Introduction

Resolute Bay, an Inuit hamlet on Canada's Cornwallis Island, is a desolate but remarkable place – especially in mid-summer, as I discovered in June 2008. During a midnight stroll across a moonscape of frozen gravel, a powerful wind drove flecks of ice and sand into my face. At the same time, the sun was shining high in the sky, for Resolute Bay is located at 74 degrees north. I remember thinking that it was midday in India, and people there were enjoying the same sunlight as me. The only difference was that, in Resolute Bay, the light was shining directly over the North Pole.

No country will ever "own" the North Pole, which is located about 400 nautical miles north of Greenland and the northernmost islands of Canada and Russia. Although the water and seabed close to shore belong to the coastal states, the surface, water column, and at least some of the seabed of the central Arctic Ocean belong to all humanity. At the same time, many of the challenges there – including life-threatening accidents, oil spills, and overfishing – will necessarily be addressed first and foremost by the geographically proximate Arctic states. These challenges will increase rapidly in the years and decades ahead, as the climate changes, the sea-ice melts, and ships of all kinds gain access.

During the Cold War, the US and the Soviet Union squared off across the Arctic Ocean. Nuclear submarines prowled under the ice while long-range bombers patrolled high overhead. A more peaceful and cooperative approach emerged in 1990 when the two superpowers negotiated a maritime boundary in the Bering Sea, Bering Strait, and Chukchi Sea.[1]

[1] Agreement between the United States of America and the Union of Soviet Socialist Republics on the Maritime Boundary (1990) 29 ILM 941, available at www.state.gov/documents/organization/125431.pdf.

In 1996, the eight Arctic countries – the US, Russia, Canada, Denmark, Norway, Sweden, Finland, and Iceland – created the Arctic Council as an intergovernmental forum for discussing issues other than those of "military security."[2] At the same time, Russia accepted Western assistance with the decommissioning and disposal of Soviet-era nuclear reactors and warheads.[3] It also allowed many Soviet-era warships to degrade, while the US and Canada, for their part, chose not to replace aging icebreakers.[4]

More recently, climate change is fundamentally reshaping the Arctic.[5] In addition to rising temperatures caused by global greenhouse gas emissions, change is being driven by Arctic-specific "feedback loops" arising out of the delicate balance between frozen and liquid water. An increase of a fraction of a degree in the average annual temperature can change highly reflective sea-ice into dark, heat-absorbing open ocean. The same temperature increase can turn rock-hard biologically stable permafrost into a decomposing, methane-emitting morass of ancient plant material. In the Arctic, the average annual air temperature has already increased by more than two degrees Celsius.[6]

In September 2012, the area covered by Arctic sea-ice dropped to 3.6 million square kilometers, almost 50 percent below the 1979 to 2000 average.[7] It now seems possible that a complete, late-summer melt-out could occur as early as 2020.[8] The disappearance of thick, hard

[2] See www.arctic-council.org/. On the origins of the Arctic Council, see Evan T. Bloom, "Establishment of the Arctic Council" (1999) 93 *American Journal of International Law* 712.

[3] See Brian D. Finlay, "Russian Roulette: Canada's Role in the Race to Secure Loose Nuclear, Biological, and Chemical Weapons." (2006) 61 *International Journal* 411.

[4] See, e.g., *Polar Icebreakers in a Changing World: An Assessment of U.S. Needs (Report of the Committee on the Assessment of US Coast Guard Polar Icebreaker Roles and Future Needs, National Research Council)* (Washington, DC: National Academies Press, 2007), available at www.nap.edu/catalog.php?record_id=11753; Randy Boswell, "Shortsighted Politics, Forgotten Arctic Dreams: The Abandoned Polar 8 Icebreaker Ship Could Have Embodied Canada's Identity as a Circumpolar Power," *Ottawa Citizen*, August 10, 2007, A5.

[5] For the most comprehensive (though already dated) examination, see *Impacts of a Warming Arctic: Arctic Climate Impact Assessment* (Cambridge University Press, 2004), available at www.acia.uaf.edu/.

[6] "Sea Ice Loss Major Cause of Arctic Warming," *Independent*, April 30, 2010, available at www.independent.co.uk/environment/sea-ice-loss-major-cause-of-arctic-warming-1958815.html.

[7] US National Snow and Ice Data Center, "Arctic Sea Ice News and Analysis," available at http://nsidc.org/arcticseaicenews/.

[8] Margaret Munro, "Arctic Ice 'Rotten' to the North Pole, Scientist Says," *PostMedia News*, October 1, 2012, available at www.vancouversun.com/technology/Arctic+Rotten+North+Pole+scientist+says/7279382/story.html. For a useful discussion of different scientific

"multi-year" sea-ice would open up large areas of the Arctic to year-round navigation. The Arctic Ocean could soon resemble the Baltic Sea or the Gulf of St. Lawrence where ice-strengthened ships and icebreaker-escorted convoys operate in winter. This would reduce the costs of shipping between Asia and Europe and the Atlantic Seaboard of the United States and also facilitate resource exploration and extraction.

As easy-to-access conventional sources of oil are exhausted, companies are pursuing oil in less hospitable places, or developing non-conventional sources such as the tar sands of western Canada. As a result, the costs of finding, producing, and transporting oil to market will escalate. The price of oil rose to $140 before the 2008 global recession, and has since climbed back to above $100.[9] Some experts believe that "peak oil" – the point at which world demand exceeds remaining reserves – will soon be achieved, or perhaps has been reached already.[10] All of this explains the excitement when, in 2009, the US Geological Survey released projections of undiscovered oil and gas resources north of the Arctic Circle: 83 billion barrels of oil, enough to meet current world demand for three years; and 44 trillion cubic meters of natural gas, or roughly fourteen years of supply.[11]

The combination of melting sea-ice and high oil prices has led to concerns about possible struggles for Arctic territory and resources. In 2007, Artur Chilingarov, the then-deputy chair of the Russian Duma, caused a global media frenzy by planting a titanium flag on the seabed at the North Pole and declaring "the Arctic is Russian."[12] Peter MacKay, then Canada's foreign minister, responded in an equally colorful manner: "Look, this isn't the fifteenth century. You can't go around the world and just plant flags

predictions, see Katherine Leitzell, "When Will the Arctic Lose its Sea Ice?" US National Snow and Ice Data Center, May 3, 2011, available at http://nsidc.org/icelights/2011/05/03/when-will-the-arctic-lose-its-sea-ice/.

[9] International Energy Agency, "Oil Market Reports," available at http://omrpublic.iea.org/.

[10] John Collins Rudolf, "Is 'Peak Oil' Behind Us?" *New York Times*, November 14, 2010, http://green.blogs.nytimes.com/2010/11/14/is-peak-oil-behind-us/?partner=rssandemc=rss.

[11] Donald L. Gautier, *et al.*, "Assessment of Undiscovered Oil and Gas in the Arctic." (2009) 324 (5931) *Science* 1175.

[12] Paul Reynolds, "Russia Ahead in Arctic 'Gold Rush'," *BBC News*, August 1, 2007, available at http://news.bbc.co.uk/2/hi/6925853.stm.

and say, 'We're claiming this territory.' Our claims over our Arctic are very well established."[13]

In 2008, the European Parliament stirred things up further by calling for a new multilateral convention for the Arctic modeled on the 1959 Antarctic Treaty.[14] In doing so, it was implicitly questioning the rights of Arctic Ocean coastal states under the law of the sea.[15] That same year, Scott Borgerson of the US Council on Foreign Relations described the situation in the Arctic as a "scramble" having potentially serious consequences: "The combination of new shipping routes, trillions of dollars in possible oil and gas resources, and a poorly defined picture of state ownership makes for a toxic brew."[16]

Fortunately, cooler heads have since prevailed. One of the Russian scientists involved in the North Pole flag-plant admitted that it was a publicity stunt lacking legal relevance.[17] Danish Foreign Minister Per Stig Møller invited his counterparts from the four other Arctic Ocean coastal states to Ilulissat, Greenland, where they reaffirmed their commitment to resolving any disputes within an existing framework of international law.[18] The European Union's Council of Ministers issued an Arctic policy that recognized the primacy of the law of the sea in a region that, unlike the Antarctic, is centered on an ocean.[19] US Secretary of State Hillary Clinton spoke of the need for Arctic countries

[13] "Canada Rejects Flag-Planting as 'Just a Show'," *Independent* online, August 3, 2012, available at www.iol.co.za/news/world/canada-rejects-flag-planting-as-just-a-show-1.364759#.UHgzYo4_5UQ.

[14] "European Parliament Resolution of 9 October 2008 on Arctic Governance," available at www.europarl.europa.eu/sides/getDoc.do?type=TA&reference=P6-TA-2008-0474&language=EN. For an excellent overview of similar proposals, see Timo Koivurova, "Alternatives for an Arctic Treaty – Evaluation and a New Proposal." (2008) 17 *Review of European Community and International Environmental Law* 14.

[15] The law of the sea is made up of rules of customary international law which were codified, and supplemented with other rules and institutions, in the 1982 United Nations Convention on the Law of the Sea, 1833 UNTS 397, available at www.un.org/Depts/los/convention_agreements/texts/unclos/closindx.htm.

[16] Scott Borgerson, "Arctic Meltdown." (2008) 87 *Foreign Affairs* 63, available at www.foreignaffairs.com/articles/63222/scott-g-borgerson/arctic-meltdown.

[17] Adrian Blomfield, "US Rises to Kremlin Bait," *Daily Telegraph*, August 4, 2007, available at www.telegraph.co.uk/news/worldnews/1559444/US-rises-to-Kremlin-bait.html.

[18] "The Ilulissat Declaration," May 29, 2008, available at http://uk.nanoq.gl/Emner/News/News_from_Parliament/2008/05/~/media/66562304FA464945BB621411BFFB6E12.ashx.

[19] Council of the European Union, "Council Conclusions on Arctic Issues," December 8, 2009, available at http://oceansnorth.org/resources/council-european-union-conclusions-arctic-issues. For an explanation of the shift in approach, see Njord Wegge, "The EU and the Arctic: European Foreign Policy in the Making." (2012) 3 *Arctic Review on Law and Politics* 6.

to work together: "We need all hands on deck because there is a huge amount to do, and not much time to do it."[20]

Even the leaders of Canada and Russia, who are sometimes guilty of grandstanding on Arctic issues for domestic political purposes, adopted a decidedly more cooperative stance. In January 2010, Canadian Prime Minister Stephen Harper told NATO Secretary General Anders Fogh Rasmussen that "Canada has a good working relationship with Russia with respect to the Arctic" and "there is no likelihood of Arctic states going to war."[21] Eight months later, Harper's government released an Arctic Foreign Policy Statement that committed Canada to resolving its remaining Arctic boundary disputes.[22] In September 2010, Russian prime minister (now President) Vladimir Putin told an international conference of Arctic experts that: "If you stand alone you can't survive in the Arctic. Nature makes people and states to help each other."[23] Putin's comments came just one week after Russia and Norway signed a boundary treaty for the Barents Sea, where the two countries had previously disputed ownership of 50,000 square nautical miles of oil-and-gas-rich seabed.[24]

In short, there is no state-to-state competition for territory or resources in the Arctic, and no prospect of conflict either. Instead, the Arctic is becoming a region marked by cooperation and international law-making, during a period of significant geopolitical, environmental, and economic change.

With the insignificant exception of Hans Island, a rocky islet located halfway between Greenland and Canada, all of the land in the region belongs incontestably to one or another Arctic country. The Arctic Ocean itself is governed by rules of the law of the sea which apply globally, and which all countries including the United States accept as

[20] "Hillary Clinton Criticises Canada over Arctic talks," *BBC News*, March 30, 2010, available at http://news.bbc.co.uk/2/hi/8594291.stm.

[21] US State Department cable # VZCZCXR03302, January 20, 2010, available at http://aptn.ca/pages/news/2011/05/11/while-harper-talked-tough-with-nato-on-arctic-u-s-believed-pm-all-bark-no-bite/ (original cables are reproduced below the article).

[22] Statement on Canada's Arctic Foreign Policy, August 20, 2010, available at www.international.gc.ca/polar-polaire/assets/pdfs/CAFP_booklet-PECA_livret-eng.pdf.

[23] Luke Harding, "Vladimir Putin Calls for Arctic Claims to Be Resolved under UN Law," *Guardian*, September 23, 2010, available at www.guardian.co.uk/world/2010/sep/23/putin-arctic-claims-international-law.

[24] 2010 Treaty between the Kingdom of Norway and the Russian Federation Concerning Maritime Delimitation and Cooperation in the Barents Sea and the Arctic Ocean, English translation available at www.regjeringen.no/upload/ud/vedlegg/folkerett/avtale_engelsk.pdf.

customary international law.[25] Developed through centuries of state practice and *opinio juris*, these rules were codified in the 1982 United Nations Convention on the Law of the Sea (UNCLOS).[26]

As elsewhere in the world, the territorial seas of Arctic countries extend twelve nautical miles from shore. Within that band, coastal states have extensive regulatory powers over foreign shipping and absolute rights over fish and seabed resources. Between twelve and 200 nautical miles, in the exclusive economic zone (EEZ), coastal states have fewer powers over shipping but absolute rights over fish and seabed resources. Beyond 200 nautical miles, coastal states lose their rights over fish but may have rights over the seabed – if and where they can demonstrate scientifically that the ocean floor is a "natural prolongation" of their landmass. As Chapter 4 explains, this means that planting a flag on the seabed at the North Pole had no more legal consequence than a flag-plant on the Moon. It also means that most of the Arctic's offshore oil and gas is within the uncontested jurisdiction of one or another coastal state, since offshore oil and gas, which is derived from organic material, is usually found in sedimentary strata in continental shelves.

For decades, international law has played a central role in determining the boundaries between the maritime zones of adjacent coastal states. As mentioned above, the United States and the Soviet Union signed a boundary treaty for the Bering Sea, Bering Strait, and Chukchi Sea in 1990.[27] Twenty-one years later, Russia and Norway concluded a similar treaty for the Barents Sea.[28] As Chapter 3 explains, this leaves just one unresolved maritime boundary in the Arctic: in the Beaufort Sea between the United States and Canada.

As part of an effort to resolve that dispute, the United States and Canada have cooperated in the acquisition of geological and

[25] See, e.g., President Ronald Reagan, "Statement on United States Oceans Policy, March 10, 1983," available at www.oceanlaw.org/downloads/references/reagan/ReaganOceanPolicy-1983.pdf; National Oceanic and Atmospheric Administration (NOAA), Office of General Counsel, "Law of the Sea Convention," available at www.gc.noaa.gov/gcil_los.html ("While it is not yet a party, the US nevertheless observes the Convention as reflective of customary international law and practice"). The International Court of Justice recently ruled that Art. 76(1) of UNCLOS, on extended continental shelves, is part of customary international law. *Territorial and Maritime Dispute* (*Nicaragua* v. *Colombia*), November 19, 2012, para. 118, available at www.icj-cij.org/docket/files/124/17164.pdf.

[26] n. 15, above. [27] n. 1, above. [28] n. 24, above.

geomorphological evidence concerning the outer limits of their continental shelves. As a party to UNCLOS, Canada will soon submit its data to the Commission on the Limits of the Continental Shelf (CLCS), a body of scientists that issues "recommendations" which serve to legitimize well-supported proposed continental shelf limits. The same kind of data will be relevant further north where the extended continental shelves of Canada, Russia, and Denmark may overlap along several underwater ridges. Since the Commission does not have the mandate to resolve such overlaps, boundaries might eventually have to be negotiated in the central Arctic Ocean, though again, this will take place within an existing framework of international law.

As Chapter 5 explains, there are also disputes over the legal status of the Northwest Passage and the Northern Sea Route. Both disputes are bilateral and both involve the United States, with Russia and Canada each maintaining that these Arctic straits are "internal waters" subject to their full jurisdiction and control. Russia has successfully deterred any direct challenge to its legal position, while Canada has managed its dispute for more than four decades, including by negotiating an Arctic Cooperation Agreement in 1988 in which the United States promised to seek permission before sending Coast Guard icebreakers through the Northwest Passage.[29] Now, with the sea-ice receding and ships of all kinds arriving, the agreement urgently needs updating.

Issues of ship safety, oil spill prevention, and fisheries management also demand attention. Arctic conditions necessitate high standards of ship construction, including ice-strengthening and double hulls as well as fully enclosed lifeboats and state-of-the-art navigation and communication equipment. The International Maritime Organization spent years negotiating a "Polar Code" for shipping, but the document was downgraded to a set of guidelines before being adopted in 2002.[30] Negotiations aimed at updating the guidelines and converting them to a binding treaty are now underway.

Cleaning up a major oil spill in the Arctic would be an impossible task. All eight Arctic countries have ratified the 1990 Convention on Oil

[29] Agreement between the Government of Canada and the Government of the United States of America on Arctic Cooperation, Canada Treaty Series 1988, No. 29; available at www.lexum.com/ca_us/en/cts.1988.29.en.html.

[30] The Guidelines were updated in 2009 but left unbinding. See Guidelines for Ships Operating in Polar Waters, December 2, 2009, available at www.imo.org/blast/blastDataHelper.asp?data_id=29985&filename=A1024(26).pdf.

Pollution Preparedness, Response and Cooperation (OPRC), which was negotiated under the auspices of the International Maritime Organization.[31] In addition to requiring measures such as the stockpiling of oil spill equipment, OPRC promotes the development of regional agreements. The Arctic Council has obliged with a draft treaty on Arctic marine oil pollution preparedness and response that should be adopted in 2013.[32] But the new treaty, which focuses on improving communication and coordination when accidents occur, is unlikely to go beyond the OPRC rules to address more difficult issues such as same-season relief wells and liability caps. What the Arctic really needs, as Chapter 6 explains, is a treaty on oil spill prevention.

At some point soon, long-range fishing fleets will explore the newly ice-free waters of the central Arctic Ocean. Around the world, fish stocks that exist on the high seas, or move between the high seas and the EEZs of coastal states, are acutely vulnerable to overexploitation. As Chapter 6 explains, a regional fisheries organization is needed for the Arctic Ocean – before commercial fishing begins.

Several regional organizations already exist in the Arctic. In 1993, Denmark, Finland, Iceland, Norway, Sweden, Russia, and the European Commission signed the "Kirkenes Declaration" establishing the Barents Euro-Arctic Council.[33] At the same time, provincial governments as well as indigenous groups signed a protocol establishing the Barents Regional Council. The two parallel organizations promote cooperation on matters of shared interest in a region where proximity and history have made it possible to achieve a particularly high level of trust and cooperation.

More recently, the Arctic Council has become the most comprehensive international body in the Arctic region. Since 1996, the Arctic Council has achieved a string of modest successes, including the 2004 Arctic Climate Impact Assessment[34] and the 2009 Arctic Marine Shipping Assessment.[35] In 2011, the eight member states created a permanent secretariat,

[31] 1990 International Convention on Oil Pollution Preparedness, Response and Co-operation, available at www.ifrc.org/docs/idrl/I245EN.pdf.
[32] See Task Force on Arctic Marine Oil Pollution Preparedness and Response, at www.arctic-council.org/index.php/en/about-us/task-forces/280-oil-spill-task-force.
[33] Declaration on Cooperation in the Barents Euro-Arctic Region, November 1, 1993, available at www.barentsinfo.fi/beac/docs/459_doc_KirkenesDeclaration.pdf.
[34] Arctic Climate Impact Assessment, n. 5, above.
[35] 2009 *Arctic Marine Shipping Assessment*, available at www.pame.is/index.php/amsa-2009-report.

arguably transforming the Arctic Council from an inter-governmental forum into an international organization.[36] They also negotiated a multilateral search-and-rescue treaty, the first legally binding instrument concluded under the auspices of the Arctic Council.[37]

Significantly, the Arctic Council has since its inception included indigenous peoples as "permanent participants." Together with the eight member states, they engage in an on-going, highly iterative process of consensus-based decision-making.[38] By creating a central forum for Arctic diplomacy and law-making, the Arctic Council has thus become the proverbial "town square" for an expanding transnational community of politicians, diplomats, and other experts who, through their repeated interactions, are gradually acquiring shared expectations, identities, and interests.[39] And this, in turn, is likely to promote even more cooperation and law-making.

Much like the midnight sun in Resolute Bay, this book tries to shine light on the growing role of law-based cooperation in a rapidly changing Arctic. In doing so, it deals with sometimes-quite-technical legal issues, seeking to explain them to lawyers and non-lawyers alike. Other aspects of the contemporary Arctic – post-Cold War geopolitics, the nascent institutions of regional governance, the fraught dynamic between hydrocarbons and climate change – are considered only insofar as they provide relevant context for the rules and rule-making processes. For the growth of international law-making in the Arctic is an important enough story, both in itself, and as a factual counterweight to the all-too-widespread narrative of unbridled competition and impending conflict.

[36] Nuuk Declaration, May 12, 2011, available at www.arctic-council.org/index.php/en/about/documents/category/5-declarations. Although the Arctic Council is based on a declaration rather than a founding treaty, such a treaty is not a necessary condition for an international organization. The Organization for Security and Cooperation in Europe (OSCE) is based on the "Helsinki Declaration" and has similarly evolved from an inter-governmental forum into an international organization. See Final Act of the Conference on Security and Cooperation in Europe, August 1, 1975, 14 ILM 1292, available at www1.umn.edu/humanrts/osce/basics/finact75.htm.

[37] Agreement on Aeronautical and Maritime Search and Rescue in the Arctic, May 12, 2011, available at www.arctic-council.org/index.php/en/about/documents/category/20-main-documents-from-nuuk.

[38] See discussion, Chapter 7, below.

[39] For more on the "constructivist" dynamics of diplomacy and international law-making, see Alexander Wendt, *Social Theory of International Politics* (Cambridge University Press, 1999); Michael Byers, *Custom, Power and the Power of Rules* (Cambridge University Press, 1999); Jutta Brunnée and Stephen Toope, *Legitimacy and Legality in International Law* (Cambridge University Press, 2010).

1 Territory

In August 2011, my eldest son and I rode a Zodiac through Bellot Strait, a narrow, winding, twenty-nautical-mile-long waterway in Canada's High Arctic. A seven-knot tidal rip made for an exhilarating trip. Our excitement peaked when, halfway through the strait, we landed on the most northerly extension of mainland North America. We knew that Zenith Point has been Canadian since Britain transferred its Arctic possessions to Canada in 1880 and that the islands to the north of Bellot Strait are just as unquestionably Canadian.[1] Yet the thrill of discovery still ran down our spines as we symbolically reclaimed the land for our country. This chapter focuses on territorial issues, including several of historic interest. It begins with the one remaining dispute over title to territory in the region.

1 Hans Island

A faded, wind-torn Danish flag is mounted on the wall in the office of Ambassador Thomas Winkler, legal adviser to the Danish foreign minister. Raised on Hans Island by Danish troops, the flag was later taken down by Canadian soldiers – and mailed back to Copenhagen.

Hans Island is a barren islet, just one kilometer across, located in the Kennedy Channel portion of Nares Strait between Ellesmere Island and

[1] An Order-in-Council dated July 31, 1880 transferred "all the British possessions on the North American continent, not hitherto annexed to any colony." See *Canada Gazette*, October 9, 1880; Ivan Head, "Canadian Claims to Territorial Sovereignty in the Arctic Regions." (1963) 9 *McGill Law Journal* 200 at 212.