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## Boundaries, biodiversity, resources, and increasing maritime activities: emerging oceans governance challenges for Canada in the Arctic Ocean

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## Boundaries, biodiversity, resources, and increasing maritime activities: emerging oceans governance challenges for Canada in the Arctic Ocean

### Abstract

The Arctic region is undergoing rapid environmental and socioeconomic change. As one of the most rapidly warming places on the planet, the Arctic is experiencing dramatic climate change-related impacts, such as a severe downward trend in sea ice cover. The scientific community projects that this trend could result in a sea ice-free summer by as early as 2020. As conditions warm, the retreat of sea ice is driving an expansion of political and economic activity. Recent world media attention has been focused on the Arctic to an unprecedented extent. Much of the discourse has been devoted to a perceived Arctic "scramble" or "gold rush" for jurisdictional rights and marine resources, especially potential seabed energy resources. This "race" was highlighted by the Russian Federation planting a flag on the seabed of the North Pole in August 2007. Also exciting considerable attention is the possibility of the opening up of long-sought navigational routes through the Arctic Ocean.

### Keywords

Boundaries, biodiversity, resources, increasing, maritime, activities, emerging, oceans, governance, challenges, for, Canada, Arctic, Ocean

### Disciplines

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**BOUNDARIES, BIODIVERSITY, RESOURCES,  
AND INCREASING MARITIME ACTIVITIES:  
EMERGING OCEANS GOVERNANCE CHALLENGES  
FOR CANADA IN THE ARCTIC OCEAN**

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**Ian Townsend-Gault‡**

INTRODUCTION

The Arctic region is undergoing rapid environmental and socioeconomic change. As one of the most rapidly warming places on the planet, the Arctic is experiencing dramatic climate change-related impacts, such as a severe downward trend in sea ice cover. The scientific community projects that this trend could result in a sea ice-free summer by as early as 2020.<sup>1</sup> As conditions warm, the retreat of sea ice is driving an expansion of political and economic activity. Recent world media attention has been focused on the Arctic to an unprecedented extent. Much of the discourse has been devoted to a perceived Arctic “scramble”<sup>2</sup> or “gold rush”<sup>3</sup> for jurisdictional rights and marine resources, especially potential seabed energy resources. This “race”<sup>4</sup> was highlighted by the Russian Federation planting a flag on

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1. See, e.g., Ben Webster, *The Arctic Will be Ice-Free in Summer Within 20 Years*, *Research Says*, THE TIMES (London), Oct. 15, 2009 (referring to findings by the Polar Ocean Physics Group at the University of Cambridge), available at <http://www.timesonline.co.uk/tol/news/science/earthenvironment/article6875260.ece>.

2. See, e.g., Ben Leapman, *Denmark Joins the Race to Impose Sovereignty on the North Pole Countries: Battle for Ownership of the Underwater Lomonosov Ridge*, SUNDAY TELEGRAPH (London), Aug. 12, 2007, at 29.

3. See, e.g., Paul Reynolds, *Russia Ahead in Arctic ‘Gold Rush’*, BBC NEWS, Aug. 1, 2007, [http://news.bbc.co.uk/2/hi/in\\_depth/6925853.stm](http://news.bbc.co.uk/2/hi/in_depth/6925853.stm); Paul Reynolds, *The Arctic’s New Gold Rush*, BBC NEWS, Oct. 25, 2005, <http://news.bbc.co.uk/2/hi/business/4354036.stm>.

4. See, e.g., Brian Beary, *Race for the Arctic: Who Owns the Region’s Undiscovered Oil and Gas?*, 2 CQ GLOBAL RESEARCHER 213–42 (Aug. 2008).

the seabed of the North Pole in August 2007.<sup>5</sup> Also exciting considerable attention is the possibility of the opening up of long-sought navigational routes through the Arctic Ocean.

This paper explores recent developments in the Arctic region, notably in terms of environmental changes.<sup>6</sup> The paper then examines some of the potential impacts of expanding maritime activities in the Arctic Ocean, particularly the Canadian Arctic. These include the exploitation of both living and non-living marine resources and increasing Arctic navigational opportunities. In this context, it has been suggested that the melting of sea ice will render the Northwest Passage open for navigation for significant parts of the year. A number of myths and misconceptions surrounding these predictions are highlighted. Discussion then turns to the maritime jurisdictional claims of the Arctic States, particularly Canada's claims to baselines around its Arctic archipelago, its position regarding the jurisdictional status of the waters so enclosed, its claims to control over the Passage, and the attitude of other countries to these Canadian claims. Finally, emerging options on Arctic oceans governance are provided.

## I. THE CHANGING ARCTIC

In 2004, the Arctic Climate Impact Assessment (ACIA) identified changes over recent decades and the range of potential natural and socioeconomic impacts.<sup>7</sup> The ACIA highlights the Arctic's sensitivity to climatic changes, while also showing that average temperatures in the region are trending upwards. Between 1954 and 2003, the mean annual surface air temperature rose by 2 to 3°C in Alaska and Siberia, with winter rises averaging 4°C.<sup>8</sup> The ACIA developed predictions on a range of future climate scenarios. From the composites of five ACIA climate models based on the IPCC B2 scenario (a conservative emissions scenario) a series of predictions were made.<sup>9</sup> From 1990 to 2090, projected annual temperatures show a uniform warming of up to 4°C.<sup>10</sup> Greater warming is to be experienced in winter,

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5. Reynolds, *Russia Ahead in Arctic 'Gold Rush,'* *supra* note 3.

6. The paper develops themes explored by the first two authors in Tavis Potts & Clive Schofield, *Current Legal Developments: The Arctic*, 23 INT'L J. OF MARINE & COASTAL L. 151 (2008); and Tavis Potts & Clive Schofield, *The Arctic: A Race for Resources or Sustainable Development?*, 16 OCEAN CHALLENGE 19, 19–29 (2009); and by the third author in Ian Townsend-Gault, *Not a Carve-up: Canada, Sovereignty, and the Arctic Ocean*, 1 INT'L ZEITSCHRIFT 3 (2007), <http://zeitschrift.co.uk/archivev1n3.html>.

7. SUSAN JOY HASSOL, IMPACTS OF A WARMING ARCTIC: ARCTIC CLIMATE IMPACT ASSESSMENT 8–12 (2004).

8. *Id.* at 23.

9. *Id.* at 28.

10. *Id.*

with temperatures forecasted to rise by 5°C over land and between 7 and 10°C over the Arctic Ocean and coasts.<sup>11</sup>

In September 2007, the European Space Agency reported that “[t]he area covered by sea ice in the Arctic ha[d] shrunk to its lowest level . . . since satellite measurements began nearly 30 years ago . . . .”<sup>12</sup> The United States National Snow and Ice Data Center reported that the average ice extent in September 2007 was 4.13 million km<sup>2</sup>, compared to the 1979–2000 average of 6.74 million km<sup>2</sup>.<sup>13</sup> The 2009 summer ice extent, recorded as 5.36 million km<sup>2</sup>, was the third-lowest on record.<sup>14</sup> The thinning of winter sea ice compounds the issue of decreasing summer sea ice extent. Overall, the mean ice thickness within the central Arctic Ocean was reduced by 40% between the periods of two submarine ice-draft climatologies in 1958–1976 and 1993–1997.<sup>15</sup>

Increasing temperatures, reduction of sea ice, and an altered hydrological regime arguably presage a “step change” in the nature of impacts on natural and social systems. Environmental impacts include broad-scale changes in marine and terrestrial Arctic habitats and species. Changes to migration and breeding behavior, foraging ecology, and invasive species could lead to altered species diversity, distribution, and abundance.<sup>16</sup> For coastal communities, impacts from a warming climate include damage to infrastructure from melting permafrost, increased coastal erosion, and impacts on health, water, and food supply.<sup>17</sup> Not all of the changes being experienced in the Arctic are necessarily entirely negative. As described below, a range of economic opportunities resulting from an altered sea ice regime will change socioeconomic systems in the Arctic and bring potential new environmental impacts.<sup>18</sup>

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11. *Id.*

12. European Space Agency, *Satellites Witness Lowest Arctic Ice Coverage in History*, ESA PORTAL, Sept. 14, 2007, available at [http://www.esa.int/esaCP/SEMYTC13J6F\\_index\\_2.html](http://www.esa.int/esaCP/SEMYTC13J6F_index_2.html).

13. Press Release, National Snow and Ice Data Center, Current Sea Ice Conditions: October 17, 2007 (Oct. 17, 2007), [http://nsidc.org/news/press/2007\\_m\\_seaiceminimum/20070810\\_index.html](http://nsidc.org/news/press/2007_m_seaiceminimum/20070810_index.html).

14. Press Release, National Snow and Ice Data Center, Arctic Sea Ice Extent Remains Low; 2009 Sees Third Lowest Mark (Oct. 6, 2009), [http://nsidc.org/news/press/20091005\\_minimumpr.html](http://nsidc.org/news/press/20091005_minimumpr.html).

15. D. A. Rothrock et al., *Thinning of the Arctic Sea Ice-Cover*, 26 GEOPHYSICAL RES. LETTERS 3469, 3471 (1999).

16. See HASSOL, *supra* note 7, at 62 (stating that climate change will induce “radical changes in species composition with unknown consequences”).

17. See *id.* at 78–81 (describing the impacts of climate change on coastal communities in the Arctic).

18. See *id.* at 106 (explaining how people will adapt to climate change in the Arctic).

## II. INCREASING MARITIME ACTIVITIES IN THE ARCTIC OCEAN

The Arctic region has been affected by long-standing anthropogenic activities, particularly resource exploitation such as hunting, fishing, reindeer husbandry, forestry, mining, oil and gas extraction, dumping, and navigation.<sup>19</sup> Furthermore, the significant environmental changes outlined above suggest that human activities in the Arctic are likely to increase considerably in the future.

Arctic, and especially sub-Arctic, waters are known for their highly productive fisheries, with several important fish stocks exploited since the mid-twentieth century, most notably in the Bering and Barents Seas.<sup>20</sup> As a consequence of retreating sea ice, the warming Arctic environment is likely to lead to migration and changes in the population dynamics of key fisheries and provide access to previously inaccessible areas and stocks.<sup>21</sup> While the potential impacts of changes to the Arctic marine ecosystem and impacts on the sustainability of fisheries are not well known, it nonetheless appears likely that Arctic species potentially will be vulnerable to overfishing.<sup>22</sup> The ACIA report suggests that changes to the Arctic environment will result in major changes in species distribution and productivity, which will trigger further impacts on associated and dependant species in the trophic ecology of the Arctic.<sup>23</sup> It may be that moderate warming of Arctic waters will lead to increasing productivity for certain stocks, such as herring and cod, through increased habitat and prey productivity.<sup>24</sup> Arctic ecosystems, however, are complex and are by no means fully understood in the context of changing climatic, ecological, and oceanographic conditions.<sup>25</sup> While productivity may increase in some species, decreases could occur in other dependant and associated species.<sup>26</sup>

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19. Potts & Schofield, *The Arctic: A Race for Resources or Sustainable Development?*, *supra* note 6, at 19.

20. HASSOL, *supra* note 7, at 62.

21. Recent studies are showing several fisheries shifting northward as water temperatures increase. The ACIA reports that warming bottom water temperatures in the Bering Strait are resulting in a northward shift in some fisheries species seeking colder and deeper waters and have impacts on predator-prey relationships. In the North Atlantic, it has been reported that cod and haddock have shifted 60 to 70 km north. HASSOL, *supra* note 7, at 64; *see also* Potts & Schofield, *The Arctic: A Race for Resources or Sustainable Development?*, *supra* note 6, at 26.

22. David Barber, Louis Fortier & Michael Byers, *The Incredible Shrinking Sea Ice*, 27 *OPTIONS POLITIQUES* 66, 68 (2005–2006).

23. HASSOL, *supra* note 7, at 68–69.

24. *Id.* at 62.

25. *Id.* at 14.

26. *Id.*

These developments are likely to complicate arrangements for the management of Arctic living resources.

There is also growing interest in Arctic marine living resources as a source of genetic material.<sup>27</sup> The often remarkable ways in which species have adapted to the Arctic's unique and harsh environment have served to make these resources increasingly desirable. This, in turn, raises issues related to the preservation of biodiversity and the management of bioprospecting.<sup>28</sup>

It has also been suggested that the Arctic offers great potential in terms of seabed energy resources. The United States Geological Survey's (USGS) 2008 *Circum-Arctic Resource Appraisal* pointed to the existence of over 7 million km<sup>2</sup> of Arctic continental shelf areas under less than 500 meters of water.<sup>29</sup> Furthermore, it posited that these shallow continental shelf areas "may constitute the geographically largest unexplored prospective area for petroleum remaining on Earth."<sup>30</sup> The USGS report went on to conclude that, overall, the Arctic may hold around 22% of undiscovered, technically recoverable resources globally,<sup>31</sup> potentially consisting of 90 billion barrels of oil (13% of global undiscovered oil); 1,669 trillion cubic feet of natural gas (30% of undiscovered gas); and 44 billion barrels of natural gas liquids (20% of undiscovered liquids).<sup>32</sup>

However, not all predictions agree. It is noticeable that, as a result of the difficulties of gathering data in the Arctic's harsh conditions, the USGS findings were based on a "probabilistic" analytical methodology.<sup>33</sup> In contrast, a survey drawing on detailed geoscientific analysis of individual Arctic basins, supported by oil industry data on exploration wells and existing discoveries, offers a significantly less optimistic picture.<sup>34</sup>

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27. See DAVID LEARY, UNU-IAS REPORT: BIOPROSPECTING IN THE ARCTIC 24 (2008) (identifying 43 commercially active companies that are engaged in research and exploitation of biotechnology based on Arctic resources, including the existence of 31 patents on specific Arctic genetic resources).

28. Potts & Schofield, *The Arctic: A Race for Resources or Sustainable Development?*, *supra* note 6, at 27.

29. CIRCUM-ARCTIC RESOURCE APPRAISAL ASSESSMENT TEAM, USGS, *Circum-Arctic Resource Appraisal: Estimates of Undiscovered Oil and Gas North of the Arctic Circle* para. 2 (Peter H. Shauffer ed., 2008), available at <http://pubs.usgs.gov/fs/2008/3049/fs2008-3049.pdf>.

30. *Id.*

31. Press Release, USGS, *90 Billion Barrels of Oil and 1,670 Trillion Cubic Feet of Natural Gas Assessed in the Arctic*, July 23, 2008, [http://www.usgs.gov/newsroom/article.asp?ID=1980&from=rss\\_home](http://www.usgs.gov/newsroom/article.asp?ID=1980&from=rss_home).

32. CIRCUM-ARCTIC RESOURCE APPRAISAL ASSESSMENT TEAM, *supra* note 29, ¶ 8.

33. *Id.* at para. 3.

34. The joint Wood MacKenzie and Fugro Robertson study, *Future of the Arctic*, released on 1 November 2006, provided estimates of three million barrels of oil per day and five million barrels of gas equivalent per day at peak production. Press Release, Wood Mackenzie & Fugro Robertson, *Future of*

Even if the Arctic seabed does contain globally significant hydrocarbon resource potential, enormous challenges to exploring, exploiting, and transporting these resources remain. In particular, it appears likely that subsea technology, which can operate underneath sea ice cover, will be required.<sup>35</sup> Furthermore, both of the studies mentioned above agree that the Arctic is likely to be predominantly gas-prone. This necessarily has implications for the development of these resources because remote gas presents considerable transportation challenges. Consequently, the exploitation of a large portion of Arctic seabed resources appears unlikely in the near-term.<sup>36</sup>

Nonetheless, there exists a strong perception that the Arctic may yield seabed energy resource riches, and this perception helps underpin claims to maritime jurisdiction. For example, in one of the final acts of his presidency, outgoing U.S. President George W. Bush, issued a National Security Directive stating that “[e]nergy development in the Arctic region will play an important role in meeting growing global energy demand” because of the “substantial portion” of global undiscovered energy resources thought to exist there.<sup>37</sup>

### III. MELTING ICE—OPENING SHIPPING LANES?

Conventional wisdom suggests that as the Arctic warms, sea ice coverage will be reduced and thus the seasonal Arctic navigational “window” will expand.<sup>38</sup> Indeed, a key finding of the ACIA report was that “[r]educed sea ice is very likely to increase marine transport and access to

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the Arctic (Nov. 1, 2006), reprinted in Dave Cohen, *Arctic Dreams*, ENERGY BULLETIN, Apr. 25, 2007, <http://www.energybulletin.net/node/29151>. Overall, the November 2007 report concluded that its findings were “disappointing from a world oil resource base perspective” and “calls into question the long-considered view that the Arctic represents one of the last great oil and gas frontiers and a strategic energy supply cache for the US.” Wood Mackenzie & Fugro Robertson, *Arctic Role Diminished in World Oil Supply*, 234 *Pipeline & Gas Journal* 2 (February 2007), available at <http://www.epmag.com/archives/newsAnalysis/102.htm>.

35. Press Release, Wood Mackenzie & Fugro Robertson, *Exploration in the Arctic Has a Long Term Future* (Nov. 15, 2006), reprinted in Dave Cohen, *Arctic Dreams*, ENERGY BULLETIN, Apr. 25, 2007, <http://www.energybulletin.net/node/29151>.

36. Potts & Schofield, *The Arctic: A Race for Resources or Sustainable Development?*, *supra* note 6, at 24–26.

37. Memorandum from The White House Office of the Press Sec’y, *Presidential Directive on Arctic Region Policy*, § III(G)(2) (Jan. 9, 2009) (on file with the Nat’l Sci. Found.), available at [http://www.nsf.gov/od/opp/opp\\_advisory/briefings/may2009/nspd66\\_hspd25.pdf](http://www.nsf.gov/od/opp/opp_advisory/briefings/may2009/nspd66_hspd25.pdf).

38. Claes L. Ragner, *Den norra sjövägen*, *Barents—ett gränsland i Norden [The Northern Sea Route, THE BARENTS—A NORDIC BORDERLAND]* (Torsten Hallberg ed., Fridtjof Nansen Inst. tran., 2008), <http://www.fni.no/publ/marine.html> (follow “Ragner, Claes Lykke: ‘Den norra sjövägen’”) (discussing the growing opportunity for transit during summer sea ice melt).



resources.”<sup>39</sup> This scenario has stirred long-standing, but also long-dormant, dreams of opening the shipping routes between the Atlantic and the Pacific Oceans by way of the Arctic—namely the Northwest Passage and the Northern Sea Route (formerly known as the Northeast Passage).<sup>40</sup> Indeed, even a transpolar “over-the-top” route has been suggested.<sup>41</sup>

It is not difficult to understand the abiding lure of these routes. The Northwest Passage offers a staggering 9,000 km (4,860 nautical miles (nm))<sup>42</sup> distance saving over the traditional route between Europe and Asia via the Panama Canal and a 17,000 km (9,180 nm) saving as compared with the Cape Horn route.<sup>43</sup> Navigation traffic in the Arctic is clearly on the rise, led by increasing “adventure cruising”<sup>44</sup> in Arctic waters, increased support traffic for oil and gas developments on the periphery of the Arctic,<sup>45</sup> and to some extent from the pursuit of migrating stocks by fishing fleets.<sup>46</sup> Furthermore, satellite imagery showed the Northwest Passage to be ice-free at the September ice minimum in 2007 and 2008.<sup>47</sup>

Nevertheless, there exist strong reasons to doubt the viability of such routes for large-scale, regular inter-oceanic transportation in the near-term. The first and most obvious factor that mitigates against the use of the Northwest Passage for regular inter-oceanic transits is that, while the waterway (or rather, waterways) in question may be ice-free at the end of the Arctic summer, the Arctic navigational “window” is still narrow.<sup>48</sup> For much of the year—and year-round in the event of a cold summer—ice is likely to remain a key factor and a threat to safety of navigation.<sup>49</sup> The

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39. HASSOL, *supra* note 7, at 11.

40. See Ragner, *supra* note 38 (discussing the long-held vision of the “Northeast Passage” as an “adventurous shortcut” with the potential of bringing a revolution in sea trade).

41. See Hon. Norman Yakeleya, Member of the Legislative Assembly of the Northwest Territories, Statement to the Legislative Assembly (June 2, 2008), available at [http://www.exec.gov.nt.ca/currentnews/speechDetails.asp?varStatement\\_ID=684](http://www.exec.gov.nt.ca/currentnews/speechDetails.asp?varStatement_ID=684) (assuming eventual presence of polar route).

42. While it is acknowledged that “M” is the technically correct abbreviation for a nautical mile, with “nm” referring to nanometres, “nm” is used to denote nautical miles here as this abbreviation is widely used by many authorities (for example the United Nations Office of Ocean Affairs and the Law of the Sea) and appears to cause less confusion than “M”, which is often assumed to be an abbreviation for metres.

43. Katherine J. Wilson et al., *Shipping in the Canadian Arctic: Other Possible Climate Change Scenarios*, 3 GEOSCIENCE & REMOTE SENSING SYMP. 1853, 1853 (2004).

44. B. Stonehouse, *Polar Environments*, in THE ENCYCLOPEDIA OF ECOTOURISM 219, 227 (David B. Weaver ed., 2001).

45. HASSOL, *supra* note 7, at 11.

46. *Id.* at 84.

47. Press Release, National Snow and Ice Data Center, Arctic Sea Ice Reaches Annual Minimum Extent (Sept. 17, 2009) (on file with author) <http://nsidc.org/arcticseaicenews/>.

48. Ragner, *supra* note 38.

49. See Patrick R.M. Toomey, *Global Warming: Arctic Shipping*, MERIDIAN (Canadian Polar Commission, Ottawa, Ont.) Fall/Winter 2007, at 10, available at <http://www.polarcom.gc.ca/>

hazardous nature of navigation in the Arctic will necessarily have implications in terms of operating costs, both as a result of the need to use ice-strengthened vessels with ice-breaker support in some cases and potentially vast increases in insurance costs (if insurers can, in fact, be found).<sup>50</sup> Despite shorter transit distances, these factors are likely to entail delays and increased costs which will tend to erode the savings.<sup>51</sup> Furthermore, there have been indications that even with a rise in temperatures, there will be only a marginal lengthening in the summer sailing season. In fact, navigation through the Northwest Passage may even become considerably more hazardous as softer first-year ice in the channels between the islands of the Canadian Arctic archipelago melts and causes hard multi-year sea ice from the central Arctic Ocean to drift into and essentially “fill in” the Northwest Passage.<sup>52</sup>

In practical terms, therefore, it appears that the Northwest Passage is not a viable international sea lane, at least in the immediate future. This, in turn, may have implications for the long-standing international legal dispute over the status of the Northwest Passage.<sup>53</sup> At the crux of this dispute is whether the Northwest Passage constitutes a strait “used for international navigation” within the meaning of Article 37 of the United Nations Convention on the Law of the Sea (LOSC).<sup>54</sup> If it is such a strait, as the U.S. and others maintain, then an unfettered and non-suspendable right of transit passage applies.<sup>55</sup> Canada, in contrast, asserts that the Northwest Passage is not a strait used for international navigation and that it has jurisdiction over the waters within the straight baselines it has declared around the Canadian Arctic archipelago.<sup>56</sup> A key element in the Canadian argument is that because of the infrequent past and present usage, particularly the paucity of

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media.php?mid=3278 (noting exceptionally high insurance rates as an illustration of the dangers of sea ice navigation).

50. *Id.* at 10.

51. *Id.*

52. Katherine J. Wilson et al., *supra* note 43, at 1854.

53. For recent Canadian and U.S. perspectives on this issue, see Michael Byers & Suzanne Lalonde, *Who Controls the Northwest Passage?*, CANADA'S ARCTIC WATERS IN INT'L LAW & DIPLOMACY 1, 10–11 (2006) (discussing the political and legal significance of the Northwest Passage opening due to climate change, including the positions Canada and the United States have taken in the debate); James Kraska, *The Law of the Sea Convention and the Northwest Passage*, 22 INT'L J. MARINE & COASTAL LAW 257, 258–60 (2007) (explaining that the “inflow of shipping traffic has revived debate over the legal status of the route”); see also Donat Pharand, *The Arctic Waters and the Northwest Passage: A Final Revisit*, 38 OCEAN DEV. & INT'L LAW 3, 4, 28–44 (2007) (discussing the “legal debate over the status of the Arctic waters generally and of the Northwest Passage in particular”).

54. Byers & Lalonde, *supra* note 53, at 23.

55. United Nations Convention on the Law of the Sea art. 37–44, Dec. 10, 1982, 1833 U.N.T.S. 397 [hereinafter LOSC].

56. Byers & Lalonde, *supra* note 53, at 25–26.

non-consensual transits, the Northwest Passage is not a strait used for international navigation.<sup>57</sup> As such, it should not be considered to be in the same category as, for instance, the Straits of Hormuz or Malacca.<sup>58</sup>

The U.S. has long desired to preserve freedom of navigation through international straits, and the U.S. position on the Northwest Passage should be viewed through this geostrategic lens. Indeed, the National Security Presidential Directive of January 9, 2009, notes the U.S.'s "broad and fundamental national security interests in the Arctic region," including "freedom of navigation and overflight [sic]" rights, which the Directive termed a "top national priority."<sup>59</sup> The Directive went on to explicitly assert that the U.S. views both the Northwest Passage and Northern Sea Route as "straits used for international navigation" to which the regime of transit passage open to the vessels of all nations applies.<sup>60</sup>

Recognizing that increasing navigation in the Arctic region carries with it the risk of maritime accidents, Canada has moved to assert additional jurisdictional measures over navigation in the Canadian Arctic. Its government promulgated the Arctic Waters Pollution Prevention Act in 1970.<sup>61</sup> In August of 2008, Canada announced that it would extend the application of its Arctic Waters Pollution Prevention Act from 100 nm to 200 nm and make use of its Arctic marine traffic scheme, NORDREG, mandatory.<sup>62</sup> Article 234 of LOSC provides the international legal basis for these efforts to give Canada's Arctic waterways special protection. This article allows coastal states to adopt and enforce nondiscriminatory provisions with the objective of preventing, reducing, and controlling marine pollution from vessels in ice-covered areas of their exclusive economic zones (EEZs), where severe climatic conditions and the presence of ice cover "for most of the year create obstructions or exceptional hazards to navigation . . . ." <sup>63</sup>

The logic of these developments would seem to be self-evident given the enormous damage to the fragile Arctic environment that would result from a major shipping catastrophe in hazardous high latitude waters.

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57. *Id.* at 10–11, 25–26.

58. Richard B. McNeese, *Freedom of Transit through International Straits*, 6 J. MAR. L. & COM. 175, 182–84 (1975).

59. Presidential Directive, *supra* note 37, § III(B)(1),(5).

60. *Id.* § III(B)(5).

61. Arctic Water Pollution Prevention Act, R.S.C., ch. A 12 (1985); see Penny Becklumb, Bill C-3: An Act to Amend the Arctic Waters Pollution Prevention Act, LS-617(E), at 7 (2008) (giving a brief history of the Act and its purposes).

62. Press Release, Stephen Harper, Prime Minister of Canada, Backgrounder - Extending the Jurisdiction of Canadian Environment and Shipping Laws in the Arctic (Aug. 27, 2008), <http://pm.gc.ca/eng/media.asp?id=2246>.

63. LOSC, *supra* note 55, at art. 234.

Nevertheless, Canada's new regulations are likely to result in fresh contention between Canada and the U.S. in their long-standing dispute over the legal status of the Northwest Passage.

#### IV. ARCTIC MARITIME CLAIMS

The Arctic Ocean is a semi-enclosed sea almost surrounded by five coastal states: Canada, Denmark (Greenland), Norway (Svalbard), Russia, and the U.S. All of these states, with the notable exception of the U.S., are parties to the LOSC.<sup>64</sup> However, it should be noted that the U.S. generally regards the LOSC as being reflective of customary international law and pursues its oceans policy accordingly.<sup>65</sup>

All of the Arctic littoral States, including the U.S., have advanced claims consistent with the LOSC, generally 12 nm of territorial seas and 200 nm of EEZs.<sup>66</sup> In Canada's case, the breadth of its maritime claims is not contested, but where they are measured from has been the source of some disagreement.

Canada first declared that it would draw straight baselines around the Canadian Arctic archipelago in response to the transit of the Northwest Passage by the American ice-breaking Coast Guard vessel *Polar Sea* in 1985.<sup>67</sup> Article 7 of the LOSC provides that straight baselines may be constructed along coasts that are either "deeply indented and cut into" or where there exists "a fringe of islands along the coast in its immediate vicinity . . . ."<sup>68</sup> Article 7 also requires that "[t]he drawing of straight baselines must not depart to any appreciable extent from the general direction of the coast, and the sea areas lying within the lines must be sufficiently closely linked to the land domain to be subject to the regime of

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64. UNITED NATIONS, STATUS OF THE UNITED NATIONS CONVENTION ON THE LAW OF THE SEA, TABLE RECAPITULATING THE STATUS OF THE CONVENTION AND OF THE RELATED AGREEMENTS, AS OF 1 OCTOBER 2009 (2009), [http://www.un.org/Depts/los/reference\\_files/status2008.pdf](http://www.un.org/Depts/los/reference_files/status2008.pdf) [hereinafter CONVENTION TABLE ON RELATED AGREEMENTS].

65. J. ASHLEY ROACH & ROBERT W. SMITH, UNITED STATES RESPONSES TO EXCESSIVE MARITIME CLAIMS 5–6 (2d ed. 1996).

66. The exception to this rule is Denmark which, on behalf of Greenland, claims a 200 nm fishing zone rather than a 200 nm EEZ. See Robin R. Churchill, *Claims to Maritime Zones in the Arctic—Law of the Sea Normality or Polar Peculiarity?*, in THE LAW OF THE SEA AND POLAR MARITIME DELIMITATION AND JURISDICTION 116–19 (Alex G. Oude Elferink & Donald R. Rothwell eds., 2001) (discussing these fishing zone and EEZ arrangements).

67. Suzanne Lalonde, *Increased Traffic through Canadian Arctic Waters: Canada's State of Readiness*, 38 REVUE JURIDIQUE THEMIS 49, 65–67 (2004). This was duly accomplished by means of the *Territorial Sea Geographical Coordinates (Area 7) Order*. Territorial Sea Geographical Coordinates (Area 7) Order SOR/85-872 (Can.).

68. LOSC, *supra* note 55, at art. 7(1).

internal waters.”<sup>69</sup> The lack of precision inherent in these key terms of Article 7 has led one eminent commentator to observe that “the imprecise language [of Article 7] would allow any coastal country, anywhere in the world, to draw straight baselines along its coast . . . .”<sup>70</sup> Nonetheless, support for the more conservative view advocated by the United States and others<sup>71</sup> can be found in the International Court of Justice’s (ICJ) decision in the *Qatar/Bahrain Case* of 2001, which stated unequivocally that the method of straight baselines in accordance with Article 7 of the LOSC “must be applied restrictively.”<sup>72</sup> It remains questionable whether Canada’s straight baselines claims are in keeping with the terms of Article 7 of the LOSC—that is, whether the islands comprising Canada’s Arctic archipelago really represent fringing islands and whether the waters so enclosed are closely enough linked to the land domain to be considered internal waters. Certainly Canada’s straight baselines claims do not appear to be in keeping with the more restrictive interpretation of Article 7 advocated by the ICJ. That said, the majority of state practice with regards to straight baselines appears to run contrary to such a conservative reading of Article 7. Nevertheless, that fact represents a less than compelling argument in favor of Canada’s own arguably excessive claim.

An additional complication and source of dispute in Canada’s Arctic claims is its assertion that the waters enclosed by its straight baselines in the Arctic are not merely internal waters, but “historic internal waters.”<sup>73</sup> The concept of historic waters represents one of the more nebulous areas of international law. The only reference to historic waters in the LOSC occurs in the final paragraph of Article 10, which deals with bays and refers to “so-called ‘historic’ bays”<sup>74</sup>—hardly a ringing endorsement of the concept. Indeed, historic waters have been dubbed “an orphaned offshore

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69. *Id.* at art. 7(3); *see also* VICTOR PRESCOTT & CLIVE SCHOFIELD, *THE MARITIME POLITICAL BOUNDARIES OF THE WORLD* 154–56 (2d ed. 2004) (discussing Article 7 and the rules governing the construction of straight baselines along appropriate coasts).

70. J. R. V. PRESCOTT, *THE MARITIME POLITICAL BOUNDARIES OF THE WORLD* 64 (1985).

71. The United States in particular has been a keen advocate of a conservative or restrictive interpretation of Article 7, even going so far as to publish its own guidelines on the proper application of Article 7 of the LOSC. BUREAU OF OCEANS & INT’L. ENVTL. & SCI. AFF., U.S. DEP’T OF STATE, PUB. NO. 106, *LIMITS IN THE SEAS* (1987). *See also* Roach & Smith, *supra* note 65, at 57–146 (describing the United States restrictive application of excessive baselines).

72. *Maritime Delimitation & Territorial Questions Between Qatar & Bahrain* (Qatar v. Bahrain), 2001 I.C.J. 40, 103 (Mar. 16). *See id.* at 103–04 (declining to employ straight or archipelagic baselines to the Bahraini coast, citing Bahrain’s failure to declare archipelagic status and thereafter define a system of archipelagic straight baselines).

73. Donat Pharand, *Historic Waters in International Law with Special Reference to the Arctic*, 21 U. TORONTO L.J. 1, 2 (1971). *See also* Byers & Lalonde, *supra* note 53, at 10–11 (discussing Canada’s claims to historic internal waters in its Arctic archipelago).

74. LOSC, *supra* note 55, at art.10(3).

international legal regime” on account of the fact that they were left out of both the 1958 Conventions and LOSC.<sup>75</sup> To date, there has been no authoritative pronouncement as to how and when historic waters should be applied.<sup>76</sup> The United States has predictably (given its freedom of navigation concerns) taken a restrictive view: “To meet the international standard for establishing a claim to historic waters, a State must demonstrate its open, effective, long term, and continuous exercise of authority over the body of water, coupled with acquiescence by foreign States in the exercise of that authority.”<sup>77</sup> The United States has also argued that, given the extension of coastal State territorial sea claims to 12 nm under the LOSC, “no new claim to historic bay or historic waters is needed to meet resource and security interests of the coastal State.”<sup>78</sup> While the United States view is not the only one, the general trend appears to be for claims to historic waters to be restricted to relatively confined marine areas that are dominated by—and often largely surrounded by—a particular State. It is highly questionable whether the extensive waters enclosed by Canada’s straight baselines around its Arctic archipelago fall into this category.

#### A. Arctic Maritime Delimitation

By no means have all of the potential maritime boundaries in the Arctic Ocean been delimited. This is, however, not remarkable when one considers that the majority of potential maritime boundaries around the world are only partially delimited, if they are agreed upon at all.<sup>79</sup> In general, the Arctic Ocean is mercifully bereft of territorial disputes. The exception to the rule is Hans Island, sovereignty over which is contested by Canada and Denmark (on behalf of Greenland).<sup>80</sup> Hans Island, which has an area of approximately 1 km<sup>2</sup>, is located in the Nares Strait between Ellesmere Island and Greenland.<sup>81</sup> However, this dispute did not prevent the parties from

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75. Ted L. McDorman, *Notes on the Historic Waters Regime and the Bay of Fundy*, in *THE FUTURE OF OCEAN REGIME BUILDING: ESSAYS IN TRIBUTE TO DOUGLAS M. JOHNSTON* 701, 701 (Aldo Chircop et. al eds., 2009).

76. The classic work on this issue is: *Juridical Regime of Historic Waters, Including Historic Bays*, U.N. Doc. A/CN.4/143 (1962), reprinted in [1962] 2 Y. B. Int’l L. Comm’n 1, U.N. Doc. A/CN.4/SER.A/1962/Add.1.

77. ROACH & SMITH, *supra* note 65, at 31.

78. *Id.* at 37.

79. PRESCOTT & SCHOFIELD, *supra* note 69, at 217–18.

80. *Id.* at 265; Christopher Stevenson, *Hans Off! The Struggle for Hans Island and the Potential Ramifications for International Border Dispute Resolution*, 30 B.C. INT’L & COMP. L. REV. 263, 263–66 (2007).

81. PRESCOTT & SCHOFIELD, *supra* note 69, at 265; *Canada Island Visit Angers Danes*, BBC NEWS, July 25, 2005, <http://news.bbc.co.uk/2/hi/europe/4715245.stm>.

concluding a continental shelf boundary agreement in 1973 using an equidistance line between opposite main island coasts on either side as a basis for delimitation.<sup>82</sup> Canada and Denmark were able to side-step their dispute over Hans Island by ignoring the island for the purposes of drawing their seabed maritime boundary.<sup>83</sup>

Canada's potential maritime boundary with the United States in the Beaufort Sea is also in dispute. The U.S. insists on an equidistance line as a basis for delimitation, but Canada argues that the maritime boundary should be a seaward extension of the 141°W meridian, which provides the boundary between Alaska and the Yukon Territory. These positions represent the conventional approach (United States) and the sector-based approach (Canada), the two main approaches to maritime boundary delimitation.<sup>84</sup> While the sector-based approach is clearly more favourable to Canada in the area immediately offshore of the coast, it is worth pointing out that overall Canada's sector-based approach (if agreed to by its neighbouring States) would deliver considerably less maritime space to Canada than the application of strict equidistance lines.

#### *B. Overlapping Outer Continental Shelves in the Central Arctic Ocean*

Even if the 200 nm EEZ claims of the Arctic littoral States are taken into account, a large area in the central Arctic Ocean lies seaward of these 200nm jurisdictional limits. As such, these areas are considered part of the high seas, even if they are (presently at least) ice-covered for much of the year.<sup>85</sup> However, there are large portions of the seabed underlying this high seas "pocket" or "donut hole" that do not, necessarily form part of the international seabed—that portion of the seabed beyond national jurisdiction, which is referred to as "the Area."<sup>86</sup>

In accordance with the provisions of Article 76 of the LOSC, the Arctic littoral States that are parties to the LOSC have made, or are in the process of preparing, submissions to the relevant United Nations scientific body—

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82. See THE AM. SOC'Y OF INT'L L., *INTERNATIONAL MARITIME BOUNDARIES: VOL. 1* 371–72 (Jonathan Chaney & Lewis Alexander eds., 1993) (discussing the terms of the agreement); PRESCOTT & SCHOFIELD, *supra* note 69, at 265 (describing the agreement as "innovative" because it simply ignores the disputed island in order to facilitate a larger agreement).

83. Consequently, there is a gap in the boundary line which stops just short of Hans Island to the south and then continues just to the north of it. PRESCOTT & SCHOFIELD, *supra* note 69, at 265.

84. *Id.* at 539.

85. See LOSC, *supra* note 55, at art. 86 (applying the provisions governing the "high seas" to "all parts of the sea that are not included in the exclusive economic zone, in the territorial sea or in the internal waters of a State, or in the archipelagic waters of an archipelagic State").

86. *Id.* at part XI; see also Allison Winter, *U.S. Bans Commercial Fishing in Warming Arctic*, N.Y. TIMES, Aug. 21, 2009 (describing the regulation-free areas in the Arctic).

the Commission on the Limits of the Continental Shelf (CLCS). Through this process these States will define the outer limits of their continental shelf rights beyond 200 nm from the coast.<sup>87</sup> Article 76(1) of the LOSC establishes that the continental shelf of a coastal state consists of “the seabed and the subsoil of submarine areas,” extending to a distance of 200 nm from relevant baselines or “throughout the natural prolongation of its land territory to the outer edge of the continental margin . . . .”<sup>88</sup> Thus, in accordance with the EEZ concept (codified through the LOSC), every coastal State has the right to claim sovereign rights over both the seabed and water column out to 200 nm, regardless of whether the continental margin actually extends that distance offshore and provided that there are no overlapping claims with neighboring states.<sup>89</sup> Alternatively, where coastal States are positioned on broad continental margins, they are able to assert rights over those parts of the continental shelf beyond the 200 nm EEZ limit forming part of their natural prolongation.<sup>90</sup> These areas of continental shelf beyond the 200 nm limit are frequently referred to as the “outer” or “extended” continental shelf.<sup>91</sup>

Article 76 of the LOSC goes on to lay down a complex series of formulae through which the coastal state can define and establish its rights to the outer edge of its continental shelf areas beyond the 200 nm limit. Essentially, Article 76 provides two formulae by which coastal states can establish the existence of a continental margin beyond the 200 nm limit: the “Gardiner Line,” which is based on reference to depth or thickness of

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87. LOSC, *supra* note 55, at art. 76.

88. *Id.* ¶ 1.

89. These rights, however, are governed in accordance with Part VI (dealing with the continental shelf) of the Convention rather than Part V (dealing with the EEZ). *Id.* at arts. 55, 57, 76.

90. While no sure figure can be determined until all outer continental shelf submissions have been considered by the CLCS, it has been estimated that outer continental shelf areas may encompass around five percent of the ocean floor. Peter J. Cook & Chris M. Carleton, *Introduction to CONTINENTAL SHELF LIMITS: THE SCIENTIFIC AND LEGAL INTERFACE* 3, 3 (Peter J. Cook & Chris M. Carleton eds., 2000).

91. *See id.* (noting the existence of 15 million km<sup>2</sup> of extended shelf area “which lies beyond the 200 [nm] limit, to which sovereign rights may also extend under the terms of the Convention”). It is worth noting that the term “extended continental shelf” gives a somewhat misleading impression that coastal States are somehow advancing claims to “additional” areas of continental shelf. However, because continental shelf rights are inherent to the coastal State, this is not, in fact, the case. Instead, coastal States and the CLCS are engaged in determining the proper location for the outer limits of the continental shelf seawards of the 200 nm limit. *See* LOSC, *supra* note 55, at art. 77(3) (stating that continental shelf rights are inherent and “do not depend on occupation, effective or notional, or on any express proclamation”); *North Sea Continental Shelf Case* (Federal Republic of Germany v. Netherlands), 1969 I.C.J. 3, 23 (Feb. 20) (stating that “the rights of the coastal State in respect of the area of continental shelf that constitutes a natural prolongation of its land territory into and under the sea exist *ipso facto* and *ab initio*, by virtue of its sovereignty over the land . . .” and that “[i]n short, there is here an inherent right” to such territory).



sedimentary rocks overlying the continental crust,<sup>92</sup> or the “Hedberg Line,” which is established 60 nm from the foot of the continental slope.<sup>93</sup> Two maximum constraints or “cut-off” lines are then applied: either a distance of 350 nm from relevant baselines or 100 nm from the 2,500 meter isobath.<sup>94</sup> In order to make these calculations and thus establish entitlement to outer continental shelf areas in accordance with Article 76, a coastal state is required to gather information related to the morphology of its continental margin, its geological characteristics, and bathymetric information relating to water depth.<sup>95</sup> Additionally, geodetically robust distance measurements are necessary in order to determine, for example, the location of 200 nm and 350 nm limit lines.<sup>96</sup> Although complex, the point here is that Article 76 of the LOSC provides for a definable outer limit to the continental shelf claims of coastal states, which represents a major step forward compared to the indeterminate situation under the 1958 Convention on the Continental Shelf.<sup>97</sup>

Suggestions that the Arctic littoral States are engaged in a form of “land grab” are therefore misplaced.<sup>98</sup> While coastal states are engaged in a race of sorts to gather the scientific information, all are doing so in accordance with the terms of the LOSC.<sup>99</sup>

Submissions are made to the CLCS, the United Nations technical body that provides recommendations upon which the coastal State should rely to declare final and binding outer shelf limits.<sup>100</sup> Both Russia (December 2001) and Norway (on behalf of Spitzbergen, December 2006) have made

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92. Commission on the Limits of the Continental Shelf (CLCS), May 3–14, 1999, *Scientific and Technical Guidelines of the Commission on the Limits of the Continental Shelf*, § 8.1.3, U.N. Doc. CLCS/11 (May 13, 1999) [hereinafter CLCS Scientific and Technical Guidelines].

93. *Id.* § 5.4.8.

94. LOSC, *supra* note 55, at art. 76(4)–(5).

95. Steinar Thor Gudlaugsson, *Natural Prolongation and the concept of the Continental Margin for the Purpose of Article 76*, in LEGAL AND SCIENTIFIC ASPECTS OF CONTINENTAL SHELF LIMITS 61, 66 (Myron H. Nordquist et al. eds., 2004).

96. See CLCS Scientific and Technical Guidelines, *supra* note 92, § 9.2 (laying out the guidelines for acceptable bathymetric and geodetic measurements).

97. Article 1 of the Convention on the Continental Shelf of 1958 defined the continental shelf as “to a depth of 200 metres or, beyond that limit, to where the depth of the superjacent waters admits of the exploitation of the natural resources of the said areas . . . .” Convention on the Continental Shelf art. 1, Apr. 29, 1958, 499 U.N.T.S. 311; see also Ted L. McDorman, *The Role of the Commission on the Limits of the Continental Shelf: A Technical Body in a Political World*, 17 INT’L J. MARINE & COASTAL L. 301, 307 (2002) (contending that Article 76’s “real achievement” is not the complexity of its provisions or the establishment of the Commission, but the fact that it provides for “a definable limit” to continental shelf claims, “however difficult the defining of that limit may be”).

98. David R. Sands, *Sea Treaty Sparks Rivalries; Senate Fight Looms Amid Race to North Pole*, WASH. TIMES, Nov. 12, 2007, at A01.

99. *Id.*

100. McDorman, *supra* note 97, at 301.

submissions.<sup>101</sup> In 2002, the Commission indicated that Russia should make a revised submission.<sup>102</sup> Russia is understood to be engaged in undertaking surveys aimed at gathering additional information, especially in the Arctic Ocean, to be included in its revised submission. It remains to be seen how the Commission will deal with the complex and contentious issue of submarine ridges in the Arctic Ocean.<sup>103</sup> Both Russia and Denmark (on behalf of Greenland) indicated that they consented to the Commission proceeding to examine Norway's submission without prejudice to the delimitation of maritime boundaries at a later stage.<sup>104</sup> Russia also made a point of noting that the Commission's work did not prejudice its position with respect to Spitsbergen.<sup>105</sup> The Commission duly provided Norway with recommendations on the outer limits of its continental shelf on March 27, 2009.<sup>106</sup> The deadline for submission for Canada is 2013 and Denmark the following year—ten years after each of these States became parties to

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101. The executive summaries of these submissions are available on the Commission's website at [http://www.un.org/Depts/los/clcs\\_new/commission\\_submissions.htm](http://www.un.org/Depts/los/clcs_new/commission_submissions.htm). See U.N. Comm'n of the Limits of the Cont'l Shelf, *Statement by the Chairman of the Comm'n on the Limits of the Cont'l Shelf on the progress of work in the Comm'n*, U.N. Doc. CLCS/32 (Apr. 12, 2009), available at <http://www.un.org/Docs/journal/asp/ws.asp?m=CLCS/32> (Russian Federation); U.N. Comm'n of the Limits of the Cont'l Shelf, *Statement by the Chairman of the Comm'n on the Limits of the Cont'l Shelf on the progress of work in the Comm'n*, U.N. Doc. CLCS/54 (Apr. 27, 2007), available at <http://www.un.org/Docs/journal/asp/ws.asp?m=CLCS/54> (Norway).

102. The Secretary-General, *Report of the Secretary-General on Oceans and the Law of the Sea*, ¶ 41, delivered to the General Assembly, U.N. Doc. A/57/57/Add.1 (Oct. 8, 2002).

103. The key difficulty here is distinguishing between "submarine elevations" and "submarine ridges" and determining how the cut-off lines provided for in Article 76 should be applied to such features. LOSC, *supra* note 55, at art. 76(6). Much has been written on this problematic issue. See generally Philip Symonds et al., *Ridge Issues*, in CONTINENTAL SHELF LIMITS: THE SCIENTIFIC AND LEGAL INTERFACE 285 (Peter J. Cook & Chris M. Carleton eds., 2000); Ron MacNab, *Submarine Elevations and Ridges: Wild Cards in the Poker Game of UNCLOS Article 76*, 39 OCEAN DEV. & INT'L L. 223 (2008).

104. U.N. DIV. FOR OCEAN AFFAIRS AND THE LAW OF THE SEA, Comm'n on the Limits of the Continental Shelf, OUTER LIMITS OF THE CONTINENTAL SHELF BEYOND 200 NAUTICAL MILES FROM THE BASELINES: REACTION TO THE SUBMISSIONS TO THE COMMISSION MADE BY THE KINGDOM OF NORWAY, NOTE FROM DENMARK (Jan. 24, 2007), available at [http://www.un.org/Depts/los/clcs\\_new/submissions\\_files/submission\\_nor.htm](http://www.un.org/Depts/los/clcs_new/submissions_files/submission_nor.htm) (follow link to "Note dated 24 January 2007"); U.N. DIV. FOR OCEAN AFFAIRS AND THE LAW OF THE SEA, Comm'n on the Limits of the Continental Shelf, OUTER LIMITS OF THE CONTINENTAL SHELF BEYOND 200 NAUTICAL MILES FROM THE BASELINES: REACTION TO THE SUBMISSIONS TO THE COMMISSION MADE BY THE KINGDOM OF NORWAY, NOTE FROM THE RUSSIAN FEDERATION, (2007), available at [http://www.un.org/Depts/los/clcs\\_new/submissions\\_files/submission\\_nor.htm](http://www.un.org/Depts/los/clcs_new/submissions_files/submission_nor.htm) (follow link to "Note dated 21 February 2007") [hereinafter NOTE FROM THE RUSSIAN FEDERATION].

105. NOTE FROM THE RUSSIAN FEDERATION, *supra* note 104.

106. U.N. Comm'n of the Limits of the Cont'l Shelf, *Summary of the Recommendations of the Commission on the Limits of the Continental Shelf in Regard to the Submission Made by Norway in Respect of Areas in the Arctic Ocean, the Barents Sea and the Norwegian Sea on 27 November 2006*, U.N. Doc. CLCS/40/Rev. 1, Annex VI (Mar. 27, 2009) (providing a summary of the recommendations made by the Commission in respect of Norway's submission).

LOSC.<sup>107</sup> As a non-party to the LOSC, no deadline has been set for the United States.<sup>108</sup>

Some experts have suggested that the vast majority of the central Arctic seabed may form part of the outer continental shelf entitlements of the Arctic coastal states, with the possible exception of four “donut holes” beyond national jurisdiction.<sup>109</sup> Given that the Arctic Ocean is virtually surrounded by the territories of the Arctic coastal States, all of which share large areas of continental margin in the Arctic, the maritime entitlements of the Arctic States are likely to converge and overlap. However, it should be emphasized that the Commission will not resolve these potentially contentious issues. The Commission is a scientific and technical, rather than legal, body.<sup>110</sup> Its task is to ensure that the outer limits to the continental shelf as submitted by States are consistent with the complex criteria laid out in the LOSC.<sup>111</sup> The Commission does not have a mandate to address sovereignty concerns or overlapping claims and will not assess submissions in an area where a maritime dispute exists.<sup>112</sup> The Commission’s recommendations are also specifically without prejudice to the delimitation of maritime boundaries.<sup>113</sup> Ultimately, these conflicts will have to be resolved by the Arctic coastal states themselves, either through cooperative approaches or perhaps through maritime delimitation for areas beyond 200 nm from the coast.<sup>114</sup>

It is also worth noting that most—if not all—of the oil and gas bearing sedimentary basins of the Arctic that have been analyzed fall within 200 nm of the coast. Thus, these areas are mostly within the declared EEZs of the Arctic littoral States, a fact that somewhat undermines the media portrayals of an Arctic resource free-for-all in respect of outer continental shelf.<sup>115</sup>

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107. CONVENTION TABLE ON RELATED AGREEMENTS, *supra* note 64.

108. *Id.*

109. Ron Macnab, *The Outer Limit of the Continental Shelf in the Arctic Ocean*, in LEGAL AND SCIENTIFIC ASPECTS OF CONTINENTAL SHELF LIMITS 301–11 (Myron H. Nordquist et al. eds., 2004).

110. LOSC, *supra* note 55, at annex II, art. 3.

111. *Id.*

112. Comm’n of the Limits of the Cont’l Shelf, *Rules of Procedure of the Comm’n of the Limits of the Cont’l Shelf*, annex II, R. 46, U.N. Doc. CLCS/40/Rev.1 (Apr. 17, 2008).

113. *Id.*

114. See e.g., Alex G. Oude Elferink, *Maritime Delimitation Between Denmark/Greenland and Norway*, 38 OCEAN DEV. & INT’L LAW 375, 376 (2007) (“The preamble of the 2006 Agreement [Norway-Denmark] indicates that the parties intend to revert to the delimitation of the continental shelf beyond 200 nautical miles . . .”).

115. Donald L. Gautier et al., *Assessment of Undiscovered Oil and Gas in the Arctic*, 324 SCIENCE 1175, 1175–77 (2009) (illustrating location of oil and gas bearing sediments).

## V. ARCTIC GOVERNANCE OPTIONS

In May 2008, ministers from all five Arctic coastal states issued the Ilulissat Declaration.<sup>116</sup> This document emphasizes the “sovereignty, sovereign rights and jurisdiction” of the five Arctic coastal States over “large areas” of the Arctic Ocean.<sup>117</sup> The Arctic littoral States noted that the LOSC was the “extensive international legal framework” applicable to the Arctic Ocean, and that it provides a “solid foundation for responsible management . . . through national implementation and application of relevant provisions.”<sup>118</sup>

The five Arctic coastal states emphasized their commitment to “the orderly settlement of any possible overlapping claims” and acknowledged their “stewardship” responsibilities, principally via existing soft law instruments such as regional cooperation mechanisms under the Arctic Council.<sup>119</sup> Interestingly, other non-littoral Arctic States and indigenous groups such as the Inuit Circumpolar Council (ICC) were not included in discussions over the content of the declaration.<sup>120</sup> The ICC responded that the Ilulissat Declaration “ignores” the role that the Inuit should be playing.<sup>121</sup>

This national sovereignty and sovereign rights-oriented approach is at odds with the views expressed by leading environmental NGOs, such as the World Wildlife Fund, which has suggested that the LOSC alone is not enough.<sup>122</sup> There is continuous and growing pressure from external State actors in the Arctic governance system. Recently, the European Parliament passed a resolution calling on the European Commission to take a “proactive role” in the Arctic.<sup>123</sup> It controversially called for an international treaty for the protection of the Arctic “having as its inspiration the Antarctic Treaty . . . .”<sup>124</sup> Following this controversial announcement, the EU Commission released a communication on the Arctic that dropped the

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116. The Ilulissat Declaration, Arctic Ocean Conference, May 28, 2008, *reprinted in* 48 INT’L LEGAL MATERIALS 382, 382 (2009).

117. *Id.*

118. *Id.*

119. *Id.*

120. *Id.*

121. Press Release, Inuit Circumpolar Council, Canadian Inuit Call for Direct Say on Arctic Sovereignty (June 2, 2008) (on file with author).

122. TIMO KOIVUROVA & ERIK MOLENAAR, WORLD WILDLIFE FEDERATION, INTERNATIONAL GOVERNANCE AND REGULATION OF THE MARINE ARCTIC: OVERVIEW & GAP ANALYSIS 3 (2009).

123. European Parliament Resolution of 9 October 2008 on Arctic Governance, EUR. PARL. DOC. P6 TA 0474, ¶ N.14 (2008), *available at* <http://www.europarl.europa.eu/activities/plenary/ta/calendar.do?language=EN> (navigate to October 2008; then choose the 9th; then choose “Arctic Governance”; it is the 12th main entry).

124. *Id.*

language on adoption of an “Arctic Treaty,” but outlined a policy of systematic engagement in Arctic environmental protection, human rights, research, and multilateral governance.<sup>125</sup> States with minimal territorial geopolitical interests but seeking opportunities in emerging economic sectors will continue to press for influence and action at the Arctic table. South Korea, and China are *ad hoc* observers to the Arctic Council and will remain key economic and trade influences for Canada and the Arctic states. South Korea and China will also continue to invest in scientific infrastructure and engage in scientific partnerships with Arctic and non-Arctic states.

The growth in energy, navigation, fisheries, and tourism sectors in the Arctic all pose distinct challenges for Canada’s domestic and international Arctic policy platform. The development implementation of Canada’s Ocean Management approach<sup>126</sup> and Northern Strategy<sup>127</sup> are of interest and relevance, but a detailed analysis of this regime is beyond the scope of this paper. Key instruments within the Oceans Management approach will be the continued development and effectiveness of integrated management initiatives, such as the Beaufort Sea and the Gulf of St. Lawrence Large Ocean Management Areas (LOMAs). The development of marine protected areas under processes established in the Oceans Act and the Federal Marine Protected Areas Strategy will be important for the identification and conservation of Arctic biodiversity that is both domestically and internationally significant. The five-year funding program, Health of the Oceans,<sup>128</sup> has advanced policy development for a range of domestic and international Arctic issues. Under this initiative, Canada has contributed to several Arctic Council initiatives, including building capacity on a circum-Arctic ecosystem based management approach; co-leading the International Arctic Marine Shipping Assessment; and researching and developing pollution mitigation and oil spill capacity and emergency response expertise.

Many initiatives are at an early phase of development—their effectiveness in delivering sustainable Arctic development has not been assessed, but it is noted for future work. Clearly Canada is interested in investing in a multilateral approach to Arctic management expertise in

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125. *Communication from the Commission to the European Parliament and the Council—The European Union and the Arctic Region*, ¶ 1–2.3, COM (2008) 0763 final (Nov. 20, 2008), available at <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:DKEY=483680:EN:NOT>.

126. Canadian Government, Department of Fisheries and Oceans, *Oceans Management Approach*, May 7, 2009, <http://www.dfo-mpo.gc.ca/oceans/management-gestion/index-eng.htm>.

127. Canadian Government, Canada’s Northern Strategy, *Canada’s Northern Strategy*, Aug. 18, 2009, <http://www.northernstrategy.gc.ca/index-eng.asp>.

128. Canadian Government, Department of Fisheries and Oceans, *Health of the Oceans Initiative*, May 07, 2009, <http://www.dfo-mpo.gc.ca/oceans/management-gestion/healthyoceans-santedesoceans/index-eng.htm>.

addition to its domestic capacity. Canada's Northern Strategy is a holistic government approach to addressing Arctic sovereignty and sustainable development. It addresses issues relating to Arctic sovereignty, environmental heritage, social and economic development in the North, and devolution of governance to Northern people and communities. Recent actions under the sovereignty theme include the development of a new icebreaker, developing security capacity in the form of a new Canadian Forces Army Training Centre in Resolute Bay, and a deep water berthing and fueling facility in Nanisivik. Through the strategy, the Canadian government has strengthened maritime regulations by introducing new ballast water regulations and amending the Arctic Waters Pollution Prevention Act. It is investing in economic development with \$1.8 billion (CA) in offshore oil and gas exploration licenses in the Beaufort Sea and a range of initiatives that support social development in the North. Canada continues to promote this two track strategy of "hard" military and civil infrastructure investment in the North and a raft of "soft" power initiatives including international scientific and environmental policy engagement.

It is a turbulent and changing time for Arctic governance, and we identify three scenarios for the future that will influence Canadian Arctic policy: a "status quo" regime, a mixed reform regime, and a new binding international regime.<sup>129</sup> The status quo option is a likely scenario, particularly because Arctic coastal states are unlikely to relinquish sovereignty or sovereign rights to a new binding multilateral regime. The divergence of political opinion over the Arctic governance and ongoing geopolitical positioning render it difficult to reach an agreement that relinquishes sovereign rights. Nevertheless, progressive reforms could be made within the existing political framework. In this status quo scenario, the Arctic Council would remain the dominant soft law regime for cooperation, and national action would continue under existing national and international instruments, such as the LOSC.

A "flexible approach to norm-building" within existing frameworks appears to be a likely way to move forward on difficult international issues and improve governance.<sup>130</sup> A mixed reform regime would seek to reform and address the inefficiencies and gaps in the existing "unambitious regime."<sup>131</sup> This scenario would occur as Arctic States (and other states

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129. Potts & Schofield, *The Arctic: A Race for Resources or Sustainable Development?*, *supra* note 6, at 28–29.

130. Olav Schram Stokke, *A Legal Regime for the Arctic? Interplay with the Law of the Sea Convention*, 31 *MARINE POLICY* 402, 408 (2007).

131. DONALD R. ROTHWELL, *THE POLAR REGIONS AND THE DEVELOPMENT OF INTERNATIONAL LAW* 389 (1996).

with interests in the region) move ahead on an issue-by-issue basis under international frameworks such as the LOSC, with Article 122 on regional cooperation in semi-enclosed seas (the “regional seas approach”) offering a potential model for building collaborative measures and avoiding a lowest common denominator approach.<sup>132</sup> This regime would retain the principle of sovereign rights but increase cooperation on critical multilateral issues, such as fisheries management, shipping and navigation, and mineral development. There is considerable room for improving regulations pertaining to those issues that have existing international infrastructure, such as fisheries.

The final scenario of a comprehensive binding international regime—i.e., an “Arctic Treaty”—is unlikely. Arctic states do not demonstrate the political will to move in this direction, preferring to focus on cooperative approaches.<sup>133</sup> Several ideas have been discussed that would create a binding pan-Arctic treaty mechanism, loosely based on the Antarctic model. In the short term, however, this is highly unlikely, despite the EU parliamentary resolution and the desires of some NGOs who have urged for the adoption of such a treaty.

The range of instruments and alternatives offers wide scope for interpretation of the future governance of the Arctic and the role of Canada within this regime. Getting the balance right between oceans development and conservation in an era of international engagement and interest in the Arctic will be a major challenge for the Canadian government.

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132. See Ninth Global Meeting of the Regional Seas Conventions and Action Plans, Jeddah, Saudi Arabia, Oct. 29–31, 2007, *Global Strategic Directions for the Regional Seas Programmes 2008–2012: Enhancing the Role of the Regional seas Conventions and Action Plans*, U.N.E.P. (DEPI)/RS.9/6 (Oct. 31, 2007) (announcing and outlining the Regional Seas Program, one approach to marine management).

133. Paul Reynolds, *Trying to Head Off an Arctic ‘Gold Rush’*, BBC NEWS, May 29, 2008, <http://news.bbc.co.uk/2/hi/7423787.stm> (noting the incentives for cooperation).

