian interpretations better allow these foreign nations to address the increasing potential of environmental and humanitarian disaster in the Arctic. Furthermore, the rest of the world is substantially complying with the Article 234-based legal regimes of Canada and Russia. This review ultimately concludes that customary international law has developed, or is developing right now, with respect to Article 234, and that the U.S. position regarding Article 234 deviates from the emerging norm being established in the Arctic.

B. Proactive Strategy

Canada and Russia have used international legal regimes to strengthen their sovereign presence in the Arctic regions. Both nations have placed particular emphasis on Article 234 of UNCLOS, which focuses on waters that are ice-covered for a majority of the year.¹² Article 234 of UNCLOS states:

SECTION 8. ICE-COVERED AREAS

Article 234 Ice-covered areas

Coastal States have the right to adopt and enforce non-discriminatory laws and regulations for the prevention,

¹¹ See Christina Nunez, *What Happens When Oil Spills in the Arctic?*, NAT'L GEOGRAPHIC (Apr. 24, 2014), <http://news.nationalgeographic.com/news/energy/2014/04/140423-national-research-council-on-oil-spills-in-arctic/>; Melissa Bert, *A Strategy to Advance the Arctic Economy*, COUNCIL ON FOREIGN REL. (2012), <http://www.cfr.org/Arctic/strategy-advance-Arctic-economy/p27258> ("In the lower forty-eight states, response time to an oil spill or capsized vessel is measured in hours. In Alaska, it could take days or weeks to get the right people and resources on scene. The nearest major port is in the Aleutian Islands, thirteen hundred miles from Point Barrow, and response aircraft are more than one thousand miles south in Kodiak, blocked by a mountain range and hazardous flying conditions. The Arctic shores lack infrastructure to launch any type of disaster response, or to support the growing commercial development in the region.").

¹² United Nations Convention on the Law of the Sea Art. 234, Dec. 10, 1982, 1833 U.N.T.S. 397, http://www.un.org/depts/los/convention_agreements/texts/unclos/part12.htm.

reduction and control of marine pollution from vessels in ice-covered areas within the limits of the exclusive economic zone, where particularly severe climatic conditions and the presence of ice covering such areas for most of the year create obstructions or exceptional hazards to navigation, and pollution of the marine environment could cause major harm to or irreversible disturbance of the ecological balance. Such laws and regulations shall have due regard to navigation and the protection and preservation of the marine environment based on the best available scientific evidence.¹³

Canada and Russia have specifically referenced this Article as the basis for their unilateral implementation of additional environmental safety regulations and, in the case of Russia, icebreaker escort fees to ensure safety of the environment and seafarers in their respective Arctic Exclusive Economic Zones (EEZ).¹⁴ The U.S. has historically been opposed to reliance on Article 234 for additional regulation of activities on ice-covered waters due to possible impacts on freedom of navigation.¹⁵ Changing the U.S. approach would allow implementation of a regulatory framework, similar to that of Russia and Canada, to enhance environmental protection, safety of life at sea, security, and maritime domain awareness in the U.S. Arctic. Moreover, this revamped approach to Article 234 would likely ensure additional attention and funding for surface assets, a deepwater port, and attached military

¹³ *Id.*

¹⁴ See Raul (Pete) Pedrozo, *Arctic Climate Change and U.S. Accession to the United Nations Convention on the Law of the Sea*, 89 INT'L L. STUD. 757, 769 (2013); Erik Franckx, *Should the Law of Governing Maritime Areas in the Arctic Adapt to Changing Climatic Circumstances?*, 41 CAL. W. INT'L L.J. 397, 420–21 (2011); Kristin Bartenstein, *The "Arctic Exception" in the Law of the Sea Convention: A Contribution to Safer Navigation in the Northwest Passage?*, 42 OCEAN DEV. & INT'L L. 22, 36–46 (2011); Andreas Rasputnik, *Positive Unilateralism – An Effective Strategy to Protect the Canadian Arctic Environment or a Subtle Approach to Establish Sovereignty?*, THE ARCTIC INST., CENTER FOR CIRCUMPOLAR SECURITY STUD. (Dec. 23, 2011), <http://www.theArcticinstitute.org/2011/12/92743-positive-unilateralism-effective.html>; John Norton Moore, *The UNCLOS Negotiations on Ice-Covered Areas*, in CHANGES IN THE ARCTIC ENVIRONMENT AND THE LAW OF THE SEA 17, 18–23 (Myron H. Nordquist et al. eds. 2010); R. DOUGLAS BRUBAKER, INTERNATIONAL STRAITS OF THE WORLD, THE RUSSIAN ARCTIC STRAITS 79–80 (2005); SHABTAI ROSENNE, ALEXANDER YANKOV & NEAL R. GRANDY, IV, UNITED NATIONS CONVENTION ON THE LAW OF THE SEA: A COMMENTARY 396, 398 (Myron H. Nordquist et al. eds. 1991).

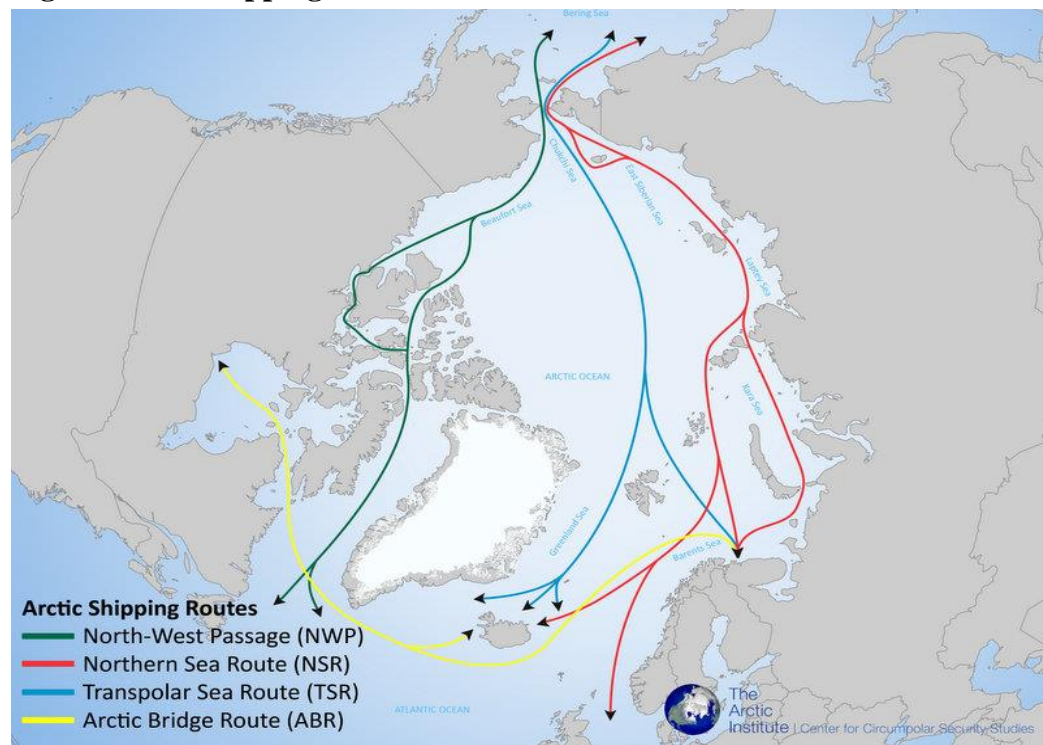
¹⁵ Pedrozo, *supra* note 14, at 768–69; Diplomatic Note from the U.S. Embassy, Ottawa, Can., to Dep't of Foreign Affairs and Int'l Trade of Can., Appendix A (Aug. 18, 2010) (hereinafter Diplomatic Note from the United States to Canada), <http://www.state.gov/documents/organization/179287.pdf>; Letter from Eric Benjaminson, U.S. Minister – Counselor, Econ. Energy and Env't Affairs, to Robert Turner, Manager, Navigation Safety and Radiocommunications, Operations & Env't Programs, Marine Safety Directorate, Dep't of Transp., Can., Appendix B (Mar. 19, 2010), <http://www.state.gov/documents/organization/179286.pdf>.

infrastructure for Arctic operations that would achieve a functional end-state of enhanced safety and security in the U.S. Arctic.

II. Background

“The United States is an Arctic Nation with broad and fundamental interests in the Arctic Region, where we seek to meet our national security needs, protect the environment, responsibly manage resources, account for indigenous communities, support scientific research, and strengthen international cooperation on a wide range of issues.”¹⁶ The official policy of the White House acknowledges that the United States is an Arctic nation, and that this region is home to U.S. citizens and natural resources. Moreover, this policy acknowledges there are national security risk needs. Nonetheless, the U.S. has failed to make any meaningful progress securing and protecting this part of the nation.

Fig. 1: Arctic Shipping Routes¹⁷



¹⁶ THE WHITE HOUSE, NATIONAL STRATEGY FOR THE ARCTIC REGION 2 (2013) [hereinafter WHITE HOUSE ARCTIC STRATEGY] (quoting THE WHITE HOUSE, NATIONAL SECURITY STRATEGY 50 (2010)), http://www.whitehouse.gov/sites/default/files/docs/nat_arctic_strategy.pdf.

¹⁷ Malte Humpert & Andreas Raspotnik, *The Future of Arctic Shipping*, THE ARCTIC INSTITUTE (Oct. 11, 2012), <http://www.thearcticinstitute.org/2012/10/the-future-of-arctic-shipping.html>.

A. Reluctant American Arctic Engagement

Without question, it is the primary duty of a national government to ensure the safety and security of its citizens.¹⁸ Unfortunately, the United States has taken a “reluctant” approach to executing its sovereign duty to citizens living in its only Arctic region—Alaska.¹⁹ The Federal Government’s failure to invest meaningfully in the U.S. Arctic has left this region of the United States without an adequate federal presence or emergency response capabilities.²⁰ Even when there is a vessel on patrol in the Bering Sea, it can take at least three days to respond to a maritime incident.²¹ No other region of the U.S. is faced with such a lack of Federal Government presence and protection.²² This is a significant issue in an area where the population is

¹⁸ U.S. CONST. pmb. (“We the People of the United States, in Order to form a more perfect Union, establish Justice, insure domestic Tranquility, provide for the common defence, promote the general Welfare, and secure the Blessings of Liberty to ourselves and our Posterity, do ordain and establish this Constitution for the United States of America.”); THE DECLARATION OF INDEPENDENCE para. 2 (U.S. 1776) (“We hold these truths to be self-evident, that all men . . . are endowed by their Creator with certain unalienable Rights, that among these are Life, Liberty and the pursuit of Happiness. That to secure these rights, Governments are instituted among Men”); CREED OF THE UNITED STATES COAST GUARDSMAN, <http://www.uscg.mil/hq/cg3/cg3pcx/corevalues.asp> (“I shall sell life dearly to an enemy of my country, but give it freely to rescue those in peril.”).

¹⁹ Rob Huebert, *United States Arctic Policy: The Reluctant Arctic Power*, 2 SCH. OF PUB. POL’Y BRIEFING PAPERS, May 2009, at 2; see also James Kraska, *International Security and International Law in the Northwest Passage*, 42 VAND. J. TRANSNAT’L L. 1109, 1116 (2009).

²⁰ Nunez, *supra* note 11; UNITED STATES COAST GUARD, ARCTIC STRATEGY, *supra* note 10, at 14–16; Bert, *supra* note 11 (“In Alaska, it could take days or weeks to get the right people and resources on scene. The nearest major port is in the Aleutian Islands, thirteen hundred miles from Point Barrow, and response aircraft are more than one thousand miles south in Kodiak, blocked by a mountain range and hazardous flying conditions. The Arctic shores lack infrastructure to launch any type of disaster response, or to support the growing commercial development in the region.”); Jerry Beilinson, *What if a Cruise Ship Wrecked in Alaska?*, POPULAR MECHANICS (Jan. 25, 2012), <http://www.popularmechanics.com/technology/engineering/extreme-machines/what-if-a-cruise-ship-wrecked-in-alaska-6645471>. See also THE PEW ENV’T GROUP, POLICY RECOMMENDATIONS: OIL SPILL PREVENTION AND RESPONSE IN THE U.S. ARCTIC OCEAN 12–13 (2010), <http://www.arctic-report.net/wp-content/uploads/2012/02/PEW-Oil-Spill-Prevention-and-Response-in-the-US-Arctic-Ocean.pdf>.

²¹ Adam Shaw, *The Big Chill*, 70 COAST GUARD PROCEEDINGS 2:26 (2013), http://www.uscg.mil/proceedings/archive/2013/Vol70_No2_Sum2013.pdf. See generally UNITED STATES COAST GUARD, ARCTIC STRATEGY, *supra* note 10, at 20–21; Bert, *supra* note 11 (“In Alaska, it could take

days or weeks to get the right people and resources on scene. The nearest major port is in the Aleutian Islands, thirteen hundred miles from Point Barrow, and response aircraft are more than one thousand miles south in Kodiak, blocked by a mountain range and hazardous flying conditions. The Arctic shores lack infrastructure to launch any type of disaster response, or to support the growing commercial development in the region.”).

²² See Beilinson, *supra* note 20; Bert, *supra* note 11 (“In the lower forty-eight states, response time to an oil spill or capsized vessel is measured in hours. In Alaska, it could take days or weeks to get the right people and resources on scene. The nearest major port is in the Aleutian Islands, thirteen hundred miles from Point Barrow, and response aircraft are more than one

subsistence based.²³ Furthermore, vessel traffic has generally continued to intensify due to decreases in multi-year ice²⁴ that has encouraged additional shipping traffic, adventure cruises, natural resource exploration, and research activity.²⁵

Vessel traffic through the Bering Strait, the unofficial gateway for the Arctic, more than doubled from 220 transits in 2008 to more than 480 in 2012, and then dipped to approximately 440 and 340 in 2013 and 2014, respectively.²⁶ In addition, vessel traffic along the Northern Sea Route (NSR) has generally been increasing, with approximately 4 vessels sailing the route in 2010, increasing to 34 in 2011, 46 in 2012, and 71 in 2013.²⁷ In 2014, 53 vessels sailed along the NSR.²⁸ In comparison, vessel traffic on the Northwest Passage (NWP) has generally decreased over the past three years, with 31 vessels sailing the route in 2012, 22 in 2013, and approximately 16 in 2014.²⁹

thousand miles south in Kodiak, blocked by a mountain range and hazardous flying conditions. The Arctic shores lack infrastructure to launch any type of disaster response, or to support the growing commercial development in the region.”).

²³ Letter from Rebecca J. Lent, Exec. Director, U.S. Marine Mammal Commission, to Michael S. Roland, Chief, Leasing Section, Bureau of Ocean Energy Management 1, 5 (Sep. 18, 2014). See ALASKA ESKIMO WHALING COMM’N, OUR VILLAGES, http://www.aewc-alaska.com/Our_Whaling_Villages.html; UNITED STATES COAST GUARD, ARCTIC STRATEGY, *supra* note 10, at 16; THE PEW ENV’T GROUP, *supra* note 20, at 7.

²⁴ “Multi-year” ice exists through multiple years and is typically much harder than “first-year” ice that has frozen within the previous year. NAT’L SNOW AND ICE DATA CENTER, MULTI-YEAR ICE, <http://nsidc.org/cryo sphere/seaice/characteristics/multiyear.html>; Peter Wadhams, ARCTIC THEME PAGE, NAT’L OCEANIC AND ATMOSPHERIC ADMIN., HOW DOES ARCTIC SEA ICE FORM AND DECAY? (Jan. 1, 2003), http://www.arctic.noaa.gov/essay_wadhams.html.

²⁵ See Byers and Lalonde, *supra* note 10, at 1141–46 (forecasting increased vessel traffic due to less ice and shorter shipping distances that allow for more shipping traffic, adventure cruises, natural resource activities, etc.); UNITED STATES COAST GUARD, ARCTIC STRATEGY, *supra* note 10, at 5, 7; Keil, *supra* note 10; Insinna, *supra* note 10 (forecasting that decreased ice will increase vessel traffic and thus allow for more activity related to fishing, tourism, natural resource extraction, etc.); Michels, *supra* note 10, at 2.

²⁶ OFFICE OF INTELLIGENCE, SEVENTEENTH DISTRICT, UNITED STATES COAST GUARD, ARCTIC VESSEL ACTIVITY SUMMARY DATA (Jan. 13, 2015) (on file with author); Seth Borenstein, *Coast Guard Proposes Bering Straits Shipping Route*, ASSOCIATED PRESS (Dec. 5, 2014), <http://www.military.com/daily-news/2014/12/05/coast-guard-proposes-bering-straits-shipping-route.html?ESRC=eb.nl>; UNITED STATES COAST GUARD, ARCTIC STRATEGY, *supra* note 10, at 5, 13; U.S. COAST GUARD SEVENTEENTH DISTRICT, NOME MARITIME SYMPOSIUM (Feb. 2013), <https://seagrant.uaf.edu/conferences/2013/bering-strait-maritime/presentations/houck-cg-overview-traffic-spill-response-web.pdf>.

²⁷ ARCTIC VESSEL ACTIVITY SUMMARY DATA, *supra* note 26; NORTHERN SEA ROUTE INFO. OFFICE, NORTHERN SEA ROUTE TRANSIT STATISTICS, http://www.Arctic-lio.com/nsr_transits.

²⁸ ARCTIC VESSEL ACTIVITY SUMMARY DATA, *supra* note 26 (explaining that in 2014 heavy ice conditions on NSR into mid-August, economics, China’s efforts to develop alternate land, and economic sanctions negatively impacted the use of the NSR); NORTHERN SEA ROUTE INFO. OFFICE, *supra* note 27.

²⁹ ARCTIC VESSEL ACTIVITY SUMMARY DATA, *supra* note 26.

Notably, however, 2014 marked the first time that a shipping vessel traversed the NWP without an icebreaker escort.³⁰

The U.S. Government, while citing financial constraints as a roadblock to establishing prevention and response capabilities in the Arctic,³¹ has collected billions of dollars from offshore lease sales alone in the U.S. Arctic, and has secured sizeable royalties for any future petroleum extraction.³² Given the lack of federal funding for efforts in the Arctic, it appears the Federal Government perceives the Arctic as little more than a revenue stream that is undeserving of investment.³³ One thing that petroleum companies,

³⁰ *Id.*

³¹ See Joan M. Bondareff and James B. Ellis II, *Is the U.S. Prepared Legally and Operationally to Protect Its Arctic Interests?*, 3 MAINBRACE 5, 7 (Oct. 2014), <http://www.blankrome.com/siteFiles/Mainbrace-Oct14.pdf> #page=6; Chelsea Todaro, *Congress Declines to Help Coast Guard Fund New Polar Icebreaker*, MILITARY.COM (Sept. 17, 2014), <http://www.military.com/daily-news/2014/09/17/congress-declines-to-help-coast-guard-fund-new-polar-icebreaker.html?ESRC=coastguard.nl>; Christina Munnell, *Congress, Federal Agencies Decline to Help Coast Guard Fund New Polar Icebreaker*, NAT'L DEF. MAG. (Sept. 2014), <http://www.nationaldefensemagazine.org/archive/2014/September/Pages/Congress,FederalAgenciesDeclinetoHelpCoastGuardFundNewPolarIcebreaker.aspx>; O'Rourke, *supra* note 3, at 14–15, 20–23; Yasmin Tadjdeh, *Pressure Builds for New Polar Icebreaker*, NAT'L DEF. MAG. (Feb. 2014), <http://www.nationaldefensemagazine.org/archive/2014/February/Pages/PressureBuildsforNewPolarIcebreaker.aspx>; Stew Magnuson, *Sticker Shock: \$1 Billion for New Icebreaker*, NAT'L DEF. MAG. (June 2013), [http://www.nationaldefensemagazine.org/archive/2013/June/Pages/StickerShock\\$1BillionforNewIcebreaker.aspx](http://www.nationaldefensemagazine.org/archive/2013/June/Pages/StickerShock$1BillionforNewIcebreaker.aspx).

³² Oil and Gas Lease Sale 242, Alaska OCS Region, Beaufort Sea Planning Area, 78 Fed. Reg. 59715-18 (proposed Sep. 12, 2014) (“Since 2005, the federal government has held several OCS lease sales in Alaska, and bonus payments to the federal treasury have exceeded \$3 billion for ten-year leases in the Beaufort and Chukchi Seas.” “While approximately 700 leases netting the federal government billions of dollars have been awarded to companies interested in oil and gas exploration in federal waters offshore Alaska since 2005, federal regulatory obstacles have helped preclude the drilling of even one well to hydrocarbon depth.”); Sue E. Moore et al., *A New Framework for Assessing the Effects of Anthropogenic Sound on Marine Mammals in a Rapidly Changing Arctic*, 62 BIOSCIENCE 289, 289 (Mar. 2012), http://ocr.org/pdfs/papers/2012_new_arctic_noise_assmt_finwk_biosci.pdf (“In 2008, oil companies paid a record \$2.6 billion for leases in the Alaskan Chukchi Sea.”); Bert, *supra* note 11 (“In 2008, the United States collected \$2.6 billion from offshore lease sales in the Beaufort and Chukchi Seas (off Alaska’s north coast), and the royalty tax rate in the region is 19 percent, which would cover operation and maintenance of [a deepwater port and military airbase] facilities down the road.”); U.S. DEP’T OF THE INTERIOR, MINERALS MGMT. SERV. ALASKA OCS REGION, FINAL BID RECAP, (2008), http://www.boem.gov/uploadedFiles/BOEM/About_BOEM/BOEM_Regions/Alaska_Region/Leasing_and_Plans/Leasing/Lease_Sales/Sale_193/RecapSale_193.pdf (“TOTAL AMOUNT EXPOSED \$ 3,389,919,496.00”).

³³ The Federal Government has failed to produce any legitimate plan for implementing safety and security in the U.S. Arctic. Instead, it simply provides very general guidance, omits any specific plans, and omits funding any of the additional general guidance provided. See, e.g., WHITE HOUSE ARCTIC STRATEGY, *supra* note 16, at 6 (“The United States will endeavor to appropriately enhance sea, air, and space capabilities as Arctic conditions change, and to

environmental organizations, and citizens residing in and near the Arctic should agree upon is that the U.S. should be using those public proceeds to establish prevention and response capabilities in the U.S. Arctic region. The U.S. Government has chosen a contradictory path by arguing it has no authority to exercise unilateral jurisdiction in its own Arctic territory, and that it is unable to return some of those funds to the Arctic because they appear to have been put to use in other regions of the U.S.³⁴

The two primary reasons for the U.S. position is a fear that allowing Article 234 to be applied as written would create a precedent for coastal states to assert jurisdiction in EEZ's elsewhere in the world (i.e., non-polar regions), and that jurisdiction could be asserted upon U.S. vessels. These fears are not completely without rationale, but they do lack a legal basis. With respect to coastal states asserting jurisdiction in non-polar regions not specifically included within Article 234, no nation has asserted such authority under Article 234.³⁵ Furthermore, the language of Article 234 limits application specifically to areas within polar regions. With regard to areas where Article 234 is applicable, state vessels are specifically precluded from Article 234, and U.S. merchant vessels are already generally complying with the Article 234 jurisdiction by Russia and Canada.³⁶

The U.S. Government's failure to ensure enforcement and response capabilities in the face of a changing Arctic environment is tantamount to an

promote maritime-related information sharing with international, public, and private sector partners, to support implementation of activities such as the search-and-rescue agreement signed by Arctic states.”).

³⁴ The majority of federal revenue from oil lease sales on the Outer Continental Shelf is placed in the U.S. Department of the Treasury's General Fund, and is not allocated for a specific government fund. See U.S. GOVERNMENT ACCOUNTABILITY OFFICE, A GLOSSARY OF TERMS USED IN THE FEDERAL BUDGET PROCESS (2005), <http://www.gao.gov/new.items/d05734sp.pdf>; U.S. DEPARTMENT OF THE TREASURY, RESOURCE CENTER, FAQ'S: ACCOUNTING & BUDGET, <http://www.treasury.gov/resource-center/faqs/Budget/Pages/us-budget.aspx>; *Leveraging America's Resources as a Revenue Generator and Job Creator*: Hearing Before the S. Comm. On Energy and Nat. Res., 113th Cong. 5–6 (2014) (statement); Statement of Greg Gould, Office of Nat. Res. Revenue, U.S. Dep't of the Interior; Jared Meyer, *Convincing Americans It's Time to Drill on Federal Lands*, REAL CLEAR ENERGY (May 7, 2014), http://www.realclearenergy.org/articles/2014/05/07/how_to_convince_congress_its_time_to_drill_on_federal_lands.html. Given there has been relatively little investment by the U.S. in its Arctic infrastructure and assets, the billions of dollars the U.S. Government obtained from Arctic oil lease sales were apparently allocated for expenses other than Arctic infrastructure.

³⁵ See generally *supra* notes 14–15.

³⁶ United Nations Convention on the Law of the Sea Art. 236, Dec. 10, 1982, 1833 U.N.T.S. 397 (“The provisions of this Convention regarding the protection and preservation of the marine environment do not apply to any warship, naval auxiliary, other vessels or aircraft owned or operated by a State and used, for the time being, only on government non-commercial service.”), http://www.un.org/depts/los/convention_agreements/texts/unclos/closindx.htm; see also Pedrozo, *supra* note 14, at 770–71.

abdication of its sovereign duty. A marine casualty that results in a significant discharge of oil or other pollutants in the U.S. Arctic could have a devastating cascading effect on the environment,³⁷ negatively affecting whale and seal populations, thereby having disastrous impacts on local populations that depend on these animals for their food and livelihood.³⁸ The devastating effects would be compounded as it would take days, or even weeks, for the United States to mount any type of response.³⁹

A change in how the United States interprets Article 234 of UNCLOS could generate fundamental change in how it views and prioritizes its own Arctic interests.⁴⁰ This change will allow the country to empower itself with respect to the Arctic, just like Canada and Russia have done. Notably, Canada and Russia are far from being close allies,⁴¹ yet they consistently interpret Article 234 to provide coastal states with unilateral authority to adopt and enforce legal regimes in areas subject to Article 234 regulation. While the American position generally recognizes the vast majority of UNCLOS as customary international law,⁴² the U.S. interpretation of Article 234 deviates

³⁷ 46 U.S.C. § 6101(a) (2015) defines marine casualties that require mandatory reporting as “(1) death of an individual. (2) serious injury to an individual. (3) material loss of property. (4) material damage affecting the seaworthiness or efficiency of the vessel. (5) significant harm to the environment.”; 46 C.F.R. § 4.03-1(b) (2015) defines “marine casualty or accident” as any “events caused by or involving a vessel and includes, but is not limited to, the following: (1) Any fall overboard, injury, or loss of life of any person. (2) Any occurrence involving a vessel that results in—(i) Grounding; (ii) Stranding; (iii) Foundering; (iv) Flooding; (v) Collision; (vi) Allision; (vii) Explosion; (viii) Fire; (ix) Reduction or loss of a vessel’s electrical power, propulsion, or steering capabilities; (x) Failures or occurrences, regardless of cause, which impair any aspect of a vessel’s operation, components, or cargo; (xi) Any other circumstance that might affect or impair a vessel’s seaworthiness, efficiency, or fitness for service or route; or (xii) Any incident involving significant harm to the environment.”

³⁸ Letter from Rebecca J. Lent, *supra* note 23, at 1, 5, 8; NICHOLAS CUNNINGHAM, OFFSHORE OIL DRILLING IN THE ARCTIC 9 (2012), <https://www.americansecurityproject.org/ASP%20Reports/Ref%200076%20-%20Offshore%20Oil%20Drilling%20in%20the%20Arctic.pdf>.

³⁹ See Nunez, *supra* note 11; UNITED STATES COAST GUARD, ARCTIC STRATEGY, *supra* note 10, at 14–16; Bert, *supra* note 11; Beilinson, *supra* note 20; *see also* THE PEW ENVT. GROUP, *supra* note 20, at 12–13.

⁴⁰ United Nations Convention on the Law of the Sea Art. 234, *supra* note 12.

⁴¹ Kraska, *supra* note 19, at 1116 (Describing “a new ‘cold war’ developing between Russia and Canada. Disputes over competing claims to the continental shelf of the North Pole have unnecessarily ignited a contest of words and wills featuring Moscow and Ottawa as the principle antagonists.” (citing Randy Boswell, *Canada, Russia Play Political Game in Arctic: Experts*, NAT’L POST (Toronto), (Aug. 16, 2009)).

⁴² WHITE HOUSE ARCTIC STRATEGY, *supra* note 16, at 10 (“While the United States is not currently a party to the Convention, we will continue to support and observe principles of established customary international law reflected in the Convention.”); UNITED STATES COAST GUARD, ARCTIC STRATEGY, *supra* note 10, at 14 (“The United States is not a party to the Convention, but accepts and acts in accordance with the provisions of the Convention relating to traditional uses of the oceans—such as navigation and overflight—as reflective of customary international law and practice.”).

from the interpretation of its geographically closest and largest Arctic neighbors.

This discussion regarding the U.S. approach to the Arctic is not simply academic. U.S. interpretation of Article 234 has the potential to affect how the U.S. cares for its Arctic territory and the U.S. citizens residing in and around the Arctic.

B. Importance of the American Arctic

Many U.S. legislators, particularly those from Alaska and the state of Washington, are raising the alarm about the continued decline of U.S. presence and ability to influence Arctic affairs and governance. Nevertheless, these warnings appear to be falling on deaf ears.

Senator Mark Begich, from Alaska, stated that “[i]t’s like they’ve never heard of it. . . . With the Obama administration we’ve had to push back pretty hard to convince them and show them why they need to invest in not only icebreakers, but forward operating bases for the Arctic.”⁴³ Consistent with the Alaskan legislator, Representative Rick Larsen, from Washington, indicated that “[i]t’s no surprise’ that the Russians are investing heavily in the Arctic. ‘They recognize the potential and opportunity there’ The U.S. continues to lag behind []. The Canadians are working on a new navy base and are far ahead of the U.S. when it comes to icebreakers.”⁴⁴

Likewise, Senator Lisa Murkowski, also of Alaska:

While Russia’s investment in military infrastructure is not necessarily a precursor to future hostility, it is more evidence that the United States is not appropriately stepping up its activities in the Arctic and investing in a region where commercial and international activities are increasing . . . I am concerned that we as a nation are setting ourselves up for another ‘Sputnik Moment,’ . . . but this time falling behind more than any other country with even non-Arctic nations like China and India investing in icebreakers and acknowledging the value of the region.⁴⁵

⁴³ David Francis, *The Race for Arctic Oil: Russia vs. U.S.*, THE FISCAL TIMES (Feb. 25, 2014), <http://www.thefiscaltimes.com/Articles/2014/02/25/Race-Arctic-Oil-Advantage-Russia-vs-US> (quoting U.S. Sen. Mark Begich, D-Alaska).

⁴⁴ Koren, *supra* note 1 (quoting U.S. Rep. Rick Larsen, D-Wash.).

⁴⁵ Koren, *supra* note 1 (quoting U.S. Sen. Lisa Murkowski, R-Alaska).

The U.S. is the chair of the Arctic Council⁴⁶ in 2015 and U.S. citizens, particularly those in Alaska, can only hope that it will add some focus and inspiration to the Federal Government's apathetic approach to addressing the needs of its Arctic territory and American citizens residing there. However, some congressional representatives are apparently apprehensive about the ability of the U.S. to affect Arctic policy, even as the chair of the Arctic Council, because the U.S. has failed to demonstrate a sincere interest in establishing a presence or demonstrating a resolve to ensure U.S. Arctic interests are protected. As U.S. Representative Don Young, R-Alaska, stated, "[u]nfortunately, when our nation takes over the chair of the Arctic Council in 2015, we will be leading from behind."⁴⁷

As explained above, this region is home to U.S. citizens.⁴⁸ Additionally, this area is home to wildlife populations that U.S. native populations rely upon for food.⁴⁹ The dearth of prevention and response capabilities in the Arctic means a vastly increased response time to any pollution event or emergent situation.⁵⁰ Consequently, in a region that hosts numerous endangered or threatened species, there is a significant chance for harm to the ecosystem if a significant pollution discharge occurs, especially in light of the lack of prevention and response capabilities.⁵¹

C. Filling the Arctic Breach?

In the face of the U.S. Government's overall indifference to the Arctic, the U.S. Coast Guard has taken the lead in performing many Arctic missions

⁴⁶ As per the U.S. Department of State, "[t]he Arctic Council is the preeminent intergovernmental forum for addressing issues related to the Arctic Region. The members of the Arctic Council include the eight countries with territory above the Arctic Circle (Canada, Denmark, Finland, Iceland, Norway, Sweden, the Russian Federation, and the United States)." U.S. DEPT. OF STATE, <http://www.state.gov/e/oes/ocns/opa/arc/ac/>.

⁴⁷ Koren, *supra* note 1.

⁴⁸ See Discussion *supra*, at Sections I.A. and II.A.

⁴⁹ See ALASKA ESKIMO WHALING COMM'N, *supra* note 23; Byers and Lalonde, *supra* note 10, at 1178–79.

⁵⁰ See Michael Byers, *Canada's Arctic Nightmare Just Came True: The Northwest Passage is Commercial*, THE GLOBE AND MAIL (Sept. 20, 2013), <http://www.theglobeandmail.com/globe-debate/canadas-Arctic-nightmare-just-came-true-the-northwest-passage-is-commercial/article14432440/> (crashed Canadian Coast Guard helicopter results in death of crew and sinking of aircraft because icebreaker is unable to respond quickly enough); Bert, *supra* note 11 ("In the lower forty-eight states, response time to an oil spill or capsized vessel is measured in hours. In Alaska, it could take days or weeks to get the right people and resources on scene. The nearest major port is in the Aleutian Islands, thirteen hundred miles from Point Barrow, and response aircraft are more than one thousand miles south in Kodiak, blocked by a mountain range and hazardous flying conditions. The Arctic shores lack infrastructure to launch any type of disaster response, or to support the growing commercial development in the region.").

⁵¹ Letter from Rebecca J. Lent, *supra* note 23, at 8.

and attempting to provide some degree of Arctic domain awareness.⁵² As succinctly stated by the Vice Commandant of the U.S. Coast Guard, “[w]here there are humans on the water, there is a demand for us to keep them safe and secure and ensure environmental responsibility.”⁵³ The U.S. Coast Guard, as a military service, law enforcement agency, and regulatory agency, executes the following statutory missions throughout the U.S. and around the world: (1) ports, waterways, and coastal security; (2) drug interdiction; (3) aids to navigation; (4) search and rescue; (5) living marine resources; (6) marine safety; (7) defense readiness; (8) migrant interdiction; (9) marine environmental protection; (10) ice operations; and (11) other law enforcement missions.⁵⁴

While all of these duties may be performed with varying degrees of effort based upon the needs at different locations throughout the United States and globally, when it comes to the U.S. homeland, only the Arctic portions of the nation experience a severe dearth of all of these government services.⁵⁵

⁵² UNITED STATES COAST GUARD, ARCTIC STRATEGY, *supra* note 10, at 21–26; *see also* BONDAREFF AND ELLIS, *supra* note 31; Tadjdeh, *supra* note 31; Magnuson, *supra* note 31; Brian Slattery and Luke Coffey, *Strengthen the Coast Guard’s Presence in the Arctic*, THE HERITAGE FOUND. (Apr. 2, 2013), http://www.heritage.org/research/reports/2013/04/strengthen-the-us-coast-guard-in-the-Arctic?mb=true#_ftn5. *See generally* U.S. COAST GUARD, THE ARCTIC: EMERGING FRONTIER, NEW OPPORTUNITIES, 70 COAST GUARD PROCEEDINGS (2013), http://www.uscg.mil/proceedings/archive/2013/Vol70_No2_Sum2013.pdf; James Kraska, *Arctic Strategy and Military Security*, in CHANGES IN THE ARCTIC ENVIRONMENT AND THE LAW OF THE SEA 251, 278–79 (Myron H. Nordquist et al. ed. 2010).

⁵³ Jodie Knox, *Coast Guard outlines 2014 Arctic priorities*, COAST GUARD MARITIME COMMONS: THE COAST GUARD BLOG FOR MARITIME PROFESSIONALS (June 18, 2014), <http://mariners.coastguard.dodlive.mil/2014/06/18/6182014-coast-guard-outlines-2014-Arctic-priorities/>; *see also* Jonathan Spaner, *The Arctic Region*, 70 COAST GUARD PROCEEDINGS 2:6 (2013), http://www.uscg.mil/proceedings/archive/2013/Vol70_No2_Sum2013.pdf.

⁵⁴ Memorandum from Anne L. Richards, Assistant Inspector General for Audits, Office of the Inspector General, Department of Homeland Security, to Rear Admiral Stephen P. Metruck, Assistant Commandant for Resources and Chief Financial Officer, United States Coast Guard (Sept. 17, 2013), http://www.oig.dhs.gov/assets/Mgmt/2013/OIG_13-122_Sep13.pdf; *see also* *Missions*, UNITED STATES COAST GUARD, <http://www.uscg.mil/top/missions/>.

⁵⁵ BONDAREFF AND ELLIS, *supra* note 31, at 5, 7 (“The U.S. is not prepared to protect its interests in the Arctic over the next decade. . . . The U.S.’s strategic and economic interests in the Arctic are too great for the nation to continue to fail to come to grips with both the legal and operational requirements of protecting those interests, and we will have squandered our opportunity to do so if Congress and the Administration do not act soon.”); Beilinson, *supra* note 20; Bert, *supra* note 11 (“In the lower forty-eight states, response time to an oil spill or capsized vessel is measured in hours. In Alaska, it could take days or weeks to get the right people and resources on scene. The nearest major port is in the Aleutian Islands, thirteen hundred miles from Point Barrow, and response aircraft are more than one thousand miles south in Kodiak, blocked by a mountain range and hazardous flying conditions. The Arctic shores lack infrastructure to launch any type of disaster response, or to support the growing

The lack of services is primarily due to a lack of assets and personnel stationed in the Arctic.⁵⁶ Since the U.S. Coast Guard is the federal agency primarily tasked with performing both domestic and international ice-breaking operations for the United States,⁵⁷ it stands to reason that it would be at the forefront of any effort to establish safety and security in the U.S. Arctic and efforts to obtain adequate resources and assets to perform ice operations in the Arctic.

With respect to assets, the well-known threats presented by polar ice require vessels operating in this environment to have hulls that can break through ice in order to offer safe transit and support to people living and working here.⁵⁸ Financial considerations are cited as the primary reason the

commercial development in the region.”); *see also* UNITED STATES COAST GUARD, ARCTIC STRATEGY, *supra* note 10, at 13–14; Kraska, *supra* note 52, at 279 (“In order to maintain security in the Arctic, the Coast Guard is grossly under-resourced. Coast Guard force structure is insufficient to confront all of the tasks in its portfolio. Lawmakers should expand the Coast Guard, and in particular build a fleet of icebreakers and ice-strengthened patrol craft.”).

⁵⁶ *See, e.g.*, Yereth Rosen, *Icebreaker Fleet Will Need Makeover by About 2020*, *Coast Guard Says*, ALASKA DISPATCH NEWS (Sept. 18, 2014), <http://www.military.com/daily-news/2014/09/18/icebreaker-fleet-will-need-makeover-by-about-2020-coast-guard-s.html?ESRC=coastguard.nl> (“The U.S. icebreaker fleet is meager compared to those in other Arctic countries . . . said [RADM Daniel Abel, Commander, U.S. Coast Guard Seventeenth District, which includes all of Alaska and the U.S. Arctic]. Russia has 37 icebreakers, Sweden and Finland each have seven and Canada has six and is acquiring a seventh, he said.”); Bert, *supra* note 11 (“The U.S. government is further hindered by the lack of ships, aircraft, and infrastructure to enforce sovereignty, criminal laws, and to protect people and the marine environment from catastrophic incidents.”); Duignan, *supra* note 4, at 57–59; Ahlers, *supra* note 4.

⁵⁷ Primary Duties (U.S. Coast Guard), 14 U.S.C. § 2 (2014) (“The Coast Guard *shall* . . . develop, establish, maintain, and operate, with due regard to the requirements of national defense . . . icebreaking facilities, and rescue facilities.”) (emphasis added); Coordination and review of budget requests; Office of Science and Technology Policy; Office of Management and Budget, 15 U.S.C. § 4109(b)(2) (2014) (“The Office of Management and Budget *shall* seek to facilitate planning for the design, procurement, maintenance, deployment, and operations of icebreakers needed to provide a platform for Arctic research by allocating all funds necessary to support icebreaking operations, except for recurring incremental costs associated with specific projects, to the Coast Guard.”) (emphasis added); Federal agency cooperation, 16 U.S.C. § 2441(c) (2014) (“Icebreaking. The Department of Homeland Security *shall* facilitate planning for the design, procurement, maintenance, deployment, and operation of icebreakers needed to provide a platform for Antarctic research. All funds necessary to support icebreaking operations, except for recurring incremental costs associated with specific projects, shall be allocated to the United States Coast Guard.”) (emphasis added); Revised Memorandum of Agreement Between the Department of the Navy and the Department of the Treasury on the Operation of Icebreakers (July 22, 1965), <https://www.uscg.mil/history/docs/1965IcebreakerMOUUSCGUSN.pdf> (“The U.S. Coast Guard *will* maintain and operate all U.S. icebreakers.”) (emphasis added).

⁵⁸ *See generally* Int’l Maritime Org. [IMO], Res. A.1024(26), *Guidelines for Ships Operating in Polar Waters* (Dec. 2, 2009), [http://www.imo.org/blast/blastDataHelper.asp?data_id=29985&filename=A1024\(26\).pdf](http://www.imo.org/blast/blastDataHelper.asp?data_id=29985&filename=A1024(26).pdf) (The International Maritime Organization (IMO) reported having adopted a mandatory

U.S. Government is unable to fund an Arctic deepwater port or icebreakers that could provide the requisite services, thereby creating what has been described as “an unfunded requirement” for the U.S. Coast Guard.⁵⁹ However, international law may provide a basis for recouping a small portion of the costs spent for services rendered to those plying through the U.S. Arctic waters.⁶⁰ The combination of any fees charged for services rendered, the billions of dollars from offshore oil lease sales, and any royalties from future extraction can provide a significant opportunity to offset the costs of establishing infrastructure and obtaining assets needed in the U.S. Arctic.⁶¹ As it stands, however, the U.S. Coast Guard is not equipped to meet all of its statutory missions in the Arctic and is valiantly fighting to fill the gaps created by its unfunded mandates.

International Code for Ships Operating in Polar Waters (Polar Code) in November 2014. The IMO indicates that the “expected date of entry into force” is Jan. 1, 2017. This paper will omit an in-depth discussion of the Polar Code because it is outside the scope of this review. *See* Int’l Maritime Org. [IMO], *Shipping in Polar Waters*, <http://www.imo.org/MediaCentre/HotTopics/polar/Pages/default.aspx>; NAVIGATING THE NORTHERN SEA ROUTE ADVISORY, AM. BUREAU OF SHIPPING, at 4–22 (Jan. 30, 2014), http://ww2.eagle.org/content/dam/eagle/publications/2014/NSR_Advisory.pdf; Bartenstein, *supra* note 14, at 22–23.

⁵⁹ *See e.g.*, Bondareef and Ellis, *supra* note 31, at 6–7; O’Rourke, *supra* note 3, at 14–15; Todaro, *supra* note 31; Munnell, *supra* note 31; Tadjdeh, *supra* note 31; Magnuson, *supra* note 31; WHITE HOUSE ARCTIC STRATEGY, *supra* note 16.

⁶⁰ *See* United Nations Convention on the Law of the Sea Art.’s 26, 234, Dec. 10, 1982, 1833 U.N.T.S. 397, http://www.un.org/depts/los/convention_agreements/texts/unclos/closindx.htm.

⁶¹ Interestingly, the U.S. Navy may find funding from outside its own budget to construct the replacement submarines (SSBN-X) for the current Ohio-class ballistic missile submarines. The National Defense Authorization Act of 2015 created a National Sea Based Deterrence Fund that will allow unspent funds to be redirected to this account for the acquisition of vessels carrying operational intercontinental ballistic missiles. The premise is that the new class of ballistic missile submarines will be national assets that simply happen to be in the care of the U.S. Navy, and that the cost of building the replacement class of submarines should not be taken from the Navy’s shipbuilding budget because it would “rob” the Navy of its ability to build other ships. Notwithstanding that it is unlikely an icebreaker will be armed with intercontinental ballistic missiles, the basic factors used to provide funding from outside the Navy’s budget would be applicable to the construction of an icebreaker as well. Given that the U.S. Navy, U.S. Coast Guard, and National Science Foundation are all on record indicating that they need additional icebreakers for national missions, these multi-mission platforms can easily fit the description of a national asset that simply happen to be in the care of the Coast Guard. At \$1 billion per icebreaker, the funding for acquisition of a new icebreaker should also not come from the Coast Guard’s \$1 billion acquisition budget because it would swallow the service’s entire acquisition budget, effectively preventing the Coast Guard from constructing any other ships. *See* Hugh Lessig, *Funding New Submarines Outside the Navy?*, DAILY PRESS (Jan. 11, 2015), <http://www.dailypress.com/news/military/dp-nws-boomer-budget-20150111-story.html#page=1>; Carl Levin and Howard P. “Buck” McKeon, National Defense Authorization Act for Fiscal Year 2015, Pub. L. No. 113-291, § 1022 (2014); U.S. COAST GUARD, U.S. COAST GUARD FACT SHEET, FISCAL YEAR 2015 PRESIDENT’S BUDGET (Mar. 7, 2014), http://www.uscg.mil/budget/docs/FY2015_Budget_Fact_Sheet.pdf.

III. Analysis

A. Article 234

The EEZ is an area measured from the baseline, or mean low-tide mark, seaward to 200 nautical miles.⁶² The text of Article 234 provides for unilateral governance by the coastal state in the EEZ in order to protect the environment from major harm.⁶³ Both Canada and Russia have interpreted and applied Article 234 in this manner.⁶⁴ However, there are seven specific

⁶² The Exclusive Economic Zone is defined as “an area beyond and adjacent to the territorial sea, subject to the specific legal regime established in this Part, under which the rights and jurisdiction of the coastal State and the rights and freedoms of other States are governed by the relevant provisions of this Convention.” United Nations Convention on the Law of the Sea Art. 55, Dec. 10, 1982, 1833 U.N.T.S. 397. It is further defined as an area that “shall not extend beyond 200 nautical miles from the baselines from which the breadth of the territorial sea is measured.” *Id.* Art. 57. “[S]ubject to the relevant provisions of [UNCLOS],” freedom of navigation in the EEZ is secured to all nations. *Id.* Art. 58.

⁶³ The term “within the limits of the exclusive economic zone” has been the object of a great amount of review and commentary due to the possibility of different, reasonable interpretations. The prevailing view is based on the premise that it would be nonsensical for Article 234 to grant a coastal state greater authority with regard to its EEZ than its territorial seas. Accordingly, in the limited context of Article 234, it is most logical to interpret the term “within the limits of the exclusive economic zone” to include all waters landward of the outer limit of the EEZ. *See* Bartenstein, *supra* note 14, at 28–30 (citing Donat Pharand, *The Arctic Waters and the Northwest Passage: A Final Revisit*, 38 OCEAN DEV. & INT’L L. 3, 47 (2007); R. Douglas Brubaker, *Straits of the Russian Arctic*, 32 OCEAN DEV. & INT’L L. 263 (2001); NORDQUIST ET AL., *supra* note 14, at 396 (“[C]oastal States may enact their own rules and regulations applicable within the limits of the exclusive economic zone. They remain bound by international rules and standards as a minimum, but may impose more stringent requirements unilaterally.”); Leonard Legault, *Protecting the Marine Environment*, in CANADA AND THE NEW INTERNATIONALISM, 99, 107 (John Holmes & John Kirton eds., 1988); Bernard Oxman, *Legal Regimes of the Arctic*, 40 AMER. SOC. INT’L L. PROC. 315, 333–34 (1988); Donald M. McRae, *The Negotiation of Article 234*, in POLITICS OF THE NORTHWEST PASSAGE, 98, 108–09 (F. Griffiths ed., 1987); Donald M. McRae & D. J. Goundrey, *Environmental Jurisdiction in Arctic Waters: The Extent of Article 234*, 16 U.B.C. L. REV. 197, 221 (1982)); *see also* BRUBAKER, *supra* note 14, at 56–58.

⁶⁴ *See, e.g.*, Arctic Waters Pollution Prevention Act, R.S.C. 1985, c. A-12 (Can.); Northern Canada Vessel Traffic Services Zone Regulations (NORDREG), SOR/2010-127 (Can.); REGULATIONS FOR NAVIGATION ON THE SEAWAYS OF THE NORTHERN SEA ROUTE, approved Sept. 14, 1990 (Russ.) (hereinafter “REGULATIONS FOR THE NORTHERN SEA ROUTE”), http://www.Arctic-lho.com/docs/nsr/legislation/Rules_of_navigation_on_the_seaways_of_the_Northern_Sea_Route.pdf; ON APPROVAL OF THE TARIFF RATES FOR PROVISION OF ICEBREAKING PILOTAGE SERVICES PROVIDED BY THE FSUE «ATOMFLOT» ON THE NORTHERN SEA ROUTE WATER AREA (Russ.), March 4, 2014 (hereinafter “ICEBREAKING PILOTAGE ON THE NORTHERN SEA ROUTE”), http://www.Arctic-lho.com/docs/nsr/tariffs/NSR_Tariff_Order.pdf; *see also* BRUBAKER, *supra* note 14, at 79–80; *see generally* Pedrozo, *supra* note 14, at 769; Alexander S. Skaridov, *Northern Sea Route: Legal Issues and Current Transportation Practice*, in CHANGES IN THE ARCTIC ENVIRONMENT AND THE LAW OF THE SEA 283, 295 (Myron H. Nordquist et al. eds., 2010); Franckx, *supra* note 14, at 420–21; Bartenstein, *supra* note 14, at 38–46; Rasputnik, *supra* note 14.

requirements that must be satisfied before a legal regime can be adopted and enforced pursuant to Article 234:

1. The legal regime must be non-discriminatory;
2. The legal regime must be focused on the prevention, reduction, and control of marine pollution from vessels;
3. The area regulated must be covered by ice for more than six months of the year;
4. The ice must present obstructions or exceptional hazards to navigation;
5. The legal regime must apply to an area where pollution could cause major harm to or irreversible disturbance to the environment;
6. The legal regime must have due regard for navigation; and
7. The legal regime must be based on the best available scientific evidence.

These requirements make it quite clear that Article 234 is only applicable under very specific and very limited circumstances.

Additionally, Article 234 was placed in its own section⁶⁵ within UNCLOS, indicating that it functions in concert with other sections of UNCLOS, such as those sections that institute both innocent passage⁶⁶ and transit passage regimes,⁶⁷ so long as Article 234 is applicable.⁶⁸ Consequently, it is axiomatic that the application and interpretation of Article 234 must be consistent with other applicable Articles. In addition to examining the plain language of Article 234, any apparent contradiction between Articles should be assessed using *lex specialis derogate legi generali*: the rule of legal interpretation that when two legal provisions appear applicable, but contrary to one another, the more specific legal provision will supersede the more general.⁶⁹

An additional point of consideration is how the international community, including U.S. flagged commercial vessels, has responded to the

⁶⁵ See United Nations Convention on the Law of the Sea Art. 234, *supra* note 12.

⁶⁶ *Id.* Art. 24.

⁶⁷ *Id.* Art. 38 (“Transit passage means . . . freedom of navigation and overflight solely for the purpose of continuous and expeditious transit of the strait between one part of the high seas or an exclusive economic zone and another part of the high seas or an exclusive economic zone.”).

⁶⁸ See Donald McRae, *Arctic Sovereignty? What is at Stake?*, 64 BEHIND THE HEADLINES 1, 18 (2007); BRUBAKER, *supra* note 14, at 134–36.

⁶⁹ *D. Ginsberg & Sons, Inc. v. Popkin*, 285 U.S. 204, 208 (1932) (citing *Kepner v. United States*, 195 U.S. 100, 125 (1904); *United States v. Chase*, 135 U.S. 255, 260 (1890); *In re Hassenbusch*, 108 F. 35, 38 (6th Cir. 1901); *United States v. Peters*, 166 F. 613, 615 (E.D. Ill. 1909)).

implementation of the unilateral authority exercised by both Canada and Russia pursuant to Article 234.⁷⁰ In general, the seafaring public has substantially complied with Canadian and Russian requirements under Article 234.⁷¹ Consequently, the plain language of Article 234 and international *status quo* both establish that Article 234 provides coastal states with the authority to unilaterally exercise jurisdiction pursuant to Article 234 when all of the conditions specified within that Article are satisfied.⁷²

B. U.S. Position on Article 234

The U.S. position with respect to Article 234, which has been described as inconsistent and ambiguous,⁷³ generally asserts that Article 234 is wholly subservient to the principle of freedom of navigation.⁷⁴ U.S. commentators recognize that Article 234 provides coastal states with authority to implement and enforce regulatory regimes within the very limited parameters set forth in the text of the Article.⁷⁵ However, some commentators suggest that the coastal state can only do so under the permission or auspices of multilateral action by the International Maritime Organization (IMO).⁷⁶ Additionally, the United States asserts that a coastal state's Article 234 regulatory regime cannot include the possibility of denying passage through its Arctic EEZ, territorial seas, or an international strait, even if a non-state vessel is non-compliant with the coastal state's requirements, because doing so would violate the rights to freedom of navigation, innocent passage, and the

⁷⁰ See, e.g., Int'l Maritime Org. [IMO] Res. A.1024(26), *Guidelines for Ships Operating in Polar Waters*, *supra* note 58; NAVIGATING THE NORTHERN SEA ROUTE ADVISORY, *supra* note 58, at 4–22.

⁷¹ BRUBAKER, *supra* note 14, at 136; see, e.g., NAVIGATING THE NORTHERN SEA ROUTE ADVISORY, *supra* note 58; Rob Huebert, *Article 234 and Marine Pollution in the Arctic*, in *THE LAW OF THE SEA AND POLAR MARITIME DELIMITATION AND JURISDICTION* 249, 263 (Alex Elferink & Donald Rothwell eds., 2001).

⁷² BRUBAKER, *supra* note 14, at 105, 136; see also NORDQUIST ET AL., *supra* note 14, at 398.

⁷³ See BRUBAKER, *supra* note 14, at 53, 61–65, 109 (providing a review of apparent contradictions between U.S. legislation and official U.S. declarations); see also *supra* note 71.

⁷⁴ See Diplomatic Note from the Embassy of the United States of America to the Department of Foreign Affairs and International Trade of Canada, *supra* note 15, Appendix A; Letter from Eric Benjaminson, *supra* note 15, Appendix B; *but cf.* Moore, *supra* note 14, at 22–23 (“[Canada] now had the ability to set environmental standards uniquely for all commercial vessels going through those ice-covered areas, and, yes, there was an important obligation to protect navigation, and we included navigation in it, but obviously this was to be taken along with the power of the coastal State to set vessel source pollution standards for vessels not entitled to sovereign immunity . . . This is an extraordinary area of otherwise coastal State control as a result of Article 234.”); U.S. DEPT. OF STATE, UNITED STATES RESPONSES TO EXCESSIVE MARITIME CLAIMS, LIMITS IN THE SEAS, NO. 112, 73 n. 114 (1992).

⁷⁵ Pedrozo, *supra* note 14, at 769; Kraska, *supra* note 52, at 274; see also Diplomatic Note from the United States to Canada, *supra* note 15, Appendix A; Letter from Eric Benjaminson, *supra* note 15, Appendix B.

⁷⁶ See, e.g., Pedrozo, *supra* note 14, at 769–70.

transit passage regime,⁷⁷ respectively.⁷⁸ Upon review, however, these latter two averments suffer from significant practical and interpretive shortcomings.

The U.S. position essentially posits an invincible international straits regime that would eviscerate any meaningful interpretation of Article 234. The practical effect under the U.S. position is that coastal states cannot interfere with a vessel's transit, but are instead required to undertake responsive action to clean up any environmental damage, attempt to recoup costs, and impose sanctions after the events occur.⁷⁹

In contrast, under the Canadian and Russian position, coastal states *could* take preemptive action pursuant to Article 234, by precluding non-state vessels that pose a threat to the environment from transiting through waters regulated pursuant to Article 234. It is almost certain that any U.S. citizen on the Alaskan coast would prefer something more proactive than hoping to adequately respond to the environmental damage *after* their food supply and livelihood have been destroyed. While this illustration might appear "unbelievable," the EXXON VALDEZ incident indicates it is not outside of the realm of possibility.⁸⁰ As will be discussed in greater detail below, only in cases of severe violations, such as instances where the violations are "almost unbelievable,"⁸¹ and threatened to cause "major harm to or irreversible disturbance of the ecological balance"⁸² could freedom of navigation be hampered pursuant to "non-discriminatory laws and regulations"⁸³ adopted and enforced pursuant to Article 234. Furthermore, these preclusions could only be enforced with respect to non-state vessels.⁸⁴

⁷⁷ "[S]ubject to the relevant provisions of [UNCLOS], freedom of navigation in the EEZ is secured to all nations. United Nations Convention on the Law of the Sea Art. 58; "Subject to this Convention, ships of all States, whether coastal or land-locked, enjoy the right of innocent passage through the territorial sea." *Id.* Art. 17; and "Transit passage means . . . freedom of navigation and overflight solely for the purpose of continuous and expeditious transit of the strait between one part of the high seas or an exclusive economic zone and another part of the high seas or an exclusive economic zone." *Id.* Art. 38.

⁷⁸ *See, e.g., id.*; *see also* Diplomatic Note from the United States to Canada, *supra* note 15, Appendix A; Letter from Eric Benjaminson, *supra* note 15, Appendix B.

⁷⁹ This is an altogether questionable strategy at best given the grave inadequacy of U.S. response capabilities in the Arctic. *See* Discussion *supra*, at Sections I.A. and II.A.

⁸⁰ David Lauter, *Legally Drunk Ship's Captain Fired by Exxon*, LOS ANGELES TIMES (Mar. 31, 1989), http://articles.latimes.com/1989-03-31/news/mn-704_1_exxon-valdez ("The National Transportation Safety Board reported Thursday that the captain of the Exxon Valdez was legally drunk when he was tested some 10 hours after his tanker hit a reef last week, causing the worst oil spill in U.S. history." "Coast Guard Commandant Paul Yost called it 'almost unbelievable' that the Exxon Valdez had strayed from a 10-mile-wide shipping channel to crash into Bligh Reef. 'This was not a treacherous area,' he said. . . . 'your children could drive a tanker through it.'").

⁸¹ *Id.*

⁸² United Nations Convention on the Law of the Sea Art. 234, *supra* note 12.

⁸³ *Id.*

⁸⁴ *See supra* note 36; *see also* McRae, *supra* note 68, at 17–18.

Beyond the problems of practicality, interpreting Article 234 such that it has no impact on freedom of navigation regimes is problematic because it renders Article 234 nonsensical by failing to account for the plain language of the Article itself, together with the rest of UNCLOS. For instance, Article 24, innocent passage, is subject to exceptions implemented “[i]n accordance with this Convention,”⁸⁵ which, by its very own language, includes the specific exceptions provided in Article 234. Furthermore, the language of Article 38, which states “[t]ransit passage means the exercise in accordance with this Part,”⁸⁶ makes clear that it is subject to Article 34, Legal Status of Waters Forming Straits Used for International Navigation.⁸⁷ Article 34 states that Part III – which, as established, includes Article 38 – “shall not in other respects affect the ... exercise by the States bordering the straits of their sovereignty or jurisdiction over such waters and their air space, bed and subsoil.”⁸⁸ This provides further evidence that the transit passage regime should be interpreted in concert with Article 234.

However, Article 34 also states that “[t]he sovereignty or jurisdiction of the States bordering the straits is exercised subject to this Part and to other rules of international law.”⁸⁹ This latter clause is implicitly restrictive and provides the basis for an alternative argument; one that supports the U.S. position that transit passage is an “invincible” right. However, this position requires interpreting the phrase “coastal states have the right to adopt and enforce” in Article 234 to either be devoid of the common meaning of the words constituting the phrase, or to have no substantive effect whatsoever. In short, such an interpretation means Article 234 has no functional application, which seems unlikely since this Article was adopted simultaneous with the rest of the competing Articles comprised in UNCLOS.

The U.S. position fails to recognize that Article 234 carves out a very narrow and very specific exception to the generally applicable principles of freedom of navigation in the EEZ, innocent passage, and transit passage based upon the unique dangers presented in areas where ice covers water for a majority of the year. The plain language and specific, limited application of Article 234 weigh in favor of the Canadian and Russian position.

Finally, it is worth noting that the U.S. interpretation of Article 234 constrains its own ability to assert its sovereign authority and inhibits the U.S. Government’s ability to execute its own responsibilities to its citizens in and near the Arctic. While maintaining and justifying a *laissez faire* approach to

⁸⁵ United Nations Convention on the Law of the Sea Art. 24(1), Dec. 10, 1982, 1833 U.N.T.S. 397, http://www.un.org/depts/los/convention_agreements/texts/unclos/unclos_e.pdf.

⁸⁶ *Id.* Art. 38(2).

⁸⁷ *Id.* Art. 34.

⁸⁸ *Id.* Art. 34(1).

⁸⁹ *Id.* Art. 34(2).

the Arctic, the U.S. allows the elements and other nations to dictate development in this region.

C. Canadian Interpretation and Leadership

Canada implemented the current version of its Arctic Waters Pollution Prevention Act (AWPPA) pursuant to the authority provided by Article 234.⁹⁰ However, the original version of AWPPA was adopted in 1970, prior to the implementation of UNCLOS, which included Article 234, in 1982.⁹¹ The events that precipitated Canada's adoption of AWPPA in 1970 are helpful to understand the subsequent adoption of Article 234 in 1982 because the motivation for adopting both AWPPA in 1970 and Article 234 in 1982 stem from the same events.

In 1969, a U.S. flagged oil tanker, MANHATTAN, made a transit through the NWP, although the transit was made without petroleum products.⁹² MANHATTAN repeatedly got stuck in ice and required the assistance of U.S. and Canadian icebreakers in order to be set free from the ice.⁹³ At the end of the transit, it was discovered that MANHATTAN had sustained serious hull damage.⁹⁴ Needless to say, the government and citizenry of Canada were alarmed at the prospect of having oil tankers plowing through ice-laden waters on its coastline.⁹⁵ Consequently, Canada adopted AWPPA to place restrictions on vessels operating along its Arctic coast.⁹⁶ At the time, there were legitimate questions regarding the legality of AWPPA, and even Canada itself appeared to question the legal basis of its

⁹⁰ Arctic Waters Pollution Prevention Act, R.S.C. 1985, c. A-12 (Can.); *see also* Canadian Coast Guard, Vessel Traffic Reporting Arctic Canada Traffic Zone (NORDREG) (*last modified* June 24, 2013), http://www.ccg-gcc.gc.ca/eng/MCTS/Vtr_Arctic_Canada ("The Northern Canada Vessel Traffic Services Zone Regulations formally establish the Northern Canada Vessel Traffic Services (NORDREG) Zone and, consistent with international law regarding ice-covered areas, implement the requirements for vessels to report information prior to entering, while operating within and upon exiting Canada's northern waters.").

⁹¹ Arctic Waters Pollution Prevention Act, S.C. 1970, c. 47 (currently R.S.C. 1985, c. A-12) (Can.); *see also* BRUBAKER, *supra* note 14, at 44; Bartenstein, *supra* note 14, at 26.

⁹² Bartenstein, *supra* note 14, at 38–46; ERIK FRANCKX, MARITIME CLAIMS IN THE ARCTIC, CANADIAN AND RUSSIAN PERSPECTIVES 75–76 (1993).

⁹³ Bartenstein, *supra* note 14, at 25; FRANCKX, *supra* note 92, at 76 ("And as it turned out, these icebreaker escorts proved not to be without reason! The Manhattan [sic] became stuck in the ice not less than 25 times during these voyages requiring icebreaker assistance to set her free.").

⁹⁴ Bartenstein, *supra* note 14, at 25; FRANCKX, *supra* note 92, at 76.

⁹⁵ Bartenstein, *supra* note 14, at 25; FRANCKX, *supra* note 92, at 76–77.

⁹⁶ *See* Arctic Waters Pollution Prevention Act, S.C. 1970, c. 47 (currently R.S.C. 1985, c. A-12).; *see also* Suzanne Lalonde, *The Arctic Exception and the IMO's PSSA Mechanism: Assessing their Value as Sources of Protection for the Northwest Passage*, 28 INT'L J. OF MARINE AND COASTAL L. 401, 403 (2013); Bartenstein, *supra* note 14, at 26; FRANCKX, *supra* note 92, at 88.

own legislation.⁹⁷ UNCLOS was later adopted in 1982, which provided an international legal basis for Canada's AWPPA.

AWPPA was amended in 1985, after Article 234 was implemented, and established certain engineering, navigation, and safety standards:

12. (1) The Governor in Council may make regulations applicable to ships of any class specified therein, prohibiting any ship of that class from navigating within any shipping safety control zone specified therein
 - (a) unless the ship complies with standards prescribed by the regulations relating to
 - (i) hull and fuel tank construction, including the strength of materials used therein, the use of double hulls and the subdivision thereof into watertight compartments,
 - (ii) the construction of machinery and equipment, the electronic and other navigational aids and equipment and telecommunications equipment to be carried and the manner and frequency of maintenance thereof,
 - (iii) the nature and construction of propelling power and appliances and fittings for steering and stabilizing,
 - (iv) the manning of the ship, including the number of navigating and look-out personnel to be carried who are qualified in a manner prescribed by the regulations,
 - (v) with respect to any type of cargo to be carried, the maximum quantity thereof that may be carried, the method of stowage thereof and the nature or type and quantity of supplies and equipment to be carried for use in repairing or remedying any condition that may result from the deposit of any such cargo in the arctic waters,
 - (vi) the free-board to be allowed and the marking of load lines,
 - (vii) quantities of fuel, water and other supplies to be carried, and

⁹⁷ See Bartenstein, *supra* note 14, at 26; Byers and Lalonde, *supra* note 10, at 1150.

- (viii) the maps, charts, tide tables and any other documents or publications relating to navigation in the arctic waters to be carried;
- (b) without the aid of a pilot, or of an ice navigator who is qualified in a manner prescribed by the regulations, at any time or during one or more periods of the year, if any, specified in the regulations, or without ice-breaker assistance of a kind prescribed by the regulations; and
- (c) during one or more periods of the year, if any, specified in the regulations or when ice conditions of a kind specified in the regulations exist in that zone.⁹⁸

Subsequently, Canada implemented the mandatory Northern Canada Vessel Traffic Services Zone Regulations (“NORDREGS”) regime, which require certain reporting and communications standards before vessels can operate in Canadian waters classified as subject to coastal state regulation pursuant to Article 234.⁹⁹ To summarize, the Canadian regulatory regime imposes specific hull construction, marine machinery, inspection, and communications requirements for vessels sailing through its Arctic territory.¹⁰⁰ The Canadians also monitor vessel traffic and ice conditions in the NWP by requiring mandatory reporting before, during, and after a vessel enters “waters of Arctic Canada.”¹⁰¹ The focus of AWPPA is squarely on the

⁹⁸ See Arctic Waters Pollution Prevention Act, R.S.C. 1985, c. A-12, § 12(1) (Can.).

⁹⁹ Northern Canada Vessel Traffic Services Zone Regulations (NORDREG), SOR/2010-127 (Can.), <http://laws-lois.justice.gc.ca/eng/regulations/SOR-2010-127/FullText.html#h-3>, Appendix E; see also Canadian Coast Guard, Vessel Traffic Reporting Arctic Canada Traffic Zone (NORDREG), http://www.ccg-gcc.gc.ca/eng/MCTS/Vtr_Arctic_Canada (“consistent with international law regarding ice-covered areas, implement the requirements for vessels to report information prior to entering, while operating within and upon exiting Canada’s northern waters. [] The Regulations will enhance the safety of vessels, crew and passengers, and will safeguard the unique and fragile Arctic marine environment.”), see Appendix C; It should also be noted that Canada has historically claimed other bases for exercising jurisdiction over Arctic waters, but due to the substantive limitations of this article, discussion is limited to Article 234 of UNCLOS and does not address Canadian claims of sovereignty over the NWP. See Bartenstein, *supra* note 14, at 26; BRUBAKER, *supra* note 14, at 65–66 (2005) (claim by Canada based upon internal waters discussed); see also James Kraska, *The Law of the Sea Convention and the Northwest Passage*, 22 INT’L J. OF MARINE AND COASTAL L. 257, 274–75 (2007) (providing an in-depth analysis of other jurisdictional claims Canada has made with respect to its Arctic waters). Nonetheless, it is quite settled that “Article 234 ‘has no implication for any claims to sovereignty or other aspects of jurisdiction’ in those areas.” (*Id.* at 275 (citing NORDQUIST ET AL., *supra* note 14, at 398)).

¹⁰⁰ Arctic Shipping Pollution Prevention Regulations, C.R.C., c. 353, http://laws-lois.justice.gc.ca/eng/regulations/C.R.C.,_c._353/ (last modified Dec. 19, 2014).

¹⁰¹ See Canadian Coast Guard, Vessel Traffic Reporting Arctic Canada Traffic Zone (NORDREG), http://www.ccg-gcc.gc.ca/eng/MCTS/Vtr_Arctic_Canada (“consistent with international law regarding ice-covered areas, implement the requirements for vessels to

enhancement of vessel safety for vessels traversing through ice-covered waters. In this context, it is axiomatic that vessel safety equates to environmental safety because it reduces the likelihood of hull breeches and vessel casualties that would discharge pollution into the environment.

It is worth noting that Canada has not only implemented legal regimes consistent with its interpretation of Article 234, but has also undertaken substantive actions to ensure the safety of vessels and the environment in its Arctic territory.¹⁰² Canada currently has plans to establish a port in its Arctic territory and add another icebreaker to the six Arctic-capable icebreakers already in service.¹⁰³ These substantive actions, consistent with the legal regime established under Article 234, provide Canada with the capability to respond to incidents that may threaten vessel safety and the environment.

D. Russian Interpretation and Leadership

Russian interpretation and application of Article 234 is largely consistent with that of Canada, and specifically employs the language of Article 234 to establish the basis for these laws.¹⁰⁴ However, Russia has

report information prior to entering, while operating within and upon exiting Canada's northern waters."); *see also* Navigation Safety Regulations, SOR/2005-134, Sec. 76.(1), 82.(2)–(4) (establishing ice reporting requirements for dangerous ice conditions and severe ice accretions on ship superstructures); Ship Station (Radio) Regulations, 1999, SOR/2000-260, Sec. 15. (establishing additional Arctic communications equipment requirements so that vessels operating in the Canadian Arctic can "receiv[e] transmissions of ice information from radio stations and ice reconnaissance aircraft in the area in which the ship is navigating.").

¹⁰² GOVERNMENT OF CANADA, STATEMENT ON CANADA'S ARCTIC FOREIGN POLICY (2010), http://www.international.gc.ca/Arctic-arctique/assets/pdfs/canada_Arctic_foreign_policy-eng.pdf;

Stephen Harper, Prime Minister of Canada, *Expanding Canadian Forces Operations in the Arctic* (Aug. 10, 2007), <http://www.pm.gc.ca/eng/news/2007/08/10/expanding-canadian-forces-operations-Arctic>; *see also* UNITED STATES COAST GUARD, MAJOR ICEBREAKERS OF THE WORLD (July 18, 2013), <http://www.uscg.mil/hq/cg5/cg552/docs/20130718%20Major%20Icebreaker%20Chart.pdf> (Depicting Canada with six icebreakers, and another under construction that is expected to be delivered in 2017. For purposes of comparison, the chart also depicts the U.S. with two operational icebreakers, and having no plans for an additional icebreaker (e.g., "TBD")).

¹⁰³ GOVERNMENT OF CANADA, STATEMENT ON CANADA'S ARCTIC FOREIGN POLICY, *supra* note 102; Prime Minister of Canada, Stephen Harper, *supra* note 102; CANADIAN COAST GUARD, ICEBREAKING PROGRAM, http://www.ccg-gcc.gc.ca/eng/CCG/Ice_Fleet; *see also* UNITED STATES COAST GUARD, MAJOR ICEBREAKERS OF THE WORLD, *supra* note 102. It should be noted, however, that Canada's own plans have shifted due to unforeseen environmental issues and cost overruns. Nevertheless, Canada has an actual plan and is implementing it, even though it may eventually do so with modifications. *See* Emma Jarratt and James Thomson, *Canada Slow to Deliver on Arctic Commitments*, BARENTS OBSERVER (Nov. 24, 2014), <http://barentsobserver.com/en/2014/11/canada-slow-deliver-Arctic-commitments-27-11>.

¹⁰⁴ The text of the Russian legislation indicates that it is overtly focused on satisfying Article 234 of UNCLOS;

placed the Arctic as a major focal point of its economy and its expressions of sovereignty.

Russia adopted, *inter alia*, its 1990 Northern Sea Route Regulations, to exert specific authorities over the NSR.¹⁰⁵ Subsequently, Russia has implemented additional national statutes and regulations governing the NSR.¹⁰⁶ The statutory and regulatory framework establishes specific engineering and notification requirements for vessels and crewmembers transiting through Russia's NSR.¹⁰⁷ Similar to Canada, Russia specifically imposes technical and operational standards:

2. Principles, subject, and goals of regulating:

The Regulations shall, on the basis of non-discrimination for vessels of all States, regulate navigation through the Northern Sea Route for purposes of ensuring safe navigation and preventing, reducing, and keeping under control Marine environment pollution from vessels. Since the specifically severe climatic conditions that exist in the Arctic Regions and the presence of ice during the larger part of the year bring about obstacles, or increased danger, to navigation while pollution of sea, or the northern coast of the USSR might cause great harm to the ecological balance or upset it irreparably, as well as inflict damage on the interests and well-being of the peoples of the Extreme North.

REGULATIONS FOR THE NORTHERN SEA ROUTE, *supra* note 64; *see also* Huebert, *supra* note 64, at 267; Skaridov, *supra* note 64, at 295; Erik J. Molenaar, *Arctic Marine Shipping: Overview of the International Legal Framework, Gaps, and Options*, J. OF TRANSNATIONAL L. & POL'Y 289, 307 (2009) ("In addition to Canada, the Russian Federation also relies on Article 234 for prescribing standards that are more stringent than [generally accepted international rules and standards]."); Pedrozo, *supra* note 14, at 769.

¹⁰⁵ *See* REGULATIONS FOR THE NORTHERN SEA ROUTE, *supra* note 64, at sec. 1.2 (defining Northern Sea Route as;

The Northern Sea Route – national transportation route of the USSR, which is situated within the inland waters, territorial sea (territorial waters), or exclusive economic zone adjoining the USSR northern coast, and includes seaways suitable for guiding ships in ice. The extreme points of which in the west are the western entrances to the Novaya Zemlya straits and the meridian running from Mys Zhelaniya northward. And in the east, in the Bering Strait, by the parallel 66°N and the meridian 168°58'37"W.)

¹⁰⁶ ABOUT THE APPROVAL OF RULES OF THE APPLICATION OF TARIFFS FOR THE ICEBREAKER ESCORTING OF SHIPS IN THE WATER AREA OF THE NORTHERN SEA ROUTE (Russ.) (Mar. 4, 2014) (hereinafter "ICEBREAKER ESCORTING IN THE NORTHERN SEA ROUTE"), http://www.nsra.ru/files/fileslist/20140428133914en-Tariff_rules%2046t2.pdf; ICEBREAKING PILOTAGE ON THE NORTHERN SEA ROUTE, *supra* note 64; RULES OF NAVIGATION ON THE WATER AREA OF THE NORTHERN SEA ROUTE (Russ.) (Jan. 17, 2013) (hereinafter "RULES OF NAVIGATION ON THE NORTHERN SEA ROUTE"), http://www.nsra.ru/files/fileslist/20150513153104en-Rules_Perevod_CNIIMF-13%2005%202015.pdf; REQUIREMENTS FOR THE DESIGN, EQUIPMENT AND SUPPLIES OF VESSELS NAVIGATING THE NORTHERN SEA ROUTE (Russ.) (Unknown Date) (hereinafter "REQUIREMENTS FOR VESSELS NAVIGATING THE NORTHERN SEA ROUTE"), http://www.arctic-liaison.com/docs/nsr/legislation/Requirements_to_the_design_equipment_and_supplies.pdf.

¹⁰⁷ REGULATIONS FOR THE NORTHERN SEA ROUTE, *supra* note 64, at Sec. 3.

1. Definitions.

1.4. Vessel – any ship, or other craft regardless of her nationality.

1.5. Special requirements – technical and operational rates and standards as set forth in publications issued by the Administration in addition to the Regulations, including the Guide to Navigation through the Northern Sea Route and the Requirements for the Design, equipment, and Supply of Vessels Navigating the Northern Sea Route.

...

4. Requirements to vessels and their commanding personnel –

A vessel intending to navigate the Northern Sea Route shall satisfy special requirements and her Master, or a person replacing him, shall be experienced in operating a vessel in ice. In situations where these persons have no such experience, or when Master requests so, the Administration (Marine Operations Headquarters) may assign a State Pilot to the vessel to assist in guiding her through the Northern Sea Route.¹⁰⁸

These regulations also establish mandatory notification guidelines and require vessels to request “guiding” through the NSR, which are sometimes referred to as the “icebreaker escort” fee regulations.¹⁰⁹ The guiding requirements, or icebreaker escort fee regulations, establish fees for services rendered in the context of Article 234.¹¹⁰ These fees appear to be based upon the precedent established by Article 26.¹¹¹

¹⁰⁸ *Id.* at Sec. 1.4, 1.5, and 4.

¹⁰⁹ *Id.* at Sec. 3. Guiding is explained in further detail in Section 7.4 (“Mandatory icebreaker guiding of vessels with ice pilot on board each vessel is established in the Proliv Vil’kitskogo, Proliv Shokal’skogo, Proliv Dmitriya Lapteva . . . and Proliv Sannikova . . . due to unfavourable navigational situation and ice conditions and for the purpose of ensuring safe navigation. In other regions the Marine Operations Headquarters shall, in consideration of ensuring safe navigation and for the purpose of providing the most favourable navigating conditions, prescribe one of the following types of guiding: 1) Guiding from shore along recommended routes up to a certain geographic point; 2) Airplane, or helicopter guiding; 3) Conventional pilotage; 4) Icebreaker guiding; 5) Icebreaker guiding combined with conventional pilotage of vessels. The Marine Operations Headquarters shall be entitled to substitute one type of guiding for another.”).

¹¹⁰ See Erik Franckx, *The Legal Regime of Navigation in the Russian Arctic*, 18 J. OF TRANSNAT’L L. & POL’Y 327, 339–40 (2009) (providing applied discussion on the different rates of fees based upon cargo type and vessel size.); see also ON APPROVAL OF THE TARIFF RATES FOR PROVISION OF ICEBREAKING PILOTAGE SERVICES PROVIDED BY THE FSUE «ATOMFLOT» ON THE NORTHERN SEA ROUTE, *supra* note 64; see Appendix C for charts depicting Russia’s icebreaker escort fees (establishing that fees are dependent upon vessel ice classification, size, time of season, and number of zones traveled through on the NSR. In sum, it is difficult to establish the fee rate without information for the multiple factors upon which Russian fees are based. For example, a 50,000 DWT bulk carrier with a minimum ice classification of 1 that is going through three separate zones of the Northern Sea Route in September (i.e., the summer/autumn time period of the regulations) could incur an

The general concept of a fee schedule for services rendered is likely consistent with international law.¹¹² Article 26 of UNCLOS,¹¹³ while specifically applicable to the territorial sea,¹¹⁴ provides a conceptual legal basis for charging fees when actual services are rendered to assist vessels traveling through Article 234 Arctic waters. As noted, however, Article 26 expressly establishes coastal state authority to charge vessels for services rendered in the coastal state's *territorial seas* only.¹¹⁵ This concept is an extrapolation of Article 26 authority to the EEZ, and is presented because it provides an example of where UNCLOS has authorized service fees to be charged, and because the Russian fees could be premised upon this precedent. Article 26 simply illustrates that interpreting the authority granted by Article 234 to similarly allow fees for actual services rendered is not a novel idea or one inconsistent with UNCLOS.

Russia's icebreaker escort fee regulations require icebreaker escort for vessels with particular ice classifications when particular ice conditions are present.¹¹⁶ The text of Russia's icebreaker fee framework indicates that it is applicable to the entire NSR, which passes through its territorial seas and

approximate charge of 21,895,500 Rubles or \$392,000 (U.S.) for the icebreaker escort (based on the conversion rate as of Dec. 22, 2014).).

¹¹¹ United Nations Convention on the Law of the Sea Art. 26, Dec. 10, 1982, 1833 U.N.T.S. 397, http://www.un.org/depts/los/convention_agreements/texts/unclos/closindx.htm.

¹¹² See generally Michael A. Becker, *Russia and the Arctic: Opportunities for Engagement Within the Existing Legal Framework*, 25 AMER. U. INT'L L. REV. 225, 241 (2010) (describing Russian application of icebreaker escort fees in a non-discriminatory manner); BRUBAKER, *supra* note 14, at 107–08.

¹¹³ Article 26 states:

Charges which may be levied upon foreign ships

1. No charge may be levied upon foreign ships by reason only of their passage through the territorial sea.

2. Charges may be levied upon a foreign ship passing through the territorial sea as payment only for specific services rendered to the ship. These charges shall be levied without discrimination.

United Nations Convention on the Law of the Sea Art. 26, *supra* note 111.

¹¹⁴ United Nations Convention on the Law of the Sea Art. 3, Dec. 10, 1982, 1833 U.N.T.S. 397, http://www.un.org/depts/los/convention_agreements/texts/unclos/part2.htm (“Every State has the right to establish the breadth of its territorial sea up to a limit not exceeding 12 nautical miles, measured from baselines determined in accordance with this Convention.”).

¹¹⁵ *Id.* Art. 26(2).

¹¹⁶ REGULATIONS FOR THE NORTHERN SEA ROUTE, *supra* note 64, at Sec. 2; see also ICEBREAKER ESCORTING IN THE NORTHERN SEA ROUTE, *supra* note 106; ON APPROVAL OF THE TARIFF RATES FOR PROVISION OF ICEBREAKING PILOTAGE SERVICES PROVIDED BY THE FSUE «ATOMFLOT» ON THE NORTHERN SEA ROUTE, *supra* note 64; see Appendix D for charts depicting Russia's icebreaker escort fees; Becker, *supra* note 112, at 241 (describing Russian application of icebreaker escort fees in a non-discriminatory manner), but cf. Claes Lykke Ragner, *Den Norra Sjövägen*, in BARENTS – ETT GRÄNSLAND I NORDEN 114, 119 (Torsten Hallberg ed., 2008) (indicating that Russia may, in practice, not be charging fees in a manner that is actually linked to services rendered).

EEZ.¹¹⁷ The stated objective of Russia's overall regulatory framework is to provide for the safe passage of vessels along the NSR, and the requirements that vessels with lesser ice classifications use icebreaker escorts when certain ice conditions are expected in certain areas along the NSR reasonably pursues that objective.¹¹⁸ Textually, the regulation and escort fees appear reasonably tailored, and are based upon ice conditions, the size of the vessel, distance of escort, and the type of cargo being transported.¹¹⁹ In the context of Article 234, the regulation protects the environment from possible pollution discharges due to marine casualties caused by ice in areas where water is covered by ice most of the year.¹²⁰

Furthermore, the author is unaware of any substantive analysis of the regulations that finds them unreasonable with regard to the services actually rendered.¹²¹ The more unreasonable the escort fees, the less likely shipping companies will be persuaded to use the NSR, which is contrary to Russia's stated intent to increase vessel traffic along the NSR.¹²² Consequently, logic

¹¹⁷ REGULATIONS FOR THE NORTHERN SEA ROUTE, *supra* note 64, at §. 1.2; ICEBREAKER ESCORTING IN THE NORTHERN SEA ROUTE, *supra* note 98.

¹¹⁸ ICEBREAKER ESCORTING IN THE NORTHERN SEA ROUTE, *supra* note 106; ON APPROVAL OF THE TARIFF RATES FOR PROVISION OF ICEBREAKING PILOTAGE SERVICES PROVIDED BY THE FSUE «ATOMFLOT» ON THE NORTHERN SEA ROUTE, *supra* note 64; *see also* John Helmer, *Russia Intensifies Control Over Northern Sea Route Shipping, But Suez May Still Win*, BUSINESS INSIDER (Sept. 5, 2013), <http://www.businessinsider.com/russia-intensifies-control-over-shipping-route-2013-9>.

¹¹⁹ *See* ON APPROVAL OF THE TARIFF RATES FOR PROVISION OF ICEBREAKING PILOTAGE SERVICES PROVIDED BY THE FSUE «ATOMFLOT» ON THE NORTHERN SEA ROUTE, *supra* note 64; Appendix D.

¹²⁰ *See* Section III.E., *infra*.

¹²¹ This may be due to the difficulty of obtaining specific information regarding actual fees charged and the actual costs to Russia for providing the services. Some reviewers have indicated that the regulations have been implemented in a manner consistent with the text of the Russian regulations and Article 234. Becker, *supra* note 112, at 241 (describing Russian application of icebreaker escort fees to Russian commercial vessels). However, other commenters have indicated that the icebreaker escort regulations are being enforced in a manner with little relationship to services rendered. *See, e.g.*, Ragner, *supra* note 116, at 119 ("Russia's mandatory icebreaker fees are high, and the fees are not directly linked to actual services rendered."); Kraska, *supra* note 52, at 277 ("The transit fees [] are disconnected from the actual cost of services rendered []"); BRUBAKER, *supra* note 14, at 94 ("The Russian provisions are probably discriminatory in their operation.") (These commentators, however, simply provide conclusions. The author is unaware of any study that calculates the costs of operating icebreakers in the NSR. The factors for assessing costs would be quite complex, but ultimately, it is the responsibility of the coastal state to provide an accounting of the rates charged for services rendered.).

¹²² Scott Borgerson, Lawson Brigham, Michael Byers, Heather Conley, and Marlene Laruelle, *The Emerging Arctic*, COUNCIL ON FOREIGN REL. (2014), [http://www.cfr.org/Arctic/emerging-Arctic/p32620#/> \("I want to stress the importance of the Northern Sea Route as an international transport artery that will rival traditional trade lanes." Vladimir Putin, President of Russia"\); Kitagawa Hiromitsu, *Japan and Russia: Breaking the Ice*, NIPPON.COM \(Dec. 11, 2013\), <http://www.nippon.com/en/currents/d00099/> \("Russian President Vladimir Putin has encouraged commercial use of the Northern Sea Route, pledging](http://www.cfr.org/Arctic/emerging-Arctic/p32620#/)

lends support to the presumption that Russia's icebreaker escort fee regulations are focused on simply offsetting costs incurred to ensure safe navigation by vessels through its ice-covered areas, in accordance with the authorities provided in Article 234. Whether those regulations are operationally implemented in a manner consistent with the text of the regulations and Article 234 is another question,¹²³ one that is beyond the scope of this review.

Similar to Canada, Russia has implemented mandatory notification reporting requirements. Vessels are required to report when and where vessels intend to enter the NSR, basic information about the vessel and its crew, and malfunctions of machinery during the transit.¹²⁴ Russia also imposes technical engineering and safety equipment standards, together with reporting requirements, in its ice-covered waters to ensure the safety of vessels, life, and the environment.¹²⁵

Russia has not only implemented legislation, but has also taken substantive actions to ensure the safety of the environment and the vessels transiting through its Arctic territory.¹²⁶ It has already established deepwater ports and military bases along its Arctic coast, and has already started construction on the largest and most powerful icebreakers in history to add to the twenty Arctic-capable icebreakers it already has.¹²⁷ Russia has by far

to turn it into a major artery for international transport.”); *see also* Huebert, *supra* note 71, at 286; *see also* Ragner, *supra* note 116, at 116.

¹²³ *See* Becker, *supra* note 112, at 24; Ragner, *supra* note 116, at 119; BRUBAKER, *supra* note 14, at 95 (providing discussion of Russia's implementation of the icebreaker escort fee regulations).

¹²⁴ RULES OF NAVIGATION ON THE NORTHERN SEA ROUTE, *supra* note 106, at Sec. II.14–20.

¹²⁵ *See supra* notes 105, 106, and 109.

¹²⁶ UNITED STATES COAST GUARD, MAJOR ICEBREAKERS OF THE WORLD, *supra* note 102 (Depicting Russia with twenty operational icebreakers, with four additional icebreakers under construction that are expected to be delivered in 2015, 2016, and 2017. For purposes of comparison, the chart also depicts the U.S. with two operational icebreakers, and having no plans for an additional icebreaker (e.g., “TBD”).

¹²⁷ Matthew Bodner and Alexey Eremenko, *Russia Starts Building Military Bases in the Arctic*, THE MOSCOW TIMES (Sep. 8, 2014), <http://www.themoscowtimes.com/business/article/russia-starts-building-military-bases-in-the-Arctic/506650.html>; John Vidal, *Russian Arctic City Hopes to Cash in as Melting Ice Opens New Sea Route to China*, THE GUARDIAN (Feb. 1, 2014), <http://www.theguardian.com/world/2014/feb/01/Arctic-city-new-route-china>; Trude Pettersen, *Russia Lays Down World's Largest Nuclear Icebreaker*, BARENTS OBSERVER (Nov. 6, 2013), <http://barentsobserver.com/en/Arctic/2013/11/russia-lays-down-worlds-largest-nuclear-icebreaker-06-11>; Trude Pettersen, *Russia Re-opens Arctic Cold War Era Air Base*, BARENTS OBSERVER (Oct. 30, 2013), <http://barentsobserver.com/en/security/2013/10/russia-re-opens-Arctic-cold-war-era-air-base-30-10>; *See* Byers, *supra* note 50; UNITED STATES COAST GUARD, MAJOR ICEBREAKERS OF THE WORLD, *supra* note 102 (Depicting Russia with twenty operational icebreakers, with four additional icebreakers under construction that are expected to be delivered in 2015, 2016, and 2017. For purposes of comparison, the chart also depicts the U.S. with two operational icebreakers, and having no plans for an additional icebreaker

established a greater ability than any other nation to protect the environment and the vessels transiting through its Arctic territory.¹²⁸ Moreover, these laws and capabilities have served to help Russia develop its economy and protect Russian citizens in its Arctic territory.¹²⁹

Furthermore, some scholars that have examined the Russian legal regime have concluded that it is generally sound when analyzed in the framework of Article 234 and customary international law.¹³⁰ Given the relative consistency of the unilateral and assertive authority being exercised by Canada and Russia, it appears customary international law is developing right now.¹³¹ The rest of the world is substantially complying with the Russian legal regime.¹³² Even the primary Classification Society used by the U.S. provides guidance to U.S. flagged commercial vessels to aid compliance with the Russian legal requirements for transiting through the Russian EEZ along the NSR.¹³³

E. Canadian and Russian Legal Regimes and Article 234 Seven-Factors Analysis

This review is intended to provide a general overview of the Canadian and Russian legal regimes in the context of Article 234 requirements. An in-depth, line-by-line analysis of the laws adopted and enforced by Canada and Russia is outside the purview of this general review. Analysis of the actual

(e.g., “TBD”); Atle Staalesen, *In Russian Arctic, a New Major Sea Port*, BARENTS OBSERVER (Aug. 6, 2012), <http://barentsobserver.com/en/energy/russian-Arctic-new-major-sea-port-06-08>; see also ARCTIC COUNCIL, ARCTIC MARINE SHIPPING ASSESSMENT (AMSA) (2009), <http://www.arctis-search.com/Arctic+Ports>.

¹²⁸ UNITED STATES COAST GUARD, MAJOR ICEBREAKERS OF THE WORLD, *supra* note 102 (depicting Russia with more icebreakers than any other nation); Ragner, *supra* note 116, at 118 (“Russia has the world’s largest fleet of ice-strengthened vessels[.]”).

¹²⁹ See Michael Byers, *The (Russian) Arctic is Open for Business*, THE GLOBE AND MAIL (Aug. 12, 2013), <http://www.theglobeandmail.com/globe-debate/the-russian-Arctic-is-open-for-business/article13696054/>; see also Jarratt and Thomson, *supra* note 103.

¹³⁰ Raspotnik, *supra* note 14; BRUBAKER, *supra* note 14, at 107; see also McRae, *supra* note 68, at 17–18 (In the context of examining the Canadian regulatory regime, finding that Article 234 provides authority to coastal state to adopt and enforce regulations for environmental protection, and that “the rules relating to transit passage are still subject to the authority of the coastal state to regulate in respect of ice-covered areas.”).

¹³¹ BRUBAKER, *supra* note 14, at 105–09.

¹³² *Id.* at 106; see, e.g., NAVIGATING THE NORTHERN SEA ROUTE ADVISORY, *supra* note 58.

¹³³ Classification Societies, 46 U.S.C. § 3316 (2014) (“Each department, agency, and instrumentality of the United States Government shall recognize the American Bureau of Shipping as its agent in classifying vessels owned by the Government and in matters related to classification[.]”); Recognized Classification Society, 46 C.F.R. 90.10-35 (2014) (“The term *recognized classification society* means the American Bureau of Shipping or other classification society recognized by the Commandant.” (alteration in original)); See, e.g., NAVIGATING THE NORTHERN SEA ROUTE ADVISORY, *supra* note 58, at 4–22.

operational practices employed by Canada and Russia to implement their respective regulatory regimes is similarly omitted.

Both the Canadian and Russian legal regimes are generally consistent with Article 234 requirements. An overview of these legal regimes is presented below in the context of the seven-factor analysis introduced above, *supra* Section III.A, for examining the application of Article 234. Subsequent to reviewing the Canadian and Russian legal regimes in the context of the seven-factor analysis, UNCLOS Articles that might have concurrent application will be examined to assess interactions with Article 234 during the rare occasions that Article 234 is applicable.

1. Non-Discriminatory

The first factor requires examining whether the legal regime is discriminatory. Article 234 requires AWPPA, NORDREGS, and Russia's 1990 environmental regulations and icebreaker escort regulations to apply to all vessels transiting through the EEZ, regardless of nationality.¹³⁴ The text of these laws focus on vessel standards, such as ice classification, and qualifications of crewmembers. As written, the laws do not discriminate with regard to nationality, and the substance is reasonably related to safe navigation through hazardous waters covered by ice the majority of the year.¹³⁵ There is no appearance of arbitrary discrimination. To the extent that these legal regimes may be applied in a manner that is inconsistent with their plain language is another matter; a fact-specific inquiry that is beyond the scope of this basic analysis. The legal regimes are non-discriminatory on their face.

2. Prevention, Reduction, and Control of Marine Pollution from Vessels

The legal regime must focus on prevention, reduction, and control of marine pollution from vessels. Canada's AWPPA and NORDREGS, and Russia's 1990 environmental regulations and icebreaker escort regulations, are geared toward vessel safety, and, therefore, they are designed for the protection of the environment. Ensuring vessel safety equates to environmental safety because it reduces the likelihood of hull breeches and vessel casualties that could yield the discharge of pollution into the

¹³⁴ United Nations Convention on the Law of the Sea Art. 234, *supra* note 12.

¹³⁵ See Becker, *supra* note 112, at 241 (describing Russian application of icebreaker escort fees in a non-discriminatory manner), but *cf.* Ragner, *supra* note 116, at 119 (indicating that Russia may, in practice, be charging fees not linked to services rendered); see also BRUBAKER, *supra* note 14, at 80–81 (concluding that any practical application of the legal regime that excludes Russian flagged vessels would be in violation of Article 234).

environment.¹³⁶ This is especially true where vessels ply through waters covered with ice for most of the year.¹³⁷

Article 234 does not simply provide authority for the prevention of marine pollution, but also for the “reduction and control of marine pollution.”¹³⁸ This provides a greater breadth of authority, because it includes both preventative *and* responsive measures. Coastal states can require response capabilities on Arctic vessels, such as tracking, safety and oil spill response equipment, communications, and escort requirements if those measures are primarily focused on ensuring the protection of the environment.¹³⁹ These measures promote vessel safety by requiring enhanced prevention and response capabilities, which improves environmental protection.

¹³⁶ Bert, *supra* note 11 (“Oil, gas, and mineral drilling, as well as fisheries and tourism[] are inherently dangerous, because icebergs and storms can shear apart even large tankers, offshore drilling units, fishing vessels, and cruise ships. As a result, human and environmental disasters are extremely likely.”); *see also* Bartenstein, *supra* note 14, at 22–23, 25–26, 38–46; FRANCKX, *supra* note 92, at 75–77 (describing the MANHATTAN casualty).

¹³⁷ *See, e.g.*, Dennis Bryant, *Polar Code Afoot*, MARINELINK.COM (Sept. 2, 2014), <http://www.marinelink.com/news/polar-afoot-code376184.aspx> (providing summary of multiple vessel casualties in ice-covered areas); Bert, *supra* note 11 (“Oil, gas, and mineral drilling, as well as fisheries and tourism[] are inherently dangerous, because icebergs and storms can shear apart even large tankers, offshore drilling units, fishing vessels, and cruise ships. As a result, human and environmental disasters are extremely likely.”); Kraska, *supra* note 19, at 1125 (“Poorly maintained Third World merchant ships and their multinational crews from distant and unsavory lands will discover the new superhighway between Asian manufacturers and European markets. The result: the challenging, ice-infested waters will cause oil spills, and the multiplying number of ships will bring illegal migrants or, even worse, terrorists.”); Franckx, *supra* note 110, at 338 (“Given the extremely hazardous navigation conditions that can be encountered when sailing the Northern Sea Route, a detailed set of requirements have been adopted in order to ensure the safety of navigation and the protection of the Arctic marine environment from pollution.”).

¹³⁸ Convention on the Law of the Sea Art. 234, *supra* note 12.

¹³⁹ *See, e.g.*, Northern Canada Vessel Traffic Services Zone Regulations, *supra* note 64; ON APPROVAL OF THE TARIFF RATES FOR PROVISION OF ICEBREAKING PILOTAGE SERVICES PROVIDED BY THE FSUE «ATOMFLOT» ON THE NORTHERN SEA ROUTE, *supra* note 64; Appendix D; *see also* Canadian Coast Guard, *Coast Guard makes rescue in the high Arctic*, <http://www.ccg-gcc.gc.ca/shorelinesfall2011-3> (last modified Apr. 9, 2014), (describing marine casualty where Canadian Coast Guard icebreaker was dispatched to a vessel that ran aground in order to remove the petroleum products onboard); Oil or Hazardous Material Pollution Prevention Regulations for Vessels, 33 C.F.R. Part 155 (2014); Bert, *supra* note 11 (“The United States and other Arctic nations track AIS ships and are able to respond to emergencies based on its signals. For this reason, mandating AIS for all vessels in the Arctic is needed. The U.S. government also needs to work with Russia to impose a traffic separation scheme in the Bering Strait, where chances for a collision are high. Finally, the United States should push for compulsory tandem sailing for all passenger vessels operating in the Arctic. Tandem sailing for cruise ships and smaller excursion boats will avert another disaster like *RMS Titanic*.”).

3. Covered by Ice for More Than Six Months of the Year

Arctic portions of the Russian, Canadian, and U.S. EEZ's are covered with ice the majority of the year.¹⁴⁰ Even during the best months to navigate through the Arctic, there is usually some ice present.¹⁴¹ These areas meet the "ice-covered" test for most of the year.

4. Obstructions or Exceptional Hazards to Navigation

Fourth, the climatic conditions and sea-ice must present obstructions or exceptional hazards to the safety of vessels.¹⁴² "Exceptional" navigational hazards are those outside the norm.¹⁴³ The norm in Arctic waters covered with ice for most of the year is certainly not the norm for most of the oceans. Although submerged rocks and tidal fluctuations can be experienced in all of the world's oceans, the threat of thick sea ice damaging the hull of a tanker and possibly sinking the vessel is uncommon.¹⁴⁴

¹⁴⁰ See NORTHERN SEA ROUTE INFORMATION OFFICE, http://www.Arctic-lia.com/nsr_ice ("There are no specific dates for commencement and completion of navigation; it all depends on particular ice conditions. In 2011 the navigation season on the NSR seaways for large vessels constituted 141 days in total, i.e. more than 4.5 months."); CANADIAN ICE SERVICE, CANADIAN ARCTIC SEA ICE MINIMUM WAS NEAR-NORMAL IN 2013 (Oct. 24, 2013), <http://ec.gc.ca/glaces-ice/default.asp?lang=En&n=71777A6E-1> ("The southern route of the Northwest Passage has been navigable since 2006 (for a few days/weeks each year)."); The U.S. Arctic maritime domain is also covered with ice for a vast majority of the year. See Letter from Rebecca J. Lent, *supra* note 23, at 6 (Indicating ice-covered waters for approximately eight (08) months of the year. ("the open-water season (1 July to 31 October).")); Thoman, *supra* note 140 ("Prior to about 2000, the typical summer at Barrow would find sea ice lingering into late June or early July. From then on, the ice would melt at an increasing rate and be pushed to and fro by the wind. Usually there was a period from early August until sometime in September when the sea near Barrow would be largely ice-free. However, the main ice pack was rarely more than 150 miles offshore at the end of summer, and by sometime in October, cooling temperatures and autumn storms would typically return the sea ice to Barrow.").

¹⁴¹ RICK THOMAN, CLIMATE.GOV, NAT'L OCEANIC AND ATMOSPHERIC ADMIN., IN BARROW, ALASKA, CLIMATE CHANGE IN ACTION (Sept. 6, 2013), <https://www.climate.gov/news-features/understanding-climate/barrow-alaska-climate-change-action> ("Not all years [on the sea near Barrow] were "typical," of course. Sometimes the sea ice never completely moved out of the Barrow area all summer."); Bert, *supra* note 11 ("The NSR was not navigable for years because of heavy ice, but it now consists of water with floating ice during the summer months."); KARL MAGNUS EGER, CENTRE FOR HIGH NORTH LOGISTICS (CHNL), ARCTIC RESOURCES AND TRANSPORTATION INFORMATION SYSTEM (ARCTIS DATABASE) (2010), <http://www.arctis-search.com/Comparison+of+Operational+Conditions+along+the+Arctic+Routes>.

¹⁴² See e.g., *supra* note 136.

¹⁴³ MERRIAM-WEBSTER DICTIONARY, <http://www.merriam-webster.com/dictionary/exceptional?show=0&t=1418244350>.

¹⁴⁴ See, e.g., *Safe Boating Hints for the Northern Coast*, CAL. STATE PARKS, DIV. OF BOATING AND WATERWAYS, <http://www.dbw.ca.gov/pubs/Norcoast/index.htm>; *Hazardous Weather: A Florida Guide Boat Safety*, FLA. DIV. OF EMERGENCY MGMT.,

The MANHATTAN example exemplifies the obstructions and hazards facing Arctic vessels.¹⁴⁵ The vessel was specifically fitted to sail through ice-covered Arctic waters and was escorted by multiple icebreakers,¹⁴⁶ but nevertheless became repeatedly stuck in the ice and sustained hull damage.¹⁴⁷ Even during the summer months sea ice presents risks and vessels can become stuck, requiring assistance from icebreakers.¹⁴⁸ Since such obstructions and hazards are not normal types of hazards encountered in a majority of the world's oceans, they are by definition "exceptional." Consequently, the significant threat presented by sea ice that can trap a vessel and damage its hull is "exceptional" for the purposes of Article 234.

5. Major Harm or Irreversible Environmental Disturbance by Pollution

The Arctic area landward of the Canadian, Russian, and U.S. EEZ boundaries is home to a large number of threatened or endangered species, such as the polar bear,¹⁴⁹ spectacled eider,¹⁵⁰ and bowhead whale,¹⁵¹ among many others, and has been described as one of the most environmentally sensitive regions in the world.¹⁵² The harsh Arctic marine environment is one of the most specialized and fragile environments on earth.¹⁵³ It is home to wildlife populations that native populations rely upon for food, such as seals,

<http://www.floridadisaster.org/kids/boatSafety.htm>. But see *supra* note 136 (describing unique threats presented by polar sea-ice); see also Kraska, *supra* note 99, at 281.

¹⁴⁵ See FRANCKX, *supra* note 92, at 75–77.

¹⁴⁶ *Id.*

¹⁴⁷ *Id.*

¹⁴⁸ See, e.g., Grant DeVuyst, *Stuck in the Arctic Ice*, COAST GUARD ALASKA (July 17, 2014), <http://alaska.coastguard.dodlive.mil/2014/07/stuck-in-the-Arctic-ice/>; Dennis Avery, *Gullible Green sailors trapped in the Arctic*, CFACT (Sept. 19, 2013), <http://www.cfact.org/2013/09/19/gullible-green-sailors-trapped-in-the-Arctic/>; *Three vessels stuck in Arctic Ice*, SEATTLE TIMES (Aug. 5, 2008), http://seattletimes.com/html/localnews/2008094177_apaktrappedvessels.html; see also Bartenstein, *supra* note 14, at 22–23.

¹⁴⁹ *Species Profile for Polar bear (Ursus maritimus)*, U.S. FISH AND WILDLIFE SERV., ENVTL. CONSERVATION ONLINE SYSTEM, <http://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=A0IJ>; Letter from Rebecca J. Lent, *supra* note 23, at 1.

¹⁵⁰ *Species Profile for Spectacled eider (Somateria fischeri)*, U.S. FISH AND WILDLIFE SERV., ENVTL. CONSERVATION ONLINE SYSTEM, <http://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B08Z>.

¹⁵¹ *Species Profile for Bowhead whale (Balaena mysticetus)*, U.S. FISH AND WILDLIFE SERV., ENVTL. CONSERVATION ONLINE SYSTEM, <http://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=A02N>; Letter from Rebecca J. Lent, *supra* note 23, at 1.

¹⁵² See Kraska, *supra* note 99, at 281 (“[T]he Northwest Passage, the world’s longest and perhaps most environmentally sensitive international strait.”).

¹⁵³ See *Administrator Unveils Arctic Plan During Aspen Speech*, NOAA (Mar. 16, 2011), http://www.noaa.gov/stories2011/20110316_Arctic.html; Karl Magnus Eger, *Effects of Oil Spills in Arctic Waters*, CENTRE FOR HIGH NORTH LOGISTICS (2010), <http://www.arctisearch.com/Effects+of+Oil+Spills+in+Arctic+Waters>.

walrus, and bowhead whales.¹⁵⁴ Pollution, particularly oil pollution, remains in the Arctic environment longer than in warmer climates because oil degrades at a slower rate in the Arctic.¹⁵⁵ Furthermore, the dearth of prevention and response capabilities in the Arctic means a vastly increased response time to any pollution event or emergent situation.¹⁵⁶ There is a much greater chance for major harm or irreversible damage to very sensitive environmental region that hosts numerous endangered or threatened species if a significant pollution discharge occurs, especially in light of the lack of prevention and response capabilities.¹⁵⁷

6. Due Regard For Navigation and the Protection and Preservation of the Marine Environment

Legal regimes must have due regard for both navigation and protection of the environment. AWPPA, NORDREGS, and Russia's 1990 environmental and icebreaker escort regulations allow any vessel to transit through areas subject to Article 234 regulation so long as they comply with the legal regimes adopted and enforced in accordance with Article 234. State vessels, such as warships, are specifically exempted from Article 234.¹⁵⁸ The first portion of this requirement, due regard to navigation, is the one primarily relied upon by the U.S. to challenge the aforementioned legal regimes.¹⁵⁹ The requirement for due regard to navigation is directly linked to "due regard to [] protection and preservation of the marine environment."¹⁶⁰

The most reasonable interpretation is that there is a balancing requirement for determining whether it is appropriate to "hamper" the right to

¹⁵⁴ See ALASKA ESKIMO WHALING COMM'N, *supra* note 23; Byers and Lalonde, *supra* note 10, at 1178–79.

¹⁵⁵ *Microbes & Oil Spills – FAQ*, AM. ACADEMY OF MICROBIOLOGY (2011), at 3, 7, <http://www.dfo-mpo.gc.ca/science/publications/microbes/pdf/microbes-eng.pdf>; Robert Wade, *A Warmer Arctic Ocean Needs Shipping Rules*, FIN. TIMES (Jan. 15, 2008), <http://www.ft.com/cms/s/0/1c415b68-c374-11dc-b083-0000779fd2ac.html#axzz3Mjt7Oykw>; THE PEW ENV'T GROUP, *supra* note 20, at 10–11.

¹⁵⁶ See Byers, *supra* note 50; Bert, *supra* note 11 ("In the lower forty-eight states, response time to an oil spill or capsized vessel is measured in hours. In Alaska, it could take days or weeks to get the right people and resources on scene. The nearest major port is in the Aleutian Islands, thirteen hundred miles from Point Barrow, and response aircraft are more than one thousand miles south in Kodiak, blocked by a mountain range and hazardous flying conditions. The Arctic shores lack infrastructure to launch any type of disaster response, or to support the growing commercial development in the region.").

¹⁵⁷ Letter from Rebecca J. Lent, *supra* note 23, at 8.

¹⁵⁸ See *supra* note 36.

¹⁵⁹ Pedrozo, *supra* note 14, at 769–71; Diplomatic Note from the United States to Canada, *supra* note 15, at 1–2, Appendix A; Letter from Eric Benjaminson, *supra* note 15, at 2, Appendix B.

¹⁶⁰ Convention on the Law of the Sea Art. 234, *supra* note 12 ("Such laws and regulations shall have due regard to navigation and the protection and preservation of the marine environment [].").

freedom of navigation for the sake of “protect[ing] and preserv[ing] [] the marine environment.”¹⁶¹ The U.S. has asserted that any requirement under Article 234 that *might* foreclose the sailing of a vessel through another nation’s EEZ, including international straits that provide passage through the territorial seas and EEZ, violates freedom of navigation regimes.¹⁶² This across-the-board, no-exceptions position has fundamental flaws when examined under the narrow exception carved out by Article 234. Applying these legal regimes to state owned or operated vessels would clearly be outside the scope of authority provided by Article 234.¹⁶³

7. Based on the Best Available Scientific Evidence

The author is unaware of any scientific studies that specifically assess the bases of the regulatory regimes of Canada and Russia. The legal regimes are primarily based upon engineering and design standards for vessels operating in polar environments. Some reviewers imply that the requirement for the legal regime to be based upon the best available scientific evidence compels coastal states to undertake studies or investigations that directly test and support the legal regime being implemented under Article 234.¹⁶⁴ However, such an interpretation would be a stretch. The plain language does not require additional studies to be done, only that the legal regime be based on the best scientific data *available* at the time the regulations are adopted.

The coastal state bears the burden under Article 234 to explain the scientific bases for the requirements,¹⁶⁵ but a failure to clearly explain the scientific basis for each and every requirement does not foreclose analysis under this factor. Analyzing each requirement and its scientific basis is outside this paper’s scope. In brief, Canadian and Russian requirements appear logically related to vessel safety.

Strengthened hulls and icebreaker escorts during periods of heavy ice conditions reduce the likelihood that the vessel will experience a casualty due

¹⁶¹ See, e.g., Bartenstein, *supra* note 14, at 39; Convention on the Law of the Sea Art. 234, *supra* note 12.

¹⁶² See Pedrozo, *supra* note 14, at 769–70; see also Diplomatic Note from the United States to Canada, *supra* note 15, Appendix A; Letter from Eric Benjaminson, *supra* note 15, Appendix B.

¹⁶³ See Convention on the Law of the Sea Art. 236, *supra* note 36 (discussed in detail *infra* at Section E.2.h.).

¹⁶⁴ See, e.g., Pedrozo, *supra* note 14, at 771 (“neither government has provided sufficient data to demonstrate that their domestic laws and regulations are based on the best available scientific evidence, as required by UNCLOS Article 234.”).

¹⁶⁵ See *id.* (Pedrozo’s assertion might simply be a conclusion that Canada and Russia have failed to explain the scientific bases for their legal regimes.).

to striking ice or being trapped in ice.¹⁶⁶ Vessel tracking in Arctic waters, and requiring escorts when there are heavy ice conditions, enhances response capability in the event there is a pollution event, search and rescue incident, or commission of a transnational crime—such as weapons of mass destruction proliferation—all of which can negatively impact the environment.¹⁶⁷ The requirements generally appear consistent with international industry standards for vessels operating in ice-covered waters.¹⁶⁸ Consequently, the Canadian and Russian regulations generally satisfy this test.¹⁶⁹

¹⁶⁶ See Bryant, *supra* note 137 (providing a summary of multiple vessel casualties in ice-covered areas); Bert, *supra* note 11 (“Oil, gas, and mineral drilling, as well as fisheries and tourism . . . are inherently dangerous, because icebergs and storms can shear apart even large tankers, offshore drilling units, fishing vessels, and cruise ships. As a result, human and environmental disasters are extremely likely.”); Kraska, *supra* note 19, at 1125 (“Poorly maintained Third World merchant ships and their multinational crews from distant and unsavory lands will discover the new superhighway between Asian manufacturers and European markets. The result: the challenging, ice-infested waters will cause oil spills, and the multiplying number of ships will bring illegal migrants or, even worse, terrorists.”); Franckx, *supra* note 110, at 338 (“Given the extremely hazardous navigation conditions that can be encountered when sailing the Northern Sea Route, a detailed set of requirements have been adopted in order to ensure the safety of navigation and the protection of the Arctic marine environment from pollution.”).

¹⁶⁷ The multiple days it takes to respond to incidents in the Arctic, which is considered a normal response time for the Arctic, stands in stark contrast with the nearly immediate response capabilities the continental U.S. experiences. This is valuable time that can serve to mitigate or even stave off a humanitarian or environmental disaster. See, e.g., Transcript of Record at 37, USCG/MMS Marine Board of Investigation into the Marine Casualty, Fire, Pollution, and Sinking of Mobile Offshore Drilling Unit Deepwater Horizon, with Loss of Life in the Gulf of Mexico 21–22 April 2010 (May 11, 2010), <http://www.uscg.mil/hq/cg5/cg545/dw/exhib/Deepwater%20Horizon%20Joint%20Investigation%20Transcript%20-%20May%202011,%202010.pdf> (Describing the 64-minute response time for USCG assets to respond to the DEEPWATER HORIZON incident in the EEZ located in the Gulf of Mexico, approximately 45 miles offshore.); Shaw, *supra* note 21, at 26; see generally UNITED STATES COAST GUARD, ARCTIC STRATEGY, *supra* note 10, at 20–21; Bert, *supra* note 11 (“In the lower forty-eight states, response time to an oil spill or capsized vessel is measured in hours. In Alaska, it could take days or weeks to get the right people and resources on scene. The nearest major port is in the Aleutian Islands, thirteen hundred miles from Point Barrow, and response aircraft are more than one thousand miles south in Kodiak, blocked by a mountain range and hazardous flying conditions. The Arctic shores lack infrastructure to launch any type of disaster response, or to support the growing commercial development in the region.”).

¹⁶⁸ See, e.g., *Requirements Concerning Polar Class*, INT’L ASS’N CLASSIFICATION SOC’Y’S (2011), http://www.iacs.org.uk/document/public/Publications/Unified_requirements/PDF/UR_I_pdf410.pdf; Int’l Maritime Org. [IMO] Res. A.1024(26), Guidelines for Ships Operating in Polar Waters, *supra* note 58; see also NAVIGATING THE NORTHERN SEA ROUTE ADVISORY, *supra* note 58, at 4–22; *Rules for Classification of Ships Newbuildings, Special Service and Type Additional Class, Part 5, Chapter 1, Ships for Navigation in Ice*, DET NORSKE VERITAS (Jan. 2009), <https://exchange.dnv.com/publishing/ruleship/2009-01/ts501.pdf>; *Guide for Building and Classing Vessels Intended for Navigation in Polar Waters*, AM. BUREAU OF SHIPPING (July 2008), <https://www.eagle.org/eagleExternalPortalWEB/ShowProperty/BEA%20Repository/Rules&>

G. Article 234 Within UNCLOS

The following section assesses the authority of Article 234 in the context of other applicable Articles of UNCLOS.

Article 24: Duties of the Coastal State (Innocent Passage)

1. The coastal State shall not hamper the innocent passage of foreign ships through the territorial sea except in accordance with this Convention. In particular, in the application of this Convention or of any laws or regulations adopted in conformity with this Convention, the coastal State shall not:
 - (a) impose requirements on foreign ships which have the practical effect of denying or impairing the right of innocent passage; or
 - (b) discriminate in form or in fact against the ships of any State or against ships carrying cargoes to, from or on behalf of any State.
2. The coastal State shall give appropriate publicity to any danger to navigation, of which it has knowledge, within its territorial sea.¹⁷⁰

States may regulate and “hamper” innocent passage in accordance with UNCLOS.¹⁷¹ Article 234 provides coastal states with unilateral authority to regulate activities within their EEZ, so long as the requirements of Article 234 are satisfied. Article 24 applies to territorial seas. Since a coastal state’s authority is greater in its territorial sea than in its EEZ,¹⁷² it would be illogical for Article 234 to provide greater authority in the EEZ than the territorial

Guides/Archives/2_SVR_2011/polarwaters; cf. Northern Canada Vessel Traffic Services Zone Regulations (NORDREG), SOR/2010-127; *Vessel Traffic Reporting Arctic Canada Traffic Zone (NORDREG)*, CAN. COAST GUARD, http://www.ccg-gcc.gc.ca/eng/MCTS/Vtr_Arctic_Canada; REGULATIONS FOR THE NORTHERN SEA ROUTE, *supra* note 64; ICEBREAKER ESCORTING IN THE NORTHERN SEA ROUTE, *supra* note 106; ICEBREAKING PILOTAGE ON THE NORTHERN SEA ROUTE, *supra* note 64.

¹⁶⁹ This is not to say that every clause of every legal requirement of these regulatory frameworks is based on the best available scientific evidence. This is simply a broad assessment of the general reporting, engineering, and icebreaker escort requirements. A line-by-line, in-depth analysis of these legal frameworks to ensure consistency with the best available scientific evidence is not appropriate for the general nature of examining the legality of employing Article 234 as an exception to freedom of navigation regimes nor as a basis to charge fees for services rendered.

¹⁷⁰ United Nations Convention on the Law of the Sea Art. 24, Dec. 10, 1982, 1833 U.N.T.S. 397, http://www.un.org/depts/los/convention_agreements/texts/unclos/part2.htm.

¹⁷¹ *Id.* Art. 24(1).

¹⁷² See, e.g., Bartenstein, *supra* note 14, at 42.

sea.¹⁷³ Article 234 provides coastal state authority in concert with Article 24 where the conditions of Article 234 are satisfied, and the practical effect does not foreclose innocent passage or discriminate against foreign ships.¹⁷⁴

Article 26: Charges Which May Be Levied Upon Foreign Ships

1. No charge may be levied upon foreign ships by reason only of their passage through the territorial sea.
2. Charges may be levied upon a foreign ship passing through the territorial sea as payment only for specific services rendered to the ship. These charges shall be levied without discrimination.¹⁷⁵

Article 26 generally precludes imposing fees upon foreign ships for passing through the territorial sea of a coastal state,¹⁷⁶ but it also allows charges to be levied upon foreign ships sailing through territorial seas where “specific services [are] rendered to the ship,” and the charges are levied without discrimination.¹⁷⁷ Icebreaker fees charged by Russia in the territorial sea portion of the NSR are consistent with UNCLOS if they satisfy the Article 26 requirements in practice. There is no express provision that allows for charging fees for services rendered in the EEZ, so states must rely on the more general authority granted under Article 234, together with the precedent set by Article 26 to charge for services rendered in the Arctic EEZ.

The ambiguity provides ample opportunity for competing arguments about whether such application is consistent with international law. Article 234 provides a broad grant of authority under a very specific set of circumstances. So long as all factors of Article 234 are satisfied by a particular legal regime, that defines the services provided and the fees for those services, it is consistent with the purposes of UNCLOS. Ensuring the safety of vessels traversing these areas equates to protecting the environment.¹⁷⁸ Freedom of

¹⁷³ See Bartenstein, *supra* note 14, at 36–37, 42–44; see also BRUBAKER, *supra* note 14, at 57.

¹⁷⁴ See also Bartenstein, *supra* note 14, at 30, 45.

¹⁷⁵ United Nations Convention on the Law of the Sea Art. 26, Dec. 10, 1982, 1833 U.N.T.S. 397, http://www.un.org/depts/los/convention_agreements/texts/unclos/part2.htm.

¹⁷⁶ *Id.* Art. 26(1).

¹⁷⁷ *Id.* Art. 26(2).

¹⁷⁸ Bert, *supra* note 11 (“Oil, gas, and mineral drilling, as well as fisheries and tourism[] are inherently dangerous, because icebergs and storms can shear apart even large tankers, offshore drilling units, fishing vessels, and cruise ships. As a result, human and environmental disasters are extremely likely.”); see also Bartenstein, *supra* note 14, at 22–23, 25–26, 38–46; FRANCKX, *supra* note 92, at 75–77 (describing the MANHATTAN casualty). Furthermore, the existence of Article 234 and countless international and national requirements specific to vessel navigation in polar environments provide further evidence that vessels are subject to different and greater hazards than other maritime environments.

navigation is effectively enhanced, not degraded or hampered, by ensuring vessels do not suffer a casualty and are not trapped in ice as they sail through a coastal state's Arctic EEZ. This is especially the case given the regulatory regimes are only applicable to private or commercial vessels, not state vessels which would be expected to have greater capability and responsibility as a national asset.

Article 38: Right of Transit Passage

1. In straits referred to in article 37, all ships and aircraft enjoy the right of transit passage, which shall not be impeded; except that, if the strait is formed by an island of a State bordering the strait and its mainland, transit passage shall not apply if there exists seaward of the island a route through the high seas or through an exclusive economic zone of similar convenience with respect to navigational and hydrographical characteristics.
2. Transit passage means the exercise in accordance with this Part of the freedom of navigation and overflight solely for the purpose of continuous and expeditious transit of the strait between one part of the high seas or an exclusive economic zone and another part of the high seas or an exclusive economic zone. However, the requirement of continuous and expeditious transit does not preclude passage through the strait for the purpose of entering, leaving or returning from a State bordering the strait, subject to the conditions of entry to that State.
3. Any activity which is not an exercise of the right of transit passage through a strait remains subject to the other applicable provisions of this Convention.¹⁷⁹

Article 38 is drafted somewhat awkwardly, and can reasonably be interpreted to offer support for both the Canadian/Russian position and the U.S. position. The language of Article 38 states, “[t]ransit passage means the exercise in accordance with this Part,”¹⁸⁰ which makes clear that transit passage is also subject to Articles 34 and 42, which are both in the same Part as Article 38.

Article 34 states that the Articles in that Part of UNCLOS “shall not in other respects affect the ... exercise by the States bordering the straits of their sovereignty or jurisdiction over such waters and their air space, bed and

¹⁷⁹ United Nations Convention on the Law of the Sea Art. 38, Dec. 10, 1982, 1833 U.N.T.S. 397, http://www.un.org/depts/los/convention_agreements/texts/unclos/part3.htm.

¹⁸⁰ *Id.* Art. 38(2).

subsoil.”¹⁸¹ This can be read to mean that transit passage can be limited by coastal states when expressly provided for in UNCLOS.

A later clause in Article 34 also states, “[t]he sovereignty or jurisdiction of the States bordering the straits is exercised subject to this Part and to other rules of international law.”¹⁸² This portion could be read to restrict coastal states from exercising any “sovereignty or jurisdiction” that limits transit passage. Alternatively, it could be read to allow some degree of regulation pursuant to Article 234 because the jurisdiction of the coastal state is being exercised subject to the authority of Article 234 as an “other rule of international law.” The latter interpretation stretches the language beyond its clear meaning because the use of the language “subject to” implies a limitation on coastal state sovereignty and jurisdiction.¹⁸³ The later clause in Article 34 appears to weigh in favor of limiting the affect of coastal state legal regimes on the exercise of transit passage.

Article 42: Laws and Regulations of State Bordering Straits Relating to Transit Passage

1. Subject to the provisions of this section, States bordering straits may adopt laws and regulations relating to transit passage through straits, in respect of all or any of the following:
 - (a) the safety of navigation and the regulation of maritime traffic, as provided in article 41;
 - (b) the prevention, reduction and control of pollution, by giving effect to applicable international regulations regarding the discharge of oil, oily wastes and other noxious substances in the strait;
 - (c) with respect to fishing vessels, the prevention of fishing, including the stowage of fishing gear;
 - (d) the loading or unloading of any commodity, currency or person in contravention of the customs, fiscal, immigration or sanitary laws and regulations of States bordering straits.
2. Such laws and regulations shall not discriminate in form or in fact among foreign ships or in their application have the practical effect of denying, hampering or impairing the right of transit passage as defined in this section.

¹⁸¹ *Id.* Art. 34(1).

¹⁸² *Id.* Art. 34(2).

¹⁸³ Article 34(2) states that “[t]he sovereignty or jurisdiction of the [coastal state] is exercised subject to this Part and to other rules of international law.” The “subject to” language connotes limitations on the authority and jurisdiction of the coastal state rather than an increase in authority and jurisdiction under Article 34.

3. States bordering straits shall give due publicity to all such laws and regulations.
4. Foreign ships exercising the right of transit passage shall comply with such laws and regulations.
5. The flag State of a ship or the State of registry of an aircraft entitled to sovereign immunity which acts in a manner contrary to such laws and regulations or other provisions of this Part shall bear international responsibility for any loss or damage which results to States bordering straits.¹⁸⁴

The right of transit passage is also expressly subject to regulation pursuant to Article 42. Article 42 states that “[s]tates bordering straits may adopt laws and regulations relating to transit passage through straits []. [] Foreign ships exercising the right of transit passage shall comply with such laws and regulations.”¹⁸⁵ There is an exception for state owned or operated vessels and aircraft that limits the application of such laws and regulations:¹⁸⁶ any legal framework imposed pursuant to Article 234 would only be applicable to state owned vessels after the fact, where a state owned or operated vessel acted contrary to such laws and the coastal state experienced an ensuing “loss or damage.”¹⁸⁷ Article 42 offers support for the Canadian and Russian position with respect to non-state owned or operated vessels, because Article 42 expressly requires vessels transiting through an international strait to comply with the laws and regulations that the coastal state requires for transiting through the strait.

However, Article 42 also requires that the laws imposed by the coastal state “shall not discriminate in form or in fact among foreign ships or in their application have the practical effect of denying, hampering or impairing the right of transit passage as defined in this section.”¹⁸⁸ The requirements imposed by the laws of the coastal state cannot hamper the right of transit passage by imposing unreasonable requirements that “*have the practical effect of denying, hampering or impairing the right of transit passage.*”¹⁸⁹ Imposing generally accepted prevention and response requirements that *directly* and *reasonably* relate to enhancing safety of the environment in accordance with Article 234 would not have the “practical effect of denying, hampering or

¹⁸⁴ *Id.* Art. 42 (emphasis added).

¹⁸⁵ *Id.* Art. 42(1), (4).

¹⁸⁶ *Id.* Art. 42(5) (“The flag State of a ship or the State of registry of an aircraft entitled to sovereign immunity which acts in a manner contrary to such laws and regulations or other provisions of this Part shall bear international responsibility for any loss or damage which results to States bordering straits.”).

¹⁸⁷ *Id.*

¹⁸⁸ *Id.* Art. 42(2).

¹⁸⁹ *Id.* (emphasis added).

impairing the right of transit passage.”¹⁹⁰ This is especially the case in instances where the coastal state is implementing generally accepted international standards¹⁹¹ and exercising *sui generis* authority under the very limited and narrow exception established via Article 234. In contrast, if requirements were so onerous so as to preclude the transit of a significant portion of vessels that the international community considered safe to operate under the conditions described in Article 234, then those regulations would clearly run afoul of the rights secured under Article 42.

AWPPA, NORDREGS, and Russia’s 1990 environmental and icebreaker escort regulations allow vessels to transit through the areas regulated pursuant to Article 234, so long as they comply with the regulations.¹⁹² Simply adopting and enforcing regulations pursuant to Article 234 does not provide *de facto* evidence that the right of transit passage has been violated because Article 42 prohibitions focus on laws and regulations that “have the practical effect of denying, hampering or impairing the right of transit passage.”¹⁹³ To show a violation, there must be some modicum of evidence that the legal regime precludes the transit of vessels that the international community considers safe to operate in “severe climatic conditions [where] the presence of ice covering such areas for most of the year create obstructions or exceptional hazards to navigation, and pollution of the marine environment could cause major harm to or irreversible disturbance of the ecological balance.”¹⁹⁴

The Canadian and Russian regulatory regimes do not “discriminate in form [] among foreign ships [so as to] have the practical effect of denying, hampering or impairing the right of transit passage,”¹⁹⁵ and are generally

¹⁹⁰ See generally, Bartenstein, *supra* note 14, at 37–39, 44–45; Byers and Lalonde, *supra* note 10, at 1186.

¹⁹¹ See *supra* note 162.

¹⁹² See also, e.g., REQUIREMENTS FOR VESSELS NAVIGATING THE NORTHERN SEA ROUTE, *supra* note 105, at § 2.3 (“Icebreakers are permitted to navigate along the NSR under ice conditions that correspond to the designation of their respective ice resistance category. Operation of an icebreaker under more severe ice conditions than these envisaged by its ice resistance category is permitted in each individual case upon decision of the Administration (Headquarters) following a review of the appropriate documentation provided by the owner of the icebreaker confirming that the state of the hull, machinery and systems of re [sic] particular icebreaker is such as to ensure the necessary navigation safety in the NSR area, as well as preclude a possibility of pollution of the sea.”).

¹⁹³ United Nations Convention on the Law of the Sea Art. 42(2), Dec. 10, 1982, 1833 U.N.T.S. 397.

¹⁹⁴ *Id.* Art. 234.

¹⁹⁵ *Id.* Art. 42(2) (Notably, this assessment does not include the operational application of these legal regimes. As mentioned previously, operational application is not assessed in this paper due to the requirement for brevity. Suffice it to say that commentators have called into question the practical application of these legal regimes. See, e.g., *supra* notes 116, 121–23, and 135.).

consistent with internationally recognized norms for vessels operating in polar environments.¹⁹⁶

Article 58: Rights and Duties of Other States in the Exclusive Economic Zone

1. In the exclusive economic zone, all States, whether coastal or land-locked, enjoy, subject to the relevant provisions of this Convention, the freedoms referred to in article 87 of navigation and overflight and of the laying of submarine cables and pipelines, and other internationally lawful uses of the sea related to these freedoms, such as those associated with the operation of ships, aircraft and submarine cables and pipelines, and compatible with the other provisions of this Convention.
2. Articles 88 to 115 and other pertinent rules of international law apply to the exclusive economic zone in so far as they are not incompatible with this Part.
3. In exercising their rights and performing their duties under this Convention in the exclusive economic zone, States shall have due regard to the rights and duties of the coastal State and shall comply with the laws and regulations adopted by the coastal State in accordance with the provisions of this Convention and other rules of international law in so far as they are not incompatible with this Part.¹⁹⁷

Article 58 secures the right of freedom of navigation in the EEZ,¹⁹⁸ but that right is limited. Article 58 provides that vessels exercising their rights to navigate through the EEZ “*shall comply with the laws and regulations adopted by the coastal State in accordance with the provisions of this Convention and other rules of international law in so far as they are not incompatible with this Part.*”¹⁹⁹ The plain language tends to support the U.S. position that freedom of navigation is paramount. However, it also provides for the application of other provisions of UNCLOS. The hierarchy of various Articles in an apparent conflict is unclear.

It is reasonable to interpret the compatibility requirement of Article 58 consistent with the requirement in Article 42 on transit passage. The mere possibility that a vessel may be prohibited from transiting through an area

¹⁹⁶ See generally *supra* note 168.

¹⁹⁷ United Nations Convention on the Law of the Sea Art. 58, Dec. 10, 1982, 1833 U.N.T.S. 397, http://www.un.org/depts/los/convention_agreements/texts/unclos/part5.htm.

¹⁹⁸ *Id.* Art. 58(1) (emphasis added).

¹⁹⁹ *Id.* Art. 58(3).

regulated pursuant to Article 234 due to the threat the vessel presents to the environment, does not equate to “discriminat[ing] in form or in fact among foreign ships or [] hav[ing] the practical effect of denying, hampering or impairing the right”²⁰⁰ of freedom of navigation in the EEZ.²⁰¹

Article 233: Safeguards With Respect to Straits Used for International Navigation

Nothing in sections 5, 6 and 7 affects the legal regime of straits used for international navigation. However, if a foreign ship other than those referred to in section 10 has committed a violation of the laws and regulations referred to in article 42, paragraph 1(a) and (b), causing or threatening major damage to the marine environment of the straits, the States bordering the straits may take appropriate enforcement measures and if so shall respect mutatis mutandis the provisions of this section.²⁰²

Sections 5, 6, and 7 do not impact transit passage,²⁰³ and UNCLOS expressly identifies when a specific legal authority established under UNCLOS will not be interpreted to displace “the legal regime of straits used for international navigation.”²⁰⁴ Article 234 is in section 8, and was *not* similarly precluded from displacing the transit passage regime.²⁰⁵ This is evidence that the drafters of UNCLOS knew very well how to make clear that specific authority provisions would not affect transit passage.

Consequently, Article 233 offers strong support to the proposition that Article 234 can “affect[] the legal regime of straits used for international navigation,”²⁰⁶ because the drafters could have clearly indicated that Article 234 should be subservient to transit passage had that been their intent.

Article 234: Ice-Covered Areas

Coastal States have the right to adopt and enforce non-discriminatory laws and regulations for the prevention,

²⁰⁰ *Id.* Art. 42(2).

²⁰¹ *See* Section III.E.2.d, *supra*.

²⁰² United Nations Convention on the Law of the Sea Art. 233, Dec. 10, 1982, 1833 U.N.T.S. 397, http://www.un.org/depts/los/convention_agreements/texts/unclos/part12.htm.

²⁰³ *Id.* (Section 5 addresses International Rules and National Legislation to Prevent, Reduce and Control Pollution of the Marine Environment; Section 6 addresses Enforcement of the Rules and Legislation adopted under Section 5; and Section 7 addresses Safeguards pertaining to the enforcement mechanisms under Section 6, relating to the conduct of investigations, legal proceedings, etc.).

²⁰⁴ *Id.*

²⁰⁵ *See* Bartenstein, *supra* note 14, at 34 (discussing how Article 233 might impact the interpretation of Article 234).

²⁰⁶ United Nations Convention on the Law of the Sea Art. 233, *supra* note 202.

reduction and control of marine pollution from vessels in ice-covered areas within the limits of the exclusive economic zone, where particularly severe climatic conditions and the presence of ice covering such areas for most of the year create obstructions or exceptional hazards to navigation, and pollution of the marine environment could cause major harm to or irreversible disturbance of the ecological balance. Such laws and regulations shall have due regard to navigation and the protection and preservation of the marine environment based on the best available scientific evidence.²⁰⁷

The plain language of Article 234 provides coastal states with the exceptional authority to adopt and enforce laws to protect the environment in their EEZs due to the unique dangers presented in areas where ice covers water for most of the year. Article 234 requires balancing between navigation and environmental protection.²⁰⁸ The language itself establishes that, in instances where risk to the environment outweighs the right of navigation, Article 234 provides an exception to the right of transit passage when all seven Article 234 requirements are satisfied.²⁰⁹

Article 236: Sovereign Immunity

The provisions of this Convention regarding the protection and preservation of the marine environment do not apply to any warship, naval auxiliary, other vessels or aircraft owned or operated by a State and used, for the time being, only on government non-commercial service. However, each State shall ensure, by the adoption of appropriate measures not impairing operations or operational capabilities of such vessels

²⁰⁷ United Nations Convention on the Law of the Sea Art. 234, *supra* note 12.

²⁰⁸ Article 234 states in relevant part that the laws “shall have due regard to navigation and the protection and preservation of the marine environment based on the best available scientific evidence.” Due regard is required for both the right of navigation AND for protection and preservation of the environment. This suggests that there is balancing between two important goals of UNCLOS: freedom of navigation and the right and responsibility of nations to protect the environment. Consequently, the most reasonable interpretation of Article 234 is that there is a rebuttable presumption that a right to transit passage exists, subject to a demonstration by the coastal state that a vessel does not comply with laws enacted pursuant to Article 234, thereby presenting a threat to the environment. *See also* Section II.E.3, *infra* (discussing a rebuttable presumption of right to transit passage); United Nations Convention on the Law of the Sea Art. 192, Dec. 10, 1982, 1833 U.N.T.S. 397, http://www.un.org/depts/los/convention_agreements/texts/unclos/closindx.htm (“States have the obligation to protect and preserve the marine environment.”). *But see* United Nations Convention on the Law of the Sea Art. 38, Dec. 10, 1982, 1833 U.N.T.S. 397, http://www.un.org/depts/los/convention_agreements/texts/unclos/closindx.htm (“all ships and aircraft enjoy the right of transit passage, which shall not be impeded.”); *see also* Bartenstein, *supra* note 14, at 39.

²⁰⁹ *See, e.g.,* McRae, *supra* note 68, at 18.

or aircraft owned or operated by it, that such vessels or aircraft act in a manner consistent, so far as is reasonable and practicable, with this Convention.²¹⁰

Article 236 clarifies that Article 234 “do[es] not apply to any warship, naval auxiliary, other vessels or aircraft owned or operated by a State and used, for the time being, only on government non-commercial service.”²¹¹ To the extent either the Canadian or Russian regulatory regimes under Article 236 are applied to any state vessel or any vessel operated by a state, then that portion of the regulatory regime, or application thereof, is clearly in violation of Article 236.²¹² This specifically places the portion of the Canadian AWPPA that pertains to application of state vessels clearly outside the authority bestowed by Article 234 since that portion of AWPPA implies state owned vessels are subject to AWPPA jurisdiction.²¹³

This Article clarifies that Article 234 has little, if any, impact on current U.S. maritime activity. State vessels are explicitly excluded from application, and, as discussed above, commercial vessels are substantially complying with Article 234.²¹⁴

H. Summary

There are approximately 436 Articles that comprise UNCLOS and its Annexes, and sometimes many competing Articles can be applicable to certain factual scenarios.²¹⁵ When there is a question of which competing Article has primacy in a given scenario, it is best to interpret the provisions

²¹⁰ United Nations Convention on the Law of the Sea Art. 236, *supra* note 36.

²¹¹ *Id.*; see also Pedrozo, *supra* note 14, at 757, 770–71; see Bartenstein, *supra* note 14, at 42; McRae, *supra* note 68, at 17–18.

²¹² See *supra* note 36.

²¹³ Arctic Waters Pollution Prevention Act, R.S.C. 1985, c. A-12, § 12(2) states:

(2) The Governor in Council may by order exempt from the application of any regulations made under subsection (1) any ship or class of ship that is owned or operated by a sovereign power, other than Canada, where the Governor in Council is satisfied that

(a) appropriate measures have been taken by or under the authority of that sovereign power to ensure the compliance of the ship with, or with standards substantially equivalent to, standards prescribed by regulations made under paragraph (1)(a) that would otherwise be applicable to it within any shipping safety control zone; and

(b) in all other respects all reasonable precautions have been or will be taken to reduce the danger of any deposit of waste resulting from the navigation of the ship within that shipping safety control zone.

²¹⁴ See generally NAVIGATING THE NORTHERN SEA ROUTE ADVISORY, *supra* note 58, at 4–22; Int’l Maritime Org. [IMO] Res. A.1024(26), Guidelines for Ships Operating in Polar Waters (Dec. 2, 2009), [http://www.imo.org/blast/blastDataHelper.asp?data_id=29985&filename=A1024\(26\).pdf](http://www.imo.org/blast/blastDataHelper.asp?data_id=29985&filename=A1024(26).pdf); Ragner, *supra* note 116, at 119.

²¹⁵ See United Nations Convention on the Law of the Sea, Dec. 10, 1982, 1833 U.N.T.S. 397, http://www.un.org/depts/los/convention_agreements/texts/unclos/UNCLOS-TOC.htm.

such that each Article has meaning and ensures effect based on the plain meaning of the Articles.²¹⁶ If Article 234 is always subject to freedom of navigation in the EEZ, to transit passage, and to innocent passage regimes, Article 234 is essentially meaningless because it will never have any consequential application in the Arctic. Such an interpretation precludes application of the Article throughout the NWP and NSR, which pass through vast portions of Arctic coastal states' EEZ.²¹⁷ The result is a legal oxymoron because the Arctic EEZ will be completely unaffected by a provision *specifically* tailored to address the unique threats and risks presented in that environment. The overall weight of the plain language of the applicable Articles, the fact that the U.S. interpretation renders Article 234 ineffective, and that Article 234 has very specific application to polar environments, tend to support the Canadian and Russian position for unilateral adoption and enforcement.

It seems most appropriate to interpret the interrelation between Article 234 and the rights of freedom of navigation in the EEZ, transit passage, and innocent passage to establish a rebuttable presumption that these navigational rights can only be overcome by demonstrated non-compliance with lawful Article 234 requirements. Specifically, non-compliance would have to be severe enough to present significant risk of pollution to the marine environment that "could cause major harm to or irreversible disturbance of the ecological balance."²¹⁸ This provides "due regard" for navigation, but also provides a reasonable interpretation of Article 234, which requires balancing of navigational rights with "due regard to . . . the protection and preservation of the marine environment"²¹⁹ As required by the plain language of Article 234, there must be a balancing of these two important coastal state responsibilities, protecting freedom of navigation and protecting the environment.²²⁰

Accordingly, when operating in the Arctic, coastal states have the responsibility to ensure that navigation is not only "free," but that it is executed in a manner that is safe and protects the environment,²²¹ especially in

²¹⁶ See *D. Ginsberg & Sons, Inc.*, *supra* note 69, at 208 ("the cardinal rule that, if possible, effect shall be given to every clause and part of a statute." (citing *Market Co. v. Hoffman*, 101 U.S. 112, 115 (1879); *Ex parte Public National Bank*, 278 U.S. 101, 104 (1928))).

²¹⁷ The NWP and the NSR constitute vast portions of the area subject to Article 234 authority, e.g., "ice-covered areas within the limits of the exclusive economic zone." See *supra* note 17.

²¹⁸ See Bartenstein, *supra* note 14, at 45.

²¹⁹ United Nations Convention on the Law of the Sea Art. 234, *supra* note 12.

²²⁰ See *supra* note 208.

²²¹ United Nations Convention on the Law of the Sea Art. 192, Dec. 10, 1982, 1833 U.N.T.S. 397, http://www.un.org/depts/los/convention_agreements/texts/unclos/closindx.htm ("States have the obligation to protect and preserve the marine environment."); see also *supra* note 208.

light of the unique threats presented by an ice-laden navigational area.²²² Coastal states owe this obligation to everyone plying their ice-laden waters. Moreover, the coastal states also owe this obligation to their own citizens who rely on the government to protect them from environmental disasters that can threaten life and livelihood if major environmental damage occurred because the coastal state failed to establish appropriate prevention and response capabilities. Nevertheless, under this line of reasoning, it would be incumbent upon the coastal state to demonstrate balancing these two important interests and finding non-compliance that threatened to cause “major harm to or irreversible disturbance of the ecological balance”²²³ before denying entry to a vessel pursuant to Article 234 authority.²²⁴ Consequently, only under the most extreme set of circumstances would a coastal state be able to actually “hamper” a vessel’s right to freedom of navigation, transit passage, or innocent passage.

IV. Conclusion

A. *The Way Ahead*

1. U.S. Recalcitrance is Deviant and Counterproductive Internationally and Domestically

Given the relative consistency of the unilateral authority being exercised by Canada and Russia, it appears customary international law has developed, or is developing right now, with respect to coastal state authority on ice-covered areas within the EEZ.²²⁵ The rest of the world is substantially complying with the Canadian and Russian regimes that rely upon Article 234 as a legal basis.²²⁶ The U.S. position regarding Article 234 deviates from the norm that is now being established in the Arctic.²²⁷

²²² See United Nations Convention on the Law of the Sea Art. 234, *supra* note 12.

²²³ *Id.*

²²⁴ This would likely require a case-by-case analysis of the factors before and after performing a measure as drastic as denying entry to a particular vessel for non-compliance with regulations adopted and enforced pursuant to Article 234. See also Bartenstein, *supra* note 14, at 45.

²²⁵ See BRUBAKER, *supra* note 14, at 45, 94–95, 109.

²²⁶ See, e.g., *supra* notes 71 and 72.

²²⁷ It is worth noting that there were three nations primarily involved with the drafting and adoption of Article 234; the U.S., Russia, and Canada. See Bartenstein, *supra* note 14, at 24–25; Huebert, *supra* note 71, at 249–51. Therefore the interpretations of these nations should be given considerable regard when determining the meaning and application of the Article. The lack of agreement on meaning, and the deviation in application, among these three nations has served to further confuse the issue. However, two of those nations have a consistent interpretation and application that the intent of the Article was to provide the unilateral right to establish and enforce laws under the narrow exception carved out by Article 234. Furthermore, the context in which the Article was developed and adopted is helpful in determining the intent of the Article; the MANHATTAN voyages and the adoption of the

2. U.S. Assertiveness in Arctic Territory

U.S. citizens would benefit from the U.S. government asserting its authority in the Arctic consistent with other Arctic nations. The United States would have to recognize and respect the assertion of other nations' rights pursuant to Article 234. Doing so would enhance sovereignty and stability in the Arctic by augmenting consistency in Arctic legal authorities, and protecting the environment and interests of all people living in the Arctic.²²⁸

Recognizing the authority granted by Article 234 would allow the U.S. to focus and apply its authority to the region in a manner consistent with Canada and Russia,²²⁹ This would provide additional opportunities to enhance funding to address U.S. shortcomings in the Arctic, and would allow for the recoupment of actual expenses for services rendered to vessels transiting through U.S. Arctic waters.²³⁰

B. Benefits of Planning and Investment

The differences in the interpretation of Article 234 are not without substantive effects. Imagine, for a moment, a deepwater port in the U.S. Arctic, perhaps Barrow, with four U.S. Arctic-capable icebreakers that regularly patrol and resupply the port.²³¹ At the port would be equipment

1970 Canadian Arctic Waters Pollution Prevention Act, which the world community, including Canada, found inconsistent with international law at the time, provide evidence that one of the primary intentions of Article 234 was to provide authority that would make such laws and regulations consistent with international law. *See generally* Moore, *supra* note 14, at 18–23; Huebert, *supra* note 71, at 249–56; FRANCKX, *supra* note 92, at 75–76, 88; NORDQUIST ET AL., *supra* note 14, at 398.

²²⁸ *See* Byers and Lalonde, *supra* note 10, at 1207–10 (recommending U.S. and Canada coordinate to ensure regulatory regimes in Alaska and the Canadian Arctic are consistent in order to collaboratively address environmental, safety, and security issues).

²²⁹ *Id.*

²³⁰ *See, e.g., supra* notes 115–18; It should be noted that the decision to charge a stricken vessel with fees for services rendered generally carries with it an important balancing test of its own. While the possibility of being charged fees may help to dissuade reckless ventures into the Arctic, it may also dissuade those in peril from requesting assistance until it is too late for an effective response. Consequently, the decision regarding whether to charge fees for services rendered in emergent search-and-rescue type incidents should not be taken lightly and should be primarily made by those with decades of experience, and whose agency has been performing the mission for more than 200 years—the U.S. Coast Guard. Nonetheless, having this option available will help to offset the costs. With wise implementation based on good judgment and experience, fees for services rendered could likely have the desired effect of dissuading reckless ventures into the Arctic, but not dissuading mariners from requesting assistance when needed.

²³¹ *See* Bert, *supra* note 11 (“The U.S. government should invest in icebreakers, aircraft, and shore-based infrastructure. A ten-year plan should include the building of at least two heavy icebreakers, at a cost of approximately \$1 billion a piece, and air station in Point Barrow, Alaska, with at least three helicopters. Such an air station would cost less than \$20 million, with operating, maintenance, and personnel costs comparable to other northern military

stockpiled for responding to an environmental threat, and an air station housing aviation assets to respond to emergency situations. These assets would also provide enhanced maritime domain awareness, which delivers the capability to track the development of dangerous situations. This capability would enable responders to engage in preventative action to stave off the development of an emergency situation or catastrophe.

There is a large shipping vessel coming through the Northwest Passage or the Northern Sea Route, and it manages to get stuck in ice just north of the Bering Strait. If the vessel tries ramming through the ice to free itself, it could damage its hull, releasing petroleum products northward of the bottleneck created by the Bering Strait.²³² The potential loss of life and damage to the environment could be catastrophic, especially during the bowhead whale migration through the Strait. The catastrophe is averted because the United States has an icebreaker that can respond that same day. The vessel is safely freed from the ice and continues on its journey south without further incident. Success!

The United States would have the ability to charge the shipping company costs for services rendered to free the vessel and avert the potential crisis.²³³ A small price to pay for avoiding a potential disaster that would likely have been more costly in terms of environmental damage, possible loss of human life, loss of the vessel, and the financial costs associated with mitigating a significant pollution event. Any fees the U.S. Government charges for services rendered, with the billions of dollars in revenue the obtained from offshore oil leases in the Arctic,²³⁴ could make it financially feasible to invest in the region.

C. Risks in Current Strategy

Unfortunately, the response and capability assets described in the scenario above are not in place, and there is no plan to ensure such measures

facilities. Finally developing a deepwater port with response presence and infrastructure is critical.”).

²³² This is a definite possibility given that many vessels have recently found themselves stuck in ice and in need of assistance in polar environments. *See, e.g.,* Shannon Riddle, *U.S. Coast Guard Vessel Assists Sailboat Trapped in Arctic Ice*, KTUU (July 13, 2014), <http://www.ktuu.com/news/news/us-coast-guard-vessel-assists-sailboat-trapped-in-Arctic-ice/26932292>; *see also* Byers and Lalonde, *supra* note 10, at 1197-98 (describing a casualty in the Antarctic that “could just as easily have sunk in the Northwest Passage[.]”).

²³³ *See supra* note 230.

²³⁴ *See* Public Comments, Proposed Oil and Gas Lease Sale 242, Alaska OCS Region, Beaufort Sea Planning Area, *supra* note 32; Moore et al., *supra* note 32; Bert, *supra* note 11; ALASKA OCS REGION, MINERALS MANAGEMENT SERVICE, U.S. DEPARTMENT OF THE INTERIOR, FINAL BID RECAP, *supra* note 32.

in the future.²³⁵ Without these measures, American response capability would be extremely limited, as Congress and the Congressional Research Service recognize.²³⁶ The results could be catastrophic to life and the environment as days or even weeks passed as assets “rush” to the area in an attempt to simply begin mounting a response to an incident.²³⁷ There could be loss of the vessel, human life, and a pollution event that could destroy wildlife populations such as bowhead whales, walruses, ringed seals, and eiders, among other at-risk species.²³⁸ There would also be the possibility of a resulting humanitarian crisis because local populations would no longer have their primary food supply. The United States has accepted these risks through its inaction.

D. Conclusion

While the United States sits idly by, Russia, Canada, China, and a host of other nations are building icebreakers and asserting their sovereign interests in the Arctic to protect and secure their environment and citizens in the Arctic.²³⁹ Meanwhile, the U.S. cannot, without help from other nations, ensure that its own citizens have heating fuel and that their food supply can be protected in the event of an environmental disaster, such as a significant oil spill or other maritime casualty in the Arctic.²⁴⁰ America has largely failed in

²³⁵ See, e.g., *supra* notes 20–23.

²³⁶ See Letter from Rebecca J. Lent, *supra* note 23, at 8; Knickmeyer, *supra* note 2 (quoting U.S. Rep. John Garamendi, D-Cal.); Koren, *supra* note 1 (quoting U.S. Sen. Lisa Murkowski, R-Alaska, and U.S. Rep. Rick Larsen, D-Wash.); O’Rourke, *supra* note 3, at 8–9, 41; Francis, *supra* note 43 (quoting U.S. Sen. Mark Begich, D-Alaska); see also Bert, *supra* note 11 (“In the lower forty-eight states, response time to an oil spill or capsized vessel is measured in hours. In Alaska, it could take days or weeks to get the right people and resources on scene. The nearest major port is in the Aleutian Islands, thirteen hundred miles from Point Barrow, and response aircraft are more than one thousand miles south in Kodiak, blocked by a mountain range and hazardous flying conditions. The Arctic shores lack infrastructure to launch any type of disaster response, or to support the growing commercial development in the region.”); see also NAT’L ACAD. OF SCIENCES, OCEAN STUD. BD., POLAR RES. BD., MARINE BD., REPORT IN BRIEF, RESPONDING TO OIL SPILLS IN THE U.S. ARCTIC MARINE ENV’T (April 2014), <http://dels.nas.edu/resources/static-assets/materials-based-on-reports/reports-in-brief/Arctic-Oil-Spill-Brief-Final02.pdf> (“Lack of infrastructure and oil spill response equipment in the U.S. Arctic could present a significant liability in the event of a large oil spill.”).

²³⁷ See Letter from Rebecca J. Lent, *supra* note 23, at 1, 5, 8; Shaw, *supra* note 21; UNITED STATES COAST GUARD, ARCTIC STRATEGY, *supra* note 10, at 20–21; Bert, *supra* note 11 (“In Alaska, it could take days or weeks to get the right people and resources on scene. The nearest major port is in the Aleutian Islands, thirteen hundred miles from Point Barrow, and response aircraft are more than one thousand miles south in Kodiak, blocked by a mountain range and hazardous flying conditions. The Arctic shores lack infrastructure to launch any type of disaster response, or to support the growing commercial development in the region.”).

²³⁸ See *supra* notes 38, 39, 42, 49, 149–52, and 237.

²³⁹ See *supra* notes 47–49, 102–10, 116–21, and 126–30.

²⁴⁰ See *supra* notes 2–8.

its sovereign responsibilities to the citizens of Alaska, who still rely upon subsistence activities for survival and livelihood.²⁴¹

The United States is overdue in tackling its sovereign responsibilities in the Arctic. It should acknowledge the unique authority provided by Article 234 to address these challenges, and use its sovereign authority to protect its territory and citizens in the Arctic. The U.S. is an Arctic nation—it is well past time it acts like it. Instead of arguing with its Arctic neighbors, the U.S. should applaud their efforts and coordinate similar efforts to ensure safety and security throughout the Arctic.²⁴²

²⁴¹ See Letter from Rebecca J. Lent, *supra* note 23, at 1, 5; ALASKA ESKIMO WHALING COMM'N, *supra* note 23; UNITED STATES COAST GUARD, ARCTIC STRATEGY, *supra* note 10; THE PEW ENV'T GROUP, *supra* note 20.

²⁴² See Byers and Lalonde, *supra* note 10, at 1207–10 (recommending U.S. and Canada coordinate to ensure regulatory regimes in Alaska and the Canadian Arctic are consistent in order to collaboratively address environmental, safety, and security issues).

Appendix A. Diplomatic Note from the U.S. Embassy to the Canadian Department of Foreign Affairs and International Trade

No. 625

The Embassy of the United States of America presents its compliments to the Department of Foreign Affairs and International Trade and has the honor to refer to the Northern Canada Vessel Traffic Services Zone Regulations (NORDREGs) which entered into effect on July 1, 2010.

The United States notes its support for the navigational safety and environmental protection objectives of NORDREGs and commends the Government of Canada for its efforts to promote the protection of the marine environment in the Arctic. As conditions in the Arctic continue to change and the volume of shipping traffic increases, Arctic coastal States need to consider ways to best protect and preserve this sensitive region.

The Government of the United States of America advises, however, that it continues to be concerned that the NORDREGs are inconsistent with important law of the sea principles related to navigational rights and freedoms and recommends that the Government of Canada submit its vessel traffic services and mandatory ship reporting system to the IMO for adoption.

Among our concerns, the NORDREGs purport to require Canadian permission for foreign flagged vessels to enter and transit certain areas that are within Canada's claimed exclusive economic zone and territorial sea and that enforcement action could include prosecution. In the view of the United States, this is not consistent with navigational rights and freedoms within the exclusive economic zone, the right of innocent passage within the territorial sea, and the right of transit passage through straits used for international navigation, all of which are bedrock principles of the law of the sea.

DIPLOMATIC NOTE

While Article 234 of the Law of the Sea Convention (the Convention) allows coastal states to adopt and enforce certain laws and regulations in ice-covered areas within the limits of their exclusive economic zones, these laws and regulations must be for the prevention, reduction and control of marine pollution from vessels and have "due regard to navigation." The United States does not believe that requiring permission to transit these areas meets the condition set forth in Article 234 of having due regard to navigation.

Additionally, the NORDREGs do not provide express exemptions for sovereign immune vessels from the applicability and enforcement of the final regulations. While the NORDREGs note that enforcement action would be consistent with international law, the United States wishes to note that, by virtue of Article 236 of the Convention, sovereign immune vessels are immune not only from enforcement of NORDREGs but also their applicability. The United States expects that this is a matter upon which our governments agree.

Finally, from a safety of navigation perspective, the United States has concerns about whether the NORDREGs vessel traffic services system is consistent with IMO guidance on the establishment of vessel traffic services.

In our view, measures like those contained in NORDREGs should be proposed to and adopted by the IMO to provide a solid legal foundation and broad international acceptance. The United States would welcome the opportunity to work with Canada and with others at the IMO on this matter.

The United States also reiterates its long-standing view that the Northwest Passage constitutes a strait used for international navigation. At a minimum, a measure such as the NORDREGs for an international strait would need to be proposed at and adopted by the IMO.

The United States noted with concern the references to "sovereignty" in the statements accompanying the announcement of the regulations. The United States wishes to note that the NORDREGs do not, and cannot as a matter of law, increase the "sovereignty" of Canada over any territory or marine area.

The Embassy of the United States of America avails itself of this opportunity to renew to the Department of Foreign Affairs and International Trade the assurances of its highest consideration.

Embassy of the United States of America

Ottawa, August 18, 2010.



Appendix B. Letter from U.S. Minister for Economic Energy and Environment Affairs to Canadian Manager of Navigation Safety and Radiocommunications, Operations, & Environmental Programs



Embassy of the United States of America

Ottawa, Canada
March 19, 2010

Robert Turner, Manager,
Navigation Safety and Radiocommunications,
Operations & Environmental Programs,
Marine Safety Directorate,
Department of Transport,
Place de Ville, Tower C,
330 Sparks Street, Ottawa,
Ontario K1A 0N5

**Subject: *Canada Gazette*, Part I, Saturday, February 27th, 2010; Vol. 144, No. 9:
proposed Northern Canada Vessel Traffic Services Zone Regulations**

Dear Mr. Turner,

On behalf of the Government of the United States of America, the Embassy wishes to provide comments on the proposed Northern Canada Vessel Traffic Services Zone Regulations (NORDREG) published in the *Canada Gazette* on February 27, 2010.

The United States of America compliments the Government of Canada's continued efforts to provide for the safety of navigation and protection of the marine environment in the Arctic area. As conditions in the Arctic evolve, all Arctic coastal states will need to consider ways to protect and preserve this sensitive region. We note the collaborative efforts we have taken with Canada in this regard.

The notice of proposed regulations states that the proposed regulations are "consistent with international law regarding ice-covered areas." In light of this, the United States understands that Canada considers Article 234 of the Law of the Sea Convention (LOSC), entitled, "Ice-covered areas," to provide an international legal basis for its proposed NORDREG Zone Regulations. That article provides a coastal state with authorities to adopt and enforce certain laws and regulations for the prevention, reduction and control of marine pollution from vessels in ice-covered areas within the limits of its exclusive economic zone when certain conditions are met. While we appreciate Canada's stewardship efforts in the Arctic region, we wish to take this opportunity to express our concerns that the new regulations appear to be inconsistent with international law, including LOSC Article 234.

First, the regulatory impact analysis statement accompanying the proposed regulations indicates that Canadian permission would be required for foreign flagged vessels to enter and transit certain areas that are within Canada's claimed exclusive economic zone and territorial sea and that enforcement action could include prosecution. If so, this would be a sweeping infringement of freedom of navigation within the exclusive economic zone

and the right of innocent passage within the territorial sea, both of which are bedrock principles of the law of the sea. While Article 234 of the LOSC allows Coastal States to adopt and enforce certain laws and regulations in ice-covered areas within the limits of the exclusive economic zone, these laws and regulations must be for the prevention, reduction and control of marine pollution from vessels and have "due regard to navigation." The United States does not believe that requiring permission to transit these areas meets the obligation set forth in Article 234 of having due regard to navigation.

Second, under LOSC Article 234, laws and regulations for the prevention, reduction and control of marine pollution from vessels in ice-covered areas within the limits of the exclusive economic zone must also be non-discriminatory. The proposed regulations rely on Canada's Shipping Control Act, which exempts vessels chartered to the Canadian Forces. However, it appears neither the Shipping Control Act nor the proposed regulations contain a provision for similarly-situated foreign vessels. This would be discriminatory, in contravention of LOSC Article 234.

Third, while the Shipping Control Act exempts vessels belonging to a foreign military force, the proposed regulations do not appear to provide an exemption for all sovereign immune vessels, including chartered vessels carrying military supplies. However, LOSC Article 236 specifies that Article 234 is among those provisions of the Convention that "do not apply" to sovereign immune vessels.

Fourth, under LOSC Article 234, laws and regulations adopted must be based on the "best available scientific evidence." The Notice of the regulations did not refer to any scientific studies in developing the proposed regulations. The United States is interested to know the scientific evidence that was considered in the development of these proposed regulations. Article 234 is likewise limited to "ice-covered areas," namely those areas covered by ice for "most of the year." Recognizing that the Notice states that "ice levels have recently been observed to be at an all-time low," the United States is likewise interested to know what information has been used to determine how this condition has been met throughout the entire area covered by the NORDREG Zone.

Finally, we note that the usual process for ensuring safety of navigation and prevention of pollution from ships is to establish such measures at the International Maritime Organization (IMO). In this regard, we would like to bring to Canada's attention relevant provisions of the International Convention for the Safety of Life at Sea, in particular Chapter V, Regulations 10 and 11, that require mandatory ship routing and reporting systems to be submitted to the IMO for adoption. We would be interested to learn whether Canada will avail itself of such an approach. The United States would welcome the opportunity to work with Canada and with others at the IMO in this regard.

The United States also reiterates its longstanding view that the Northwest Passage constitutes a strait used for international navigation. At a minimum, a measure such as the NORDREG Zone Regulations for an international strait would need to be proposed and adopted at the IMO.

In conclusion, we wish to emphasize that the United States does not oppose the Government of Canada's voluntary vessel traffic services zone and voluntary provisions for vessel registration and reporting. We likewise do not discount the need for action to protect the sensitive areas of the Arctic.

The United States supports the stewardship goals of the proposed NORDREG Zone Regulations. Such proposals, however, must have a firm international legal foundation and be implemented in a manner consistent with the law of the sea.

Thank you for the opportunity to comment on the proposed regulations. We look forward to our continued collaboration on this and other areas of mutual interest.

Sincerely,

A handwritten signature in black ink, appearing to read 'Eric Benjaminson', with a stylized flourish at the end.

Eric Benjaminson
Minister – Counselor, Economic Energy and
Environment Affairs

Appendix C. Canadian Coast Guard, Vessel Traffic Reporting Arctic Canada Traffic Zone (NORDREG)



Canadian Coast Guard

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Vessel Traffic Reporting Arctic Canada Traffic Zone (NORDREG)

The purpose of this notice is to describe to shipboard personnel the ship reporting procedures to be followed by vessels when within or intending to enter the waters of Arctic Canada.

Northern Canada Vessel Traffic Services Zone (NORDREG) includes the shipping safety control zones prescribed by the Shipping Safety Control Zones Order, the waters of Ungava Bay, Hudson Bay and Kugmallit Bay that are not in a shipping safety control zone, the waters of James Bay, the waters of the Koksoak River from Ungava Bay to Kuujuaq, the waters of Feuilles Bay from Ungava Bay to Tasiujaq, the waters of Chesterfield Inlet that are not within a shipping safety control zone, and the waters of Baker Lake, and the waters of the Moose River from James Bay to Moosonee.

NORDREG objectives:

The Northern Canada Vessel Traffic Services Zone Regulations formally establish the Northern Canada Vessel Traffic Services (NORDREG) Zone and, consistent with international law regarding ice-covered areas, implement the requirements for vessels to report information prior to entering, while operating within and upon exiting Canada's northern waters. The Regulations replace the informal NORDREG Zone (i.e. Arctic Canada VTS zone) and the voluntary reporting system that has existed in Canada's northern waters, enhancing the effectiveness of the official NORDREG Zone and Canada's ability to facilitate the safe and efficient movement of marine traffic. The Regulations will enhance the safety of vessels, crew and passengers, and will safeguard the unique and fragile Arctic marine environment. The Regulations are designed to ensure that the most effective services are available to accommodate current and future levels of marine traffic.

The Northern Canada Vessel Traffic Services Zone regulations apply to:

- a. vessels of 300 gross tonnage or more;
- b. vessels that are engaged in towing or pushing another vessel, if the combined gross tonnage of the vessel and the vessel being towed or pushed is 500 gross tonnage or more; and
- c. vessels that are carrying as cargo a pollutant or dangerous goods, or that are engaged in towing or pushing a vessel that is carrying as cargo a pollutant or dangerous goods.

Reports required:

Type of report

Every report required by any of sections below must begin with the term "NORDREG" and be followed by whichever of the following two letters corresponds to the report:

1. "SP", in the case of a sailing plan report;
2. "PR", in the case of a position report;
3. "FR", in the case of a final report;
4. "DR", in the case of a deviation report.

Sailing plan report

1. A sailing plan report must be provided

- a. when a vessel is about to enter the NORDREG Zone;
- b. more than one hour but not more than two hours before a vessel departs from a berth within the NORDREG Zone, unless the vessel is moving to another berth in the same port; and
- c. immediately before a vessel gets underway within the NORDREG Zone, if the vessel
 - i. has been stranded,
 - ii. has stopped as a result of a breakdown in the main propulsion or steering system, or
 - iii. has been involved in a collision.

Position report

1. A position report must be provided

- a. immediately after a vessel enters the NORDREG Zone; and
- b. daily at 1600 Coordinated Universal Time (UTC), if a vessel is underway within the NORDREG Zone, unless the information required by regulation 19-1, Long-range identification and tracking of ships, of Chapter V of SOLAS, is being transmitted in accordance with that regulation.

Additional position report

1. A position report must also be provided as soon as feasible after a vessel's master becomes aware of any of the following, if the vessel is within or about to enter the NORDREG Zone:
- a. another vessel in apparent difficulty;
 - b. any obstruction to navigation;
 - c. an aid to navigation that is not functioning properly or is damaged, out of position or missing;
 - d. any ice or weather conditions that are hazardous to safe navigation; and
 - e. a pollutant in the water.

Final report

1. A final report must be provided

- a. on the arrival of a vessel at a berth within the NORDREG Zone; and
- b. immediately before a vessel exits the NORDREG Zone.

Deviation report

1. A deviation report must be provided when

- a. a vessel's position varies significantly from the position that was expected based on the sailing plan report; or
- b. a vessel's intended voyage changes from the sailing plan report.

[Northern Canada Vessel Traffic Services Zone Regulations](#)

Address of report

Every report must be addressed to NORDREG CANADA and be provided to one of the Marine Communications and Traffic Services Centres that is designated by the Canadian Coast Guard to receive the report.

Please forward your information to Iqaluit MCTS via radio, facsimile, email, telex or telephone.

Iqaluit MCTS

P.O. Box 189
Iqaluit, NU
X0A 0H0

Telephone: 867-979-5269
Fax: 867-979-4264

NORDREG
Iqaluit MCTS
P.O. Box 189
Iqaluit, NU
X0A 0H0

Telephone: 867-979-5724
Fax: 867-979-4264

Email: iqaNordreg@innav.gc.ca

Telex (telefax): 063-15529
Telegraphic Identifier - NORDREG CANADA

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Date modified: 2013-06-24

Canadian Coast Guard, Vessel Traffic Reporting Arctic Canada Traffic Zone (NORDREG), http://www.ccg-gcc.gc.ca/eng/MCTS/Vtr_Arctic_Canada (last modified June 24, 2013).

Appendix D. Charts Depicting Russia's Icebreaker Escort Fees

**Tariffs for provision of icebreaking pilotage services provided by
the FSUE «Atomflot» in the Northern Sea Route water area**

For vessels with a gross tonnage up to 5 000

Table 1 – Tariffs for the summer-autumn navigation period							
Vessel's ice strengthening class	Tariff rate in Russian rubles per unit of vessel's gross tonnage						
	Pilotage within 1 zone	Pilotage within 2 zones	Pilotage within 3 zones	Pilotage within 4 zones	Pilotage within 5 zones	Pilotage within 6 zones	Pilotage within 7 zones
None	893,68	1072,42	1251,16	1429,90	1608,63	1787,37	1787,37
Ice 1	625,58	750,70	875,81	1000,93	1126,04	1251,16	1251,16
Ice 2	580,90	697,07	813,25	929,43	1045,61	1161,79	1161,79
Ice 3	536,21	643,45	750,70	857,94	965,18	1072,42	1072,42
Arc 4	446,84	536,21	625,58	714,95	804,32	893,68	893,68
Arc 5	442,37	530,85	619,32	707,80	796,27	884,75	884,75
Arc 6 – Arc 9	437,91	525,49	613,07	700,65	788,23	875,81	875,81

Table 2 – Tariffs for the winter-spring navigation period							
Vessel's ice strengthening class	Tariff rate in Russian rubles per unit of vessel's gross tonnage						
	Pilotage within 1 zone	Pilotage within 2 zones	Pilotage within 3 zones	Pilotage within 4 zones	Pilotage within 5 zones	Pilotage within 6 zones	Pilotage within 7 zones
Arc 4	1117,11	1340,53	1563,95	1787,37	2010,79	2234,21	2234,21
Arc 5	1105,94	1327,12	1548,31	1769,50	1990,68	2211,87	2211,87
Arc 6 – Arc 9	1094,76	1313,72	1532,67	1751,62	1970,58	2189,53	2189,53
Icebreaker 6 - Icebreaker 8	1083,59	1300,31	1517,03	1733,75	1950,47	2167,19	2167,19

For vessels with a gross tonnage from 5 001 up to 10 000

Table 3 – Tariffs for the summer-autumn navigation period							
Vessel's ice strengthening class	Tariff rate in Russian rubles per unit of vessel's gross tonnage						
	Pilotage within 1 zone	Pilotage within 2 zones	Pilotage within 3 zones	Pilotage within 4 zones	Pilotage within 5 zones	Pilotage within 6 zones	Pilotage within 7 zones
Her	804,32	965,18	1126,04	1286,91	1447,77	1608,63	1608,63
Ice 1	563,02	675,63	788,23	900,83	1013,44	1126,04	1126,04
Ice 2	522,81	627,37	731,93	836,49	941,05	1045,61	1045,61
Ice 3	482,59	579,11	675,63	772,14	868,66	965,18	965,18
Arc 4	402,16	482,59	563,02	643,45	723,88	804,32	804,32
Arc 5	398,14	477,76	557,39	637,02	716,65	796,27	796,27
Arc 6 – Arc 9	394,12	472,94	551,76	630,58	709,41	788,23	788,23

Table 4 – Tariffs for the winter-spring navigation period							
Vessel's ice strengthening class	Tariff rate in Russian rubles per unit of vessel's gross tonnage						
	Pilotage within 1 zone	Pilotage within 2 zones	Pilotage within 3 zones	Pilotage within 4 zones	Pilotage within 5 zones	Pilotage within 6 zones	Pilotage within 7 zones
Arc 4	1005,40	1206,47	1407,55	1608,63	1809,71	2010,79	2010,79
Arc 5	995,34	1194,41	1393,48	1592,55	1791,61	1990,68	1990,68
Arc 6 – Arc 9	985,29	1182,35	1379,40	1576,46	1773,52	1970,58	1970,58
Icebreaker 6 - Icebreaker 8	975,23	1170,28	1365,33	1560,37	1755,42	1950,47	1950,47

For vessels with a gross tonnage from 10 001 up to 20 000

Table 5 – Tariffs for the summer-autumn navigation period							
Vessel's ice strengthening class	Tariff rate in Russian rubles per unit of vessel's gross tonnage						
	Pilotage within 1 zone	Pilotage within 2 zones	Pilotage within 3 zones	Pilotage within 4 zones	Pilotage within 5 zones	Pilotage within 6 zones	Pilotage within 7 zones
Her	714,95	857,94	1000,93	1143,92	1286,91	1429,90	1429,90
Ice 1	500,46	600,56	700,65	800,74	900,83	1000,93	1000,93
Ice 2	464,72	557,66	650,60	743,55	836,49	929,43	929,43
Ice 3	428,97	514,76	600,56	686,35	772,14	857,94	857,94
Arc 4	357,47	428,97	500,46	571,96	643,45	714,95	714,95
Arc 5	353,90	424,68	495,46	566,24	637,02	707,80	707,80
Arc 6 – Arc 9	350,32	420,39	490,45	560,52	630,58	700,65	700,65

Table 6 – Tariffs for the winter-spring navigation period							
Vessel's ice strengthening class	Tariff rate in Russian rubles per unit of vessel's gross tonnage						
	Pilotage within 1 zone	Pilotage within 2 zones	Pilotage within 3 zones	Pilotage within 4 zones	Pilotage within 5 zones	Pilotage within 6 zones	Pilotage within 7 zones
Arc 4	893,68	1072,42	1251,16	1429,90	1608,63	1787,37	1787,37
Arc 5	884,75	1061,70	1238,65	1415,60	1592,55	1769,50	1769,50
Arc 6 – Arc 9	875,81	1050,97	1226,14	1401,30	1576,46	1751,62	1751,62
Icebreaker 6 - Icebreaker 8	866,87	1040,25	1213,62	1387,00	1560,37	1733,75	1733,75

For vessels with a gross tonnage from 20 001 up to 40 000

Table 7 – Tariffs for the summer-autumn navigation period							
Vessel's ice strengthening class	Tariff rate in Russian rubles per unit of vessel's gross tonnage						
	Pilotage within 1 zone	Pilotage within 2 zones	Pilotage within 3 zones	Pilotage within 4 zones	Pilotage within 5 zones	Pilotage within 6 zones	Pilotage within 7 zones
Her	536,21	643,45	750,70	857,94	965,18	1072,42	1072,42
Ice 1	375,35	450,42	525,49	600,56	675,63	750,70	750,70
Ice 2	348,54	418,24	487,95	557,66	627,37	697,07	697,07
Ice 3	321,73	386,07	450,42	514,76	579,11	643,45	643,45
Arc 4	268,11	321,73	375,35	428,97	482,59	536,21	536,21
Arc 5	265,42	318,51	371,59	424,68	477,76	530,85	530,85
Arc 6 – Arc 9	262,74	315,29	367,84	420,39	472,94	525,49	525,49

Table 8 – Tariffs for the winter-spring navigation period							
Vessel's ice strengthening class	Tariff rate in Russian rubles per unit of vessel's gross tonnage						
	Pilotage within 1 zone	Pilotage within 2 zones	Pilotage within 3 zones	Pilotage within 4 zones	Pilotage within 5 zones	Pilotage within 6 zones	Pilotage within 7 zones
Arc 4	670,26	804,32	938,37	1072,42	1206,47	1340,53	1340,53
Arc 5	663,56	796,27	928,99	1061,70	1194,41	1327,12	1327,12
Arc 6 – Arc 9	656,86	788,23	919,60	1050,97	1182,35	1313,72	1313,72
Icebreaker 6 - Icebreaker 8	650,16	780,19	910,22	1040,25	1170,28	1300,31	1300,31

For vessels with a gross tonnage from 40 001 up to 100 000

Table 9 – Tariffs for the summer-autumn navigation period							
Vessel's ice strengthening class	Tariff rate in Russian rubles per unit of vessel's gross tonnage						
	Pilotage within 1 zone	Pilotage within 2 zones	Pilotage within 3 zones	Pilotage within 4 zones	Pilotage within 5 zones	Pilotage within 6 zones	Pilotage within 7 zones
Her	446,84	536,21	625,58	714,95	804,32	893,68	893,68
Ice 1	312,79	375,35	437,91	500,46	563,02	625,58	625,58
Ice 2	290,45	348,54	406,63	464,72	522,81	580,90	580,90
Ice 3	268,11	321,73	375,35	428,97	482,59	536,21	536,21
Arc 4	223,42	268,11	312,79	357,47	402,16	446,84	446,84
Arc 5	221,19	265,42	309,66	353,90	398,14	442,37	442,37
Arc 6 – Arc 9	218,95	262,74	306,53	350,32	394,12	437,91	437,91

Table 10 – Tariffs for the winter-spring navigation period							
Vessel's ice strengthening class	Tariff rate in Russian rubles per unit of vessel's gross tonnage						
	Pilotage within 1 zone	Pilotage within 2 zones	Pilotage within 3 zones	Pilotage within 4 zones	Pilotage within 5 zones	Pilotage within 6 zones	Pilotage within 7 zones
Arc 4	558,55	670,26	781,97	893,68	1005,40	1117,11	1117,11
Arc 5	552,97	663,56	774,15	884,75	995,34	1105,94	1105,94
Arc 6 – Arc 9	547,38	656,86	766,33	875,81	985,29	1094,76	1094,76
Icebreaker 6 - Icebreaker 8	541,80	650,16	758,52	866,87	975,23	1083,59	1083,59

For vessels with a gross tonnage more than 100 000

Table 11 – Tariffs for the summer-autumn navigation period							
Vessel's ice strengthening class	Tariff rate in Russian rubles per unit of vessel's gross tonnage						
	Pilotage within 1 zone	Pilotage within 2 zones	Pilotage within 3 zones	Pilotage within 4 zones	Pilotage within 5 zones	Pilotage within 6 zones	Pilotage within 7 zones
Her	268,11	321,73	375,35	428,97	482,59	536,21	536,21
Ice 1	187,67	225,21	262,74	300,28	337,81	375,35	375,35
Ice 2	174,27	209,12	243,98	278,83	313,68	348,54	348,54
Ice 3	160,86	193,04	225,21	257,38	289,55	321,73	321,73
Arc 4	134,05	160,86	187,67	214,48	241,29	268,11	268,11
Arc 5	132,71	159,25	185,80	212,34	238,88	265,42	265,42
Arc 6 – Arc 9	131,37	157,65	183,92	210,19	236,47	262,74	262,74

Table 12 – Tariffs for the winter-spring navigation period							
Vessel's ice strengthening class	Tariff rate in Russian rubles per unit of vessel's gross tonnage						
	Pilotage within 1 zone	Pilotage within 2 zones	Pilotage within 3 zones	Pilotage within 4 zones	Pilotage within 5 zones	Pilotage within 6 zones	Pilotage within 7 zones
Arc 4	335,13	402,16	469,18	536,21	603,24	670,26	670,26
Arc 5	331,78	398,14	464,49	530,85	597,20	663,56	663,56
Arc 6 – Arc 9	328,43	394,12	459,80	525,49	591,17	656,86	656,86
Icebreaker 6 - Icebreaker 8	325,08	390,09	455,11	520,12	585,14	650,16	650,16

On approval of the tariff rates for provision of icebreaking pilotage services provided by the FSUE «Atomflot» on the Northern Sea Route water area (March 4, 2014), http://www.Arctic-luo.com/docs/nsr/tariffs/NSR_Tariff_Order.pdf.

Appendix E. Northern Canada Vessel Traffic Services Zone Regulations (NORDREG), SOR/2010-127 (Excerpt)

NORDREG INFORMATION

Item	Column 1	Column 2	Column 3
	Designator	Subject	Information
1.	A	Vessel	The vessel's name, the name of the state whose flag the vessel is entitled to fly and, if applicable, the vessel's call sign, International Maritime Organization ship identification number and Maritime Mobile Service Identity (MMSI) number.
2.	B	Date and time corresponding to the vessel's position under designator C or D given in Coordinated Universal Time (UTC)	A 6-digit group followed by a Z, the first 2 digits giving the day of the month, the next two digits giving the hour and the last two digits giving the minutes.
3.	C	Vessel's position by latitude and longitude	A 4-digit group giving the latitude in degrees and minutes suffixed with N, and a 5-digit group giving the longitude in degrees and minutes suffixed with W.
4.	D	Vessel's position by geographical name of place	If the vessel is at a known place, the name of the place. If the vessel is not at a known place, the name of a known place followed by the vessel's true bearing (3-digits) and distance in nautical miles from the place.
5.	E	Vessel's course	The true course. A 3-digit group.
6.	F	Vessel's speed	The speed in knots. A 2-digit group.
7.	G	Vessel's last port of call	The name of the port of call.
8.	H	Vessel's entry into the NORDREG Zone or departure from a berth within the NORDREG Zone	The estimated date and time that the vessel will enter the NORDREG Zone or depart the berth within the NORDREG Zone, as appropriate, with the date and time expressed as for designator B and the entry or departure position expressed as for designator C or D.
9.	I	Vessel's destination and expected time of arrival	The name of the destination followed by the expected time of arrival, expressed as for designator B.
10.	K	Vessel's exit from the NORDREG Zone or arrival at the vessel's destination.	The date and time that the vessel exits the NORDREG Zone or arrives at its berth within the NORDREG Zone, with the exit date and time expressed as for designator B and the exit or arrival position expressed as for

			designator C or D.
11.	L	Vessel's intended route	A brief description of the intended route through the NORDREG Zone.
12.	O	Vessel's maximum present static draught	A 4-digit group giving metres and centimetres.
13.	P	Vessel's cargo	A brief description of the vessel's cargo and the cargo of any vessel being towed or pushed. The description must include (a) in the case of a dangerous good, the class and quantity; and (b) in the case of a pollutant, the technical name and quantity.
14.	Q	Defects, damage and deficiencies, as well as circumstances adversely affecting the vessel's normal navigation	Brief details regarding any defects, damage or deficiencies of the vessel or its machinery, equipment, or charts and nautical publications, and any circumstances that adversely affect normal navigation.
15.	S	Weather and ice	A brief description of the prevailing weather and ice conditions.
16.	T	Vessel's authorized representative, agent or owner	The name and contact information of (a) in the case of a Canadian vessel, its authorized representative; (b) in the case of a foreign vessel, its Canadian or American agent or its owner; and (c) in the case of a pleasure craft that is not a Canadian vessel, the pleasure craft's owner.
17.	W	Persons on board the vessel	The number of persons.
18.	X	(a) In the case of a sailing plan report, (i) the amount of oil on board that is for use as fuel or carried as cargo; (ii) if the vessel's owner or master holds an arctic pollution prevention certificate in respect of the	(a) The following information: (i) the total amount of oil, expressed in cubic metres; (ii) the certificate's expiry date and the name of its issuing authority; (iii) the vessel's ice class and the name of the classification society that assigned the ice class; and (iv) a brief description of the applicable incident. (b) A brief description of the applicable matter.

		<p>vessel, the certificate;</p> <p>(iii) the vessel's ice class, if applicable; and</p> <p>(iv) if the report is referred to in paragraph 6(1)(c) of the Regulations, the applicable incident referred to in that paragraph.</p> <p>(b) In the case of a position report referred to in subsection 7(2) of the Regulations, the applicable matter referred to in that subsection.</p>	
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Northern Canada Vessel Traffic Services Zone Regulations (NORDREG), SOR/2010-127, <http://laws-lois.justice.gc.ca/eng/regulations/SOR-2010-127/FullText.html#h-3>.