

# The geopolitics of Arctic melt

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Global climate change has catapulted the Arctic into the centre of geopolitics, as melting Arctic ice transforms the region from one of primarily scientific interest into a maelstrom of competing commercial, national security and environmental concerns, with profound implications for the international legal and political system.

The significance of an Arctic rendered increasingly accessible by the melting of ice as a result of rising global temperatures should not be underestimated. As the region opens to increased human activity such as traffic from commercial shipping, tourism, and oil and gas exploration, soot emitted by maritime vessels and operations will land on the ice. Greying of the icecap, as black carbon from incomplete hydrocarbon combustion lodges itself in snow and ice, causes what was once a reflective surface to absorb more sunlight, melt, and warm the water. The resulting dangerous feedback loop is part of an alarming phenomenon that is pushing the current drive for policies to slow down climate change.

Increasing water temperatures are changing the distribution of sea ice and having grave impacts on ice-dependent flora and fauna. In September 2009 nearly 3,500 walrus congregated on Alaska's north-west coast off the Chukchi Sea because of reduced sea ice; the same happened in 2007 with over 6,000 walrus.<sup>1</sup> Polar bears are likely to face extinction in less than 70 years as they lose their traditional breeding and hunting grounds to melting ice.<sup>2</sup> Red foxes are migrating ever northwards and displacing smaller Arctic foxes.<sup>3</sup> The list goes on.

The loss of permafrost, animals and fish could have a devastating effect on the native peoples of the region, whose cultures continue to be linked intimately with them. The Inuit hunting culture is directly threatened by changes not only in the physical geography of the environment but in the composition of the animal population. Villages along the Bering and Chukchi coasts have been relocated because of melting permafrost and consequent coastal erosion. And while the impact on marine life is not yet known, signs of change can already be observed in

<sup>1</sup> Dan Joling, 'Walrus congregate on Alaska shore as ice melts', Associated Press, 10 Sept. 2009, <http://www.google.com/hostednews/ap/article/ALeqM5iveFY1XCjWegbjcLevGSl2HtDj7wD9AK36900>, accessed 10 Sept. 2009.

<sup>2</sup> Eric Post, Mads C. Forchhammer, M. Sydonia Bret-Harte, Terry V. Callaghan et al., 'Ecological dynamics across the Arctic associated with recent climate change', *Science* 325: 5946, 11 Sept. 2009, p. 1355.

<sup>3</sup> Post et al., 'Ecological dynamics across the Arctic'.

the migration of certain fish species off the coast of Greenland, and in fish growth and size. Any changes in marine life will also affect the nature of fisheries in the region, and will require policies to facilitate sustainable operations and address potential conflict as fishing grounds and national boundaries overlap.

The rapidity of Arctic melt is no longer the phantasmagoria of futuristic movies but is occurring at a rate unfathomable just a few years ago. In 2007 alone, more than one million square miles of ice melted, leaving the region with only half the ice that existed in 1950. In 2007 and again in 2008 the North-West Passage was open for two weeks, and predictions are being made of ice-free Arctic summers as early as 2013.<sup>4</sup>

These events are not limited to the North American Arctic. For the last few years, the Northern Sea Route along Russia's north coast has seen similar ice changes, providing Russia with greater access to its vast Siberian resources and leading to bold assertions of its sovereignty over vast swathes of the polar sea. Indeed, the region has already opened to global commerce with the announcement on 21 August 2009 that, for the first time, two German commercial ships unaccompanied by ice-breakers were traversing the Northern Sea Route on a voyage from Vladivostok to the Netherlands.<sup>5</sup>

In response to these developments, in July 2009 NASA's Characterization of the Arctic Sea Experiment began imaging—via unmanned aerial vehicles—the types of ice floating in the Arctic Ocean as they pass through the Fram Strait between Greenland and Svalbard and into the Atlantic Ocean. After just two months of observation the data already showed the amount of multi-year ice to have declined by 74 per cent since 1988, and that the oldest ice covers only 2 per cent of the Arctic Ocean, in contrast to 20 per cent as recently as the 1980s.<sup>6</sup>

The prospect of longer ice-free periods in the Arctic has momentous implications for the region's commercial development, which risks further melting of the Arctic ice. In a 2009 report the United States Geological Survey (USGS) postulated that over 90 billion barrels of oil, 1,669 trillion cubic feet of natural gas and 44 billion barrels of natural gas liquids are located in the Arctic (84 per cent of which could potentially be found in offshore areas).<sup>7</sup> With longer ice-free periods now available to explore for hydrocarbons, a new scramble for oil and gas could occur, especially if oil prices recover to levels above \$100 a barrel. In addition, new technological developments in marine surface and undersea logistics, as well as deep-water drilling technology, have increased the salience of issues relating to the extension of coastal states' respective continental shelves under the United Nations Convention on the Law of the Sea (UNCLOS) and the Commission on the Limits of the Continental Shelf (CLCS).

<sup>4</sup> Predictions range between 2010 and 2030.

<sup>5</sup> 'First commercial ships taking Russia's Northeast Passage', *E&E News*, 25 Aug. 2009, <http://www.eenews.net/climatewire/2009/08/25/7>, accessed 25 Aug. 2009.

<sup>6</sup> 'NASA flight studies Arctic ice', 22 July 2009, <http://arcticfocus.com/2009/07/22/nasa-flight-studies-arctic-ice/>, accessed 22 July 2009.

<sup>7</sup> US Geological Survey, 'Assessment of undiscovered oil and gas in the Arctic', *Science* 324: 5931, 29 May 2009, pp. 1175–9; US Geological Survey Fact Sheet 2008, 'Circum-Arctic resource appraisal: estimates of undiscovered oil and gas north of the Arctic Circle', <http://pubs.usgs.gov/fs/2008/3049/>, accessed 29 May 2009.



**Map 1: The Arctic region**

It is the thesis of the authors that Arctic melt does and will continue to pose economic, military and environmental challenges to governance of the region, and that technological factors will most likely be a barrier to access in the short term and an enabler in the longer term. Decreased sea ice gives countries more opportunities to plant infrastructure to enable the exploitation of hydrocarbons and

minerals, and to gain greater access for commercial shipping and fishing. While the military has a longstanding presence in the Arctic, greater access means the nature of this presence will have to adjust to take on new roles and capabilities, such as increased capacity for search-and-rescue operations and border patrolling, and submarine adaptation to reduced opaque ice cover and potentially increased monitoring of the waters by the Arctic states. Working within existing institutions and building capacity is preferable to the proliferation of new institutions, although the full structure and scope of the legal and regulatory frameworks that may be needed are at present unclear. What is clear is that the genie of increased Arctic access cannot be put back into the proverbial bottle.

## Environment

The Arctic is a complex environment. While sea passages may be 'ice-free' for a portion of the year, that term can be misleading. Multi-year ice is receding, but freely floating, younger, uncharted ice is more dangerous to navigate.

In addition to releasing harmful greenhouse gases, the warming of the Arctic tundra is leading to the proliferation of rapid large plant growth, which—like black carbon—darkens the landscape and further warms the icecaps.<sup>8</sup> Melting tundra also raises vexing problems about the construction of land-based energy infrastructure in projects such as the Alaska Natural Gas Transportation System, which would bring Alaskan and Canadian natural gas to the lower 48 states and to southern Canada, since the unstable ground may not be able to support the overland pipeline infrastructure required for the project. If these developments continue as forecast, they may focus attention increasingly on the possibilities for seaborne transportation of liquefied natural gas (LNG), with significant implications for the geopolitics of the far north.

As ice melts and waters warm, fish are moving ever further northwards. Fish do not recognize national boundaries, which makes management of fisheries potentially contentious as stocks cross maritime frontiers. Moreover, as some species of fish move north, animals such as the walrus which live south of the far polar north are seeing their traditional sources of protein disappear, and are at grave risk as a result. Inuit tribes report massive drops in the walrus and seal populations, two vital commodities for their own livelihoods. The polar bear, already adversely affected by changes in fish and other marine populations, has access to ever less of the floating ice that is vital to its habitat.

In August 2009 the Obama administration approved the Arctic Fishery Management Plan to prevent the expansion of commercial fishing into Arctic waters exposed by ice melt—an area of approximately 150,000 square nautical miles.<sup>9</sup> The impact of the movement of existing fish stocks and the introduction of new species traditionally found in waters further south has yet to be fully assessed, but

<sup>8</sup> David Ljunggren, 'Arctic tundra hotter, boosting global warming: B.C. expert', Reuters, 31 July 2009.

<sup>9</sup> Allison Winter, 'U.S. bans commercial fishing in warming Arctic', *Greenwire*, 21 Aug. 2009, <http://www.enews.net/Greenwire/2009/08/21/1>, accessed 21 Aug. 2009.

determining the impact of these new dynamics on the fragile ecosystem will be a necessary precondition to the effective management of any commercial fishing that may be allowed in the future. The overall effectiveness of the Plan depends in part on whether other Arctic states will follow suit, as maintaining the right to rush to these newly accessible fishing grounds without a sustainable management structure in place could deplete fish populations far sooner than is widely appreciated.

## Indigenous peoples

As noted above, the indigenous peoples of the Arctic are intimately tied to the environment. The effects of climate change on the region are a double-edged sword for these communities who at present lack access to some of the basic amenities of modernity by virtue of geographic location, geophysical terrain and neglect by central governments. On the one hand, melting ice will be to their disadvantage in respect of their traditional way of life, based on hunting and fishing. On the other hand, an Arctic region that is more accessible to lucrative activities such as the exploitation of hydrocarbons, fish and minerals will necessarily attract increased governmental attention, and this could benefit the citizens of the region.

While these communities have gained limited measures of political power, they have yet to exploit their economic potential. Oil and mining companies will increasingly have to consider the interests of the indigenous communities when evaluating potential projects in the Arctic. The Sami of northern Norway already have legal rights to certain local resources and are pushing for compensation from the companies that exploit them.<sup>10</sup> The Inuit Circumpolar Council, which represents the Inuit of Denmark, Canada, the US and Russia, launched its Circumpolar Inuit Declaration on Arctic Sovereignty on 28 April 2009, stating: 'It is our right to freely determine our political status, freely pursue our economic, social, cultural and linguistic development, and freely dispose of our natural wealth and resources.'<sup>11</sup> Denmark is scaling back its massive subsidies to Greenland's Inuit population, in line with the latter's moves towards greater independence and potential for wealth generation from the exploitation of hydrocarbons and minerals.

The Canadian government set up the territory of Nunavut a decade ago, granting some home-rule powers to the Canadian Inuit. Canadian Prime Minister Stephen Harper has called for the construction of a new Arctic military training base in Resolute Bay and the refurbishment of the deep-sea Arctic port at Nanisivik, a town in Nunavut, in addition to the construction of six to eight new icebreakers. While the global economic crisis has hampered the short- to medium-term feasibility of these aspirations, it also brings to light the concurrent issues affecting the Inuit from northern Quebec whom the government encouraged to move to Resolute in 1953, in order to ensure that Canadian citizens lived as far

<sup>10</sup> 'Not a barren country: the rights of Arctic peoples', *The Economist*, 18 July 2009, p. 57.

<sup>11</sup> 'Circumpolar Inuit Declaration on Arctic Sovereignty', 28 April 2009. See <http://www.itk.ca/circumpolar-inuit-declaration-arctic-sovereignty>, accessed 28 April 2009.

north as possible to maintain sovereignty in the face of a Russian threat of invasion during the Cold War.<sup>12</sup> However, those people have been abandoned to a region lacking access to infrastructure, education, medical care and job opportunities. Alcoholism and suicide rates are high, and many young people end up dropping out of school.

The presence of these populations in the region extends the national interest of Arctic states such as Canada, the US, Denmark, Sweden, Norway and Russia far north, but these communities must be treated as more than 'flag holders' at their countries' respective northernmost borders.

## Resources and shipping routes

The potential hydrocarbon bonanza of the Arctic holds much potential economic benefit for indigenous communities and the Arctic states they call home. Although detailed information on Arctic petroleum resources remains limited, according to the USGS report it appears that the ratio of natural gas to oil in the region's hydrocarbon resources is approximately three to one.<sup>13</sup> While the Arctic may have tremendous potential in the long run its contribution to energy resources in the short term should not be overestimated, as other areas are cheaper, less contentious and less technologically challenging to exploit.

The technology required to recover Arctic resources year-round is not readily available, and will not become so in the short term. Transport difficulties add to the problems to be overcome. Natural gas requires pipelines or expensive and complex liquefaction infrastructure. The former is the less likely option, because pipelines would have to cover very large distances. With technological breakthroughs in the development of shale oil resources in the lower 48 states over the last several years, meanwhile, US natural gas reserves have nearly quadrupled.

Technology is a key barrier to Arctic access in other ways. Icebreakers, many nuclear powered, are necessary for presence and power projection in the region year-round. The various Arctic nations have widely divergent capabilities. For example, Russia has 20 icebreakers; Canada has 12, and is working on budgeting for 8 more; the US has, to all intents and purposes, just one functional icebreaker. These ships take eight to ten years to build, and cost approximately \$1 billion each. The global economic crisis has, however, put a strain on budgets, and icebreaker fleets are unlikely to expand rapidly in the short term. Nonetheless, even if the US started building tomorrow it would long remain far behind other Arctic states such as Russia and Canada, taking decades and at least \$20 billion to catch up.

In the light of forecast increases in shipping traffic in Arctic waters, the Arctic Council conducted an Arctic Marine Shipping Assessment in 2009,<sup>14</sup> calling for mandatory regulations on ship construction standards, which are currently voluntary and vary greatly among countries. The International Maritime

<sup>12</sup> Douglas Belkin, 'Dissenters in Canada's Arctic', *Wall Street Journal* (Eastern edition), 12 Oct. 2007, p. A9.

<sup>13</sup> US Geological Survey, 'Assessment of undiscovered oil and gas in the Arctic'; US Geological Survey Fact Sheet 2008, 'Circum-Arctic resource appraisal'.

<sup>14</sup> See section 'The Arctic Council' under 'Governance' below.



Organization (IMO) is discussing whether to adopt the recommendations of the assessment. A final decision may be made soon.

Much of the geology supporting the presence of hydrocarbons in the Arctic is already located within the exclusive economic zones (EEZs) of the Arctic littoral states.<sup>15</sup> Therefore, an extension of a state's continental shelf beyond its EEZ may not necessarily yield that much more oil and gas. The perception of strategic finds, however, can be enough to motivate territorial claims, and fuels the use of hyperbole like 'scramble for the Arctic' with reference to what is otherwise an orderly process following international laws and norms.

In addition to hydrocarbon resources, new shipping routes opened up as the Arctic ice vanishes will reduce substantially the maritime distances between Europe and Asia, while also providing strategic alternatives to other countries such as Japan, which would have an interest in Arctic access owing to its current dependence on shipping through the Strait of Malacca for most of its energy supplies.

Use of the North-West Passage over North America could shorten shipping routes between Asia and the US east coast by 5,000 miles. However, even though Canada is a strong ally of the US, there are disputes between the two countries over the waters of the Canadian archipelago, which Canada claims are internal waters not subject to the conventions of 'innocent passage',<sup>16</sup> while the US regards them as a strait for international navigation, through which ships should be allowed to pass without interference by Canadian authorities. While neither country wishes to see the issue loom larger in their bilateral relations and both prefer at the moment to agree to disagree, under the current position all US Coast Guard vessels are designated as research vessels, which are therefore required to request transit permission from the Canadian government.<sup>17</sup> This is not a long-term solution, however. If the waterway does indeed become ever more ice-free in the future, Canada will be forced formally to resolve its dispute with the United States over the status of the North West Passage.

The Northern Sea Route over Eurasia is also important since it shortens shipping routes between northern Europe and north-east Asia by 40 per cent compared with the existing routes through the Suez or Panama canals,<sup>18</sup> and takes thousands of miles off maritime routes round Africa or Latin America. While experts have diverse views over which new maritime passage will become more important, there is a fledgling consensus that the Northern Sea Route will open sooner than the North-West Passage—a contention bolstered by the passage of the German ships this year.

As well as shorter shipping times, the potential benefits of an ice-free Arctic throughway include the ability to avoid dangerous chokepoints beset by piracy,

<sup>15</sup> Tavis Potts and Clive Schofield, 'Current legal developments: the Arctic', *International Journal of Marine and Coastal Law* 23, 2008, p. 154.

<sup>16</sup> The right of 'innocent passage' precludes such activities as scientific research, fishing, spying, smuggling, polluting and weapons testing.

<sup>17</sup> 'Canadian Arctic sovereignty', Canadian Parliamentary Information and Research Service, 26 Jan. 2006, <http://www.parl.gc.ca/information/library/PRBpubs/prbo561-e.htm#BRelations>, accessed 28 April 2009.

<sup>18</sup> Potts and Schofield, 'Current legal developments', p. 156.

and lower transportation costs. However, despite optimistic public perceptions often shaped by the mainstream media, the potential risks may actually counter and delay perceived benefits. These routes will not necessarily be more efficient. Ice-capable ships, required for the transit of Arctic waters, are more expensive to build and procure, and burn much more fuel, than those currently used for long-distance transport. Likewise, while Arctic ice melt may be accelerating, year-to-year variations can still occur, meaning that passages open one year may be closed the next. The uncertainty of when and whether passages are open increases the risk of commercial cargoes incurring large demurrage charges if they are late in arriving at final destinations, thereby offsetting some of the cost advantages of shorter routes. Finally, the potential for dangerous weather patterns to emerge in warming waters, combined with difficult-to-navigate broken ice and the lack of adequate maritime traffic management, make Arctic transit a treacherous undertaking even under the best of conditions.

Hydrocarbon prices and concerns about energy security are key drivers in accelerating interest in the Arctic, since high energy prices will generate new technological developments that are difficult to justify with prices even at current levels. New technology, especially that which allows drilling in deep water, also potentially opens vast areas of the Arctic to oil and gas exploration. New technology that can withstand ice flows will be of special benefit to Russia, since most of the waters along the Northern Sea Route are relatively shallow with huge sedimentary basins extending up to 200 or 300 miles offshore. Conducting business in the Arctic requires specialized ice-capable equipment, ranging from drilling and transportation infrastructure to established refuelling depots. To the extent that high energy prices support these costly projects, they will accelerate commercial interest in the region. Domestic and global economic conditions will also affect the progress, scale and feasibility of major Arctic projects and efforts. Canada, for example, has already cut back on its proposed Arctic expenditures.

## Governance

The Arctic is geologically complex, largely uncharted, and rife with overlapping sovereignty claims that will affect all commercial activities involving hydrocarbons and fisheries and will have a momentous impact on the region's indigenous population.

States with territorial borders in the Arctic, as generally defined, are the US, Canada, Russia, Denmark (via Greenland) and Norway (via Svalbard)—together known as the 'Arctic Five'. While possessing no direct borders on the Arctic Ocean, Sweden, Finland and Iceland are also usually considered Arctic states, though this depends on which definition of 'Arctic' one uses. Countries on every continent have a longstanding interest in the Arctic, as evidenced by the number of signatories to the Svalbard and Spitsbergen treaties.<sup>19</sup> Indeed, South Korea, China,

<sup>19</sup> See note 36 below. The Spitsbergen Treaty of 1920 recognized Norwegian sovereignty over Svalbard while giving mineral rights to various countries. Russia and Norway today continue to mine and export coal here. The 1925 Svalbard Act made Svalbard part of the Kingdom of Norway, <http://www.britannica.com/EBchecked/topic/575921/svalbard>, accessed 22 July 2009.



Japan and India have all sponsored Arctic scientific expeditions. Yet other nations claim within various international frameworks that the Arctic should remain open to all nations under the international law concept of the 'common heritage of mankind'.<sup>20</sup>

With increased human activity come a myriad of management and sovereignty issues. Tourism to the region by cruise ships is on the rise, raising concerns about the ability of each state in the region to provide search-and-rescue facilities if a large ship were suddenly to find itself in danger. Many of these ships are not ice-capable, and even though Arctic ice is melting, year-to-year variation can still be dramatic, with uncharted broken ice and passages open one year and frozen the next. Regulation of maritime traffic will also require accident clean-up capacity. This problem will rise dramatically in importance if oil and gas production accelerates. Oil spills are more difficult to clean up in cold, icy conditions. As oil decomposes slowly, ice interferes with the process, while technology to handle spills in these temperatures is lacking. Spills can also cause greying of the icecap, thereby speeding melting rates.

Strengthened legal and regulatory frameworks in the Arctic will be necessary to attract international investment and development. The debate on the future of Arctic governance centres on whether to create new or use existing multinational frameworks. Although the US enforces UNCLOS without having ratified it, it lags behind the rest of the Arctic states on its Arctic policy and in asserting its presence. In the last days of the Bush administration, and with little fanfare, a ten-page National Security and Homeland Security Presidential Directive on Arctic policy was released—the first review since 1994.<sup>21</sup> The directive was based on developments in the region stemming from climate change and increased human activity, the likely accessibility of vast mineral, hydrocarbon and fishing resources, and the recognition that the US has 'broad and fundamental national security interests in the Arctic region'.<sup>22</sup> It addresses international governance, extended continental shelf and boundary issues, the promotion of international scientific cooperation, maritime transportation, economic and energy issues, environmental protection and conservation of natural resources, and recognizes that 'the most effective way to achieve international recognition and legal certainty for [its] extended continental shelf is through the procedures available to the States Parties to the UN Convention on the Law of the Sea'.<sup>23</sup>

<sup>20</sup> 'The international seabed (i.e. the seabed beyond the limits of national jurisdiction), parts of which are believed to be rich in minerals, is not subject to national appropriation and has been designated a "common heritage of mankind" by the Declaration of Principles Governing the Seabed (1970) and the Law of the Sea treaty. Activities in the international seabed, also known as "the Area", are expected to be carried out in the collective interests of all states, and benefits are expected to be shared equitably': High seas and seabed', *Encyclopedia Britannica Online*, <http://www.britannica.com/EBchecked/topic/291011/international-law/233517/High-seas-and-seabed#ref=ref795083>, accessed 22 July 2009.

<sup>21</sup> National Security Presidential Directive 66 (NSPD-66) / Homeland Security Presidential Directive 25 (HSPD-25), 9 Jan. 2009.

<sup>22</sup> NSPD-66 / HSPD-25, section B, 1: 'National security and homeland security interests in the Arctic'.

<sup>23</sup> NSPD-66 / HSPD-25, section D, 1: 'Extended continental shelf and boundary issues'.

### *The United Nations Convention on the Law of the Sea*

UNCLOS was created in 1982. Any signatory that can prove that its continental shelf extends beyond 200 nautical miles (nm) from its shoreline is automatically entitled to legal rights allowing it to exploit oil, gas and minerals in this zone. This provision is a one-off opportunity: the extension must be claimed within ten years of signing the convention. Countries can extend their claim to 350 nm if scientific proof—based on geology—can be obtained, showing that the undersea continental plate/ridge is an extension of territory. Determining that this is the case is extremely complex, expensive and time-consuming, as the ambiguities in article 76 of UNCLOS, which defines the continental shelf, cannot possibly cover every circumstance, owing to the difficult and varied geology and topography of overlapping claims.<sup>24</sup>

The UN lacks the institutional capacity to streamline this lengthy review process. Consequently, some states have called for the creation of a new institution to address this issue. In the view of the authors, member states should commit to building capacity inside UNCLOS and the CLCS, rather than creating yet another international institution. Moreover, completely shifting authority from an existing organization to a new one will disrupt policies and programmes that are progressing along different tracks and at varying speeds: for example, applications to the CLCS, which have different deadlines depending on the date of submission by each state. The problem is exacerbated by the fact that the US has yet to sign UNCLOS, even though it stands to gain considerable territory from ratification. As a non-signatory state, the US has little credibility in any discussion on Arctic sovereignty, and cannot assert rights over resources off its Alaskan coast beyond the 200 nm of its EEZ.

Notwithstanding US enforcement of UNCLOS, a number of members of Congress are concerned about the failure of the US to ratify the convention. Nonetheless, in the Senate—which has to approve UNCLOS before ratification can take place—there is a handful of individuals opposed to ratification, fearful of ceding too much sovereignty to a supranational organization and of agreeing to an unfavourable allocation of resources. These senators believe that key provisions of UNCLOS could paralyse the unfettered movement of the US Navy, the most powerful navy in the world. They consider customary international law sufficient to deal with these so-called ‘new Arctic maritime issues’ since general international cooperation has hitherto prevailed.

The debate over signing UNCLOS is politically interesting in that it has brought the oil industry, the military and the environmental community together on the same side of the debate. These groups realize that without stable legal frameworks there will be no oil and gas exploration, and this will be detrimental to US national and energy security.<sup>25</sup> The navy’s leadership has pointed out that there are frameworks under the convention that will protect the navy’s right to patrol the Arctic.

<sup>24</sup> UNCLOS, art. 76, [http://www.un.org/Depts/los/convention\\_agreements/texts/unclos/part6.htm](http://www.un.org/Depts/los/convention_agreements/texts/unclos/part6.htm), accessed 28 April 2009.

<sup>25</sup> Telis Demos, ‘Arctic Circle oil rush’, *Fortune*, 20 Aug. 2007, p. 11.

Environmental groups want the US to join UNCLOS so that it has a seat at the table to ensure the protection of the Arctic's flora and fauna. The real absurdity of the US not ratifying UNCLOS is that, while the US Senate dithers, other states are rushing out to claim extensions to their respective continental shelves. By not signing, the US is effectively ceding over 200,000 square miles of undersea territory in the Arctic, not to mention another 100,000 square miles off the Gulf of Mexico and east coast, which together are equivalent in size to two Californias.<sup>26</sup>

The US currently relies on customary international law to govern its Arctic activities. Customary international law derives from the consistent general practices of states out of a sense of legal obligation, as codified in the Vienna Convention on the Law of Treaties, and holds unless it conflicts with the obligations of a member state under the United Nations Charter.<sup>27</sup> The 'high seas' is the designation traditionally given to the areas that are beyond the territorial waters of states and are therefore not subject to national jurisdiction or appropriation (as exclusive economic zones, territorial seas, internal waters or archipelagic waters), while the 'international seabed' constitutes the 'common heritage of mankind beyond the limits of any national jurisdiction'.<sup>28</sup> However, by signing the convention, Washington would enhance its tools for combating maritime trafficking and piracy; strengthen its jurisdiction over its Arctic backyard and the potential resources it contains; and create a more stable international framework with clear delimitations of sovereignty, allowing exploration and production in the region to become more attractive to energy and mining companies, should the technology and market conditions for their exploitation become available.

Given the technological risks of operating in such an environment, and the huge capital and operating costs involved, it is vital that clear and unambiguous legal and regulatory frameworks be put in place. A crystal-clear legal and regulatory regime is a prerequisite not only for energy and mining projects, but also for the effective management of fisheries, the operation of commercial shipping and the management of accidents that occur beyond national boundaries, as well as any other potential activities that may arise.<sup>29</sup> US ratification of the convention will reinforce and protect existing international law regarding the movement of US military and civilian ships, as well as the rights of innocent passage, transit passage, archipelagic sea lanes passage and freedom of the high seas.

Critics of UNCLOS cite the lack of transparency of article 76 as one of the convention's major flaws. Under article 76, submissions by Arctic states are not made readily available to all other member states, with the result that states are unable to challenge assertions—especially as to extensions of the outer continental

<sup>26</sup> Neil King, Jr, 'Sea treaty unites unlikely allies: environmentalists, oil interests and military urge Senate to back pact', *Wall Street Journal* (Eastern edition), 22 Aug. 2007, p. A6.

<sup>27</sup> Vienna Convention on the Law of Treaties, signed Vienna, 23 May 1969, entered into force 27 Jan. 1980, <http://fletcher.tufts.edu/multi/texts/BH538.txt>, accessed 22 July 2009; 'International law: an overview', Cornell University Legal Information Institute, [http://topics.law.cornell.edu/wex/international\\_law](http://topics.law.cornell.edu/wex/international_law), accessed 22 July 2009.

<sup>28</sup> 'High seas and seabed', *Encyclopedia Britannica Online*.

<sup>29</sup> Scott G. Borgerson, 'The national interest and the Law of the Sea', Council on Foreign Relations special report no. 46, May 2009, p. 20.

shelf—since they often do not see the full logic behind each state's argumentation. Not seeing the actual submissions sometimes makes it difficult for signatory states to understand the justification for decisions rendered by the CLCS. In addition, opponents of UNCLOS argue that the language in article 76 is ambiguous in many places, leaving critical definitions of many terms unclear. They also argue that, while the CLCS is supposed to be a technical organization, it is in reality too often governed by political imperatives. Critics also contend that the diverse timetables for final applications for territorial extensions make it difficult for states to coordinate and cooperate among themselves to resolve their differences in a transparent manner.

Protection of international commercial transit is especially salient with reference to the safe transportation of oil and gas, which could become a major issue once commercial and technological changes allow the large-scale exploitation of Arctic resources. UNCLOS clearly defines what constitutes a state's EEZ (200 nm from its coastline), contiguous zone (24 nm from the baselines by which the breadth of the territorial sea is measured) and territorial sea (width of 12 nm from the coastal state's baseline).<sup>30</sup> The failure of the US to join UNCLOS represents an abnegation of US leadership and allows vitally important maritime states such as Malaysia and Indonesia to cite the US refusal to sign UNCLOS as one of the principal reasons why they have declined to join the Proliferation Security Initiative (PSI), which blocks shipments of nuclear and missile technology to rogue states.<sup>31</sup>

Russia, Norway, Canada and Denmark are already in line with extension applications to the CLCS. Russia was the first to submit a claim in 2001; however, owing to the insufficient evidence presented, it must re-submit its application by 2011. Norway submitted in 2006, while Canada must submit by 2013, and Denmark by 2014.

### *The Arctic Council*

The Arctic Council, founded in 1996, is not an international organization with a firm legal charter, but rather an international forum designed to foster cooperation and collaboration on Arctic issues.<sup>32</sup> During the deliberations that formed the organization, the US was adamant that the Arctic Council should not, as part of its mandate, discuss national security issues. Member states are satisfied that, within its well-defined limits, the system serves as a good forum for the expression of their views and concerns. Almost all the members, for a variety of reasons, are opposed to setting up a new system, to broadening the Council's mandate, or to ceding sovereignty over the region to an international organization. However, most of

<sup>30</sup> Borgerson, 'The national interest and the Law of the Sea', pp. 22–3; 'Contiguous zone', *Encyclopedia Britannica Online*, <http://www.britannica.com/EBchecked/topic/134801/contiguous-zone>, accessed 2 Feb. 2009.

<sup>31</sup> King, 'Sea treaty unites unlikely allies'; Charles Wolf, Jr, 'Asia's nonproliferation laggards: China, India, Pakistan, Indonesia and Malaysia', *Wall Street Journal Asia*, 9 Feb. 2009. The PSI was announced by President George W. Bush on 31 May 2003; it is unclear whether this US-led initiative is legal under or conflicts with UNCLOS, and whether accession to UNCLOS would impede the PSI.

<sup>32</sup> Arctic Council members are: Canada, Denmark (including Greenland and the Faroe Islands), Finland, Iceland, Norway, Sweden, the Russian Federation and the US: <http://arctic-council.org>, accessed 2 Feb. 2009.

the Council members realize that the Arctic is changing rapidly and that increased cooperation on issues of trans-border interest must be cultivated. The US reiterated its commitment to the Arctic Council as a 'high-level forum' in 2009; while being open to reorganization and updating of the forum's structure, the US reaffirmed its aversion to any expansion of the Council's expressly limited mandate.<sup>33</sup>

The Ilulissat Declaration, signed on 28 May 2008, emphasizes that UNCLOS is a commitment of the entire group, and that there is no need for a new international legal regime. Most organs of the US government support Ilulissat even though the US has not signed UNCLOS.

The Council's 2009 Arctic Marine Shipping Assessment recommends that the eight Arctic states formulate a harmonized search-and-rescue instrument which involves pooling their financial and technical resources to meet the challenges of the region. The assessment also includes recommendations about harmonized and mandatory shipbuilding standards for ships navigating Arctic waters, in cooperation with the IMO; improved navigation infrastructure, including navigation charts and communications systems; development of a harmonized marine traffic awareness system; guidelines on oil and gas exploration; and technology transfer for responding to environmental accidents under challenging Arctic conditions.<sup>34</sup>

## **Bilateral issues**

Because the Arctic is a semi-enclosed sea encircled by littoral states, extensions of continental shelves and delimitations of maritime boundaries will lead invariably to overlapping sovereignty claims.

Norway has been a major source of energy security for Europe with new discoveries of Arctic gas, especially in the light of recent Russian curtailments of gas to Europe through Ukraine. With additional gas pipelines planned by Russia from its own Arctic and other gas resources, Norwegian gas will remain a critical component of European energy supply. This importance of Norway for European energy security means, however, that Norway must explore ever further northwards, creating tensions with Russia in terms of territorial claims over the disputed boundary of the Barents Sea. Norway claims the Gakkel Ridge as an extension of its continental shelf via the Svalbard Islands.<sup>35</sup> Naval manoeuvres by Russia have disrupted Norwegian air traffic in offshore areas, and there are often aerial harassment between Russian fighter jets and Norwegian jets trying to intercept them at the border. Norway—a NATO state bordering Russia—has moved its centre of military operations from its southern location in Jåttå, outside Stavanger, to Reiter, outside Bodø, in the north,<sup>36</sup> reinforcing the strategic importance of the high north to both Norwegian and NATO foreign policy.

<sup>33</sup> NSPD-66 / HSPD-25, section C, 2: 'International governance'.

<sup>34</sup> Arctic Council, *Arctic Marine Shipping Assessment Report 2009*, <http://arcticportal.org/en/pame/amsa-2009-report>, accessed 1 Sept. 2009.

<sup>35</sup> Terrence W. Haverluk, 'The age of cryopolitics', *Focus on Geography* 50: 3, Winter 2007, p. 2.

<sup>36</sup> 'Norway moves military north', *Siku News*, 5 Aug. 2009, <http://www.sikunews.com/art.html?artid=6763&catid=7>, accessed 5 Aug. 2009.

The Spitsbergen Treaty of 9 February 1920 grants Norway territorial sovereignty over what is now known as the Svalbard archipelago. At the time the treaty was negotiated, states had the exclusive legal right to resources in their territorial waters up to a distance of 3 miles from the coastline. However, the treaty also provides for equal access to Spitsbergen's resources for all signatory powers.<sup>37</sup> On this basis, Russia has operated a coaling station there for many years. With changes under international law brought about by UNCLOS and other legal regimes over the years, Russia argues that, as a signatory to the treaty, it has the right to look for resources further offshore, though clearly under a resource extraction regime that would remain under Norway's legal jurisdiction. The significance of these claims should not be underestimated, especially given Norway's membership of NATO. During the Cold War, the region between Svalbard and northern Norway was the centre of a dangerous cat-and-mouse game between NATO and the Soviet Union. At that time, Soviet strategic doctrine was based on the necessity either before the outbreak of a conflict with the West or in its earliest hours to move its northern fleet out of Murmansk and into the North Atlantic through the Svalbard/Norwegian gap; the same is true of Russian strategic doctrine today. This action was deemed vital for Russia's force projection in the Atlantic, or, in the worst case, for a strategic nuclear strike against the American east coast. Clearly Moscow's worst fear is that NATO could bottle its fleet up, severely affecting the balance of forces in a major conflict.

Even since the end of the Cold War and its attendant fears of nuclear annihilation, Russia has remained nervous that offshore listening platforms might be installed on offshore oil and gas platforms, providing NATO with important capabilities for monitoring Russian commercial and strategic activities in the region.

Two of the most sensitive issues involving claims for additional offshore territorial extensions under UNCLOS centre on conflicting claims by Russia, Denmark and Canada over the Lomonosov and Mendeleev Ridges. Each country claims that the ridges are natural geological extensions of its territory, and each is collecting geological data to support its claims. In August 2007 Russian explorers planted a titanium flag on the Lomonosov seabed, mainly for domestic political consumption but also to send a message about their perceptions of sovereignty to the other Arctic states. In March 2009 Russia announced plans to establish a military force to protect its Arctic interests, as the region is expected to be an extremely important supplier of energy resources within the next 10–15 years.<sup>38</sup>

While some of Russia's actions may be perceived as aggressive, fears about the potential militarization of the Arctic at this stage are unwarranted. In contrast to alarmist rhetoric by some conservative think-tanks, relations among the Arctic powers have thus far been characterized by a spirit of cooperation, with outstanding disputes managed peacefully. In May 2009 Russian Foreign Minister Sergei Lavrov

<sup>37</sup> The nine original signatories to the treaty were: the US, Denmark, France, Italy, Japan, Netherlands, Norway, Sweden and the UK. Total signatories today number over 40.

<sup>38</sup> Tom Parfitt, 'Russia plans military force to patrol Arctic as "cold rush" intensifies', *Guardian*, 28 March 2009, <http://www.guardian.co.uk/world/2009/mar/28/russia-gas-oil-arctic-nato>, accessed 6 April 2009.



and US Secretary of State Hillary Clinton called for cooperation between their two countries in the region. The US continues to request the Russian Federation to ratify the US–Russia maritime boundary agreement delineating the maritime boundary between Russia and Alaska through the Bering Strait and Chukchi Sea into the Arctic Ocean.<sup>39</sup> Russia, in turn, called for increased cooperation with Canada in Arctic management at a press conference on 30 June 2009. Soon thereafter, Prime Minister Vladimir Putin declared 3.7 million acres in the Russian Arctic as a national park, signalling that Russia apparently believes it has more to gain by following international law and demonstrating ecological sensitivity than by aggressively asserting its sovereignty.

Among the other Arctic littoral states, Canada is setting up a deep-water docking port on Baffin Island at Nanisivik and opening an Arctic military training centre in Resolute Bay in an attempt to bolster its territorial claims in its high north. The US and Canada have unresolved overlapping claims, not only over the international boundary between the two countries through the Beaufort Sea, but also on the sea floor. Resolution of this matter is especially important, since there is believed to be tremendous oil potential off the shore of Alaska, which is often referred to in the petroleum industry as the ‘next Gulf of Mexico’.

Further to the east, Denmark and Canada have a territorial dispute over Hans Island, located in the Nares Strait which separates Greenland from Ellesmere Island. Denmark claims that Hans Island is part of Greenland, which has been an integral part of Denmark since 1953. The continental shelf between Greenland and Canada was delimited by Canada and Denmark in a decision ratified by the UN on 17 December 1973.<sup>40</sup> The treaty does not draw a line through Hans Island, however, as its status is still in dispute. Since then both countries have planted flags on the island, the Danes in 1984 (provoked by the presence of a Canadian explorer from Dome Petroleum), and the Canadians in 2005. Hans Island has taken on a significance disproportionate to its size as a symbol of Arctic sovereignty for the two countries because of the additional potentially resource-rich access it could grant to either nation.

Greenland obtained self-government from the Danish parliament in 1979. It then voted for increased self-rule in November 2008.<sup>41</sup> The issue of Denmark’s sovereignty over Greenland, which is based on historical exploration and settlement, became more complex on 20 June 2009, when Greenland obtained a new self-government agreement, under which it is recognized by the international community as a separate entity from Denmark with control of its internal affairs and of any international agreements pertaining specifically to Greenland. Denmark will retain control over foreign affairs, defence and finances, but will gradually decrease its substantial annual subsidy (currently comprising nearly 60 per cent of

<sup>39</sup> NSPD-66 / HSPD-25, section D, 4, c. ‘Extended continental self and boundary issues’.

<sup>40</sup> UN, ‘Agreement between the Government of the Kingdom of Denmark and the Government of Canada relating to the Delimitation of the Continental Shelf between Greenland and Canada’, 17 Dec. 1973, <http://www.un.org/Depts/los/LEGISLATIONANDTREATIES/PDFFILES/TREATIES/DNK-CAN1973CS.PDF>, accessed 2 Feb. 2009.

<sup>41</sup> ‘Greenland’, *CIA World Fact Book*, <https://www.cia.gov/library/publications/the-world-factbook/geos/gl.html>, accessed 22 July 2009.

Greenland's total government revenues),<sup>42</sup> and cede some control of Greenland's natural resources. Greenland's new status will move it towards independence. This development was anticipated by many analysts, given the possibility of massive oil, gas and diamond reserves beneath and around Greenland.

Following Greenland's most recent move towards greater autonomy, Danish members of parliament approved a plan to set up an Arctic military command and task force for 2010–2014, which will focus on Greenland and the Faroe Islands. Danish armed forces will have a greater role as melting ice increases the geopolitical significance of the region: plans include the establishment of a joint-service Arctic Command and an Arctic Response Force that may include combat aircraft, and the expansion of the military base at Thule, Greenland.<sup>43</sup>

Already, additional new areas of concern are arising which pose geopolitical challenges for the region. For example, in October 2007 a new small island was discovered off the coast of Greenland when a shifting ice pack to the north-east revealed what was dubbed 'Stray Dog West' by expedition leader Dennis Schmitt. Although it was formed from land debris and erosion deposits rather than being a tectonic creation, its emergence from the melting ice is an example of how much is still unknown about the complex geography of the region. Should Stray Dog West fulfil the criteria required to gain definition as an island, it will be added to maps and will grant Denmark additional fishing rights and seabed claims. Other locations that were thought to be parts of singular entities, such as Warming Island and Franz Joseph Land, were revealed to be multiple land masses once the ice connecting them melted.<sup>44</sup>

As noted above, the question of access to the Arctic is relevant not only to the states in the region, but also to those further south. Arctic shipping routes are an attractive prospect, in theory, to China, Japan, South Korea and Taiwan. South Korea is one of the major builders of ice-capable vessels. China carried out Arctic research in 1999 and 2003, and in 2004 built an Arctic satellite observation centre at New Olson, Spitsbergen Island, in Norway.<sup>45</sup> The construction of such centres has been permitted by the Norwegian government to the original signatories to the 1920 Spitsbergen Treaty, and China, Japan, Germany, Italy, France and South Korea, among others, have taken advantage of the opportunity. China's application to the Arctic Council for permanent observer status, however, was turned down in 2009, and the full ministerial meeting of the Council will not convene again to consider applications until 2011. Also turned down were applications by the EU, South Korea and Italy.<sup>46</sup> Other contentious issues centre on whaling and sealing, Canada, Denmark and Norway disagreeing with the EU ban on seal products.

<sup>42</sup> 'Greenland', *CIA World Fact Book*.

<sup>43</sup> 'Denmark plans forces for Arctic', BBC News, 16 July 2009, <http://news.bbc.co.uk/go/pr/fr/-/2/hi/europe/8154181.stm>, accessed 22 July 2009.

<sup>44</sup> Astrid Wendlandt, 'Northern pebbles new pawns in Arctic chess game', Reuters, 31 Oct. 2007.

<sup>45</sup> 'China joins Arctic studies committee', 20 April 2005, <http://www.china.org.cn/english/scitech/126310.htm>, accessed 2 Feb. 2009.

<sup>46</sup> 'Arctic Council rejects EU's observer application', 30 April 2009, <http://euobserver.com/885/28043>, accessed 11 May 2009. Non-Arctic states with permanent observer status are France, Germany, Poland, Spain, the Netherlands and the UK. Non-Arctic states with 'ad-hoc status' are China, Italy and South Korea.

## Challenges to governance

While the Arctic Council and Arctic Five want more effective implementation of existing regimes, the EU advocates establishing a new regime: an international treaty for the protection of the Arctic. The European Parliament sees Arctic policy as vital to European security, and in March 2008 stated that conventions need to be altered to reflect the potential new energy balance stemming from the discovery of Arctic resources while reducing the size of Norwegian claims in the Arctic. While the EU remains committed to UNCLOS and recognizes the work of the Arctic Council, the European Parliament has called for specific EU Arctic policies to increase the role that the EU can play in the region to enhance current multi-lateral agreements or make up for the shortcomings of what it considers to be a fragmented legal framework.<sup>47</sup>

Given the USGS assessment of the potential for substantial oil and gas reserves in the region—including within national EEZs—it is possible that a serious diplomatic row may at some point break out among those nations that border the region, including those that want their territorial claims extended, those that argue that some of the Arctic belongs to no one and that they therefore should have unfettered access, and those that believe that, given its fragile and unique nature, the region (or at least large areas of it) is the common heritage of humankind and should come under international jurisdiction.

## Conclusion

The Arctic is governed by international customary maritime law in the form of UNCLOS, and cooperation is fostered by the Arctic Council, in addition to bilateral agreements or understandings between states with competing claims. The EU, while not having an official position on the matter, also supports a multilateral approach. This has been and continues to be the context in which the Arctic states operate, and there is reason to believe that this spirit of cooperation will continue. The uncertainty here lies in the timeline, as the horizon for an easily accessible Arctic Ocean lies far in the future. The point at which climate conditions, ice-capable technology, high energy prices, delineation of maritime and continental shelf boundaries, and legal and regulatory frameworks for management of maritime traffic will converge sufficiently to render the region a practical prospect for investment and utilization is a long way off, thereby rendering talk of any potential 'heating up' or 'Arctic scramble' inappropriate. However, while terminology connoting speed may not accurately characterize the Arctic region, this does not mean that action must not be taken now to ensure preparedness and

<sup>47</sup> 'Climate change and international security', paper from the High Representative and the European Commission to the European Council, S113/08, 14 March 2008, [http://www.consilium.europa.eu/ueDocs/cms\\_Data/docs/pressData/en/reports/99387.pdf](http://www.consilium.europa.eu/ueDocs/cms_Data/docs/pressData/en/reports/99387.pdf), accessed 6 April 2009; Communication from the Commission to the European Parliament and the Council, 'The European Union and the Arctic region', COM(2008)763(final), Brussels, 20 Nov. 2008, <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2008:0763:FIN:EN:PDF>, accessed 6 April 2009.

the development of a comprehensive economic, environmental, legal and political approach to Arctic governance.

Arctic access and exploration are not matters for the future. The Arctic's time has already come; however, it will gain in geopolitical importance only when there is a confluence of factors that focus attention on the region:

- 1 Oil prices will have to rise and be expected to remain high enough to justify the costly technological and infrastructure projects that will take many years to amortize.
- 2 Ice-capable technology will have to be available to ensure that access to the region can be sustained over time, despite seasonal and year-to-year ice fluctuations.
- 3 The geopolitical community must be convinced that the opportunities for commercial development will not exacerbate greenhouse gas emissions and the degradation of the Arctic environment to an unacceptable degree.
- 4 Interest in new maritime shipping routes, already high, will continue to increase in direct proportion to geopolitical tensions in traditional shipping chokepoints and channels—especially where potential military conflicts are brewing.
- 5 Heightened commercial and other interests in the Arctic will rise when boundaries are clearly delineated and legal frameworks in place to create a favourable investment environment, and when all Arctic states agree to abide by internationally recognized legally binding agreements and codes of conduct.

Speaking as Americans, the authors note that the US has over 1,000 miles of Arctic coastline. If the US wishes to play a leading role in creating an effective regime for the region, as well as protecting its own national interests, Washington must focus funds and policy attention on the Arctic. The actions it should take include signing UNCLOS; putting innovation to work on ice-capable technologies and military training; cooperating with Canada and other Arctic states on improved management of maritime traffic, research efforts, and search-and-rescue and accident clean-up capacities; and building a sizeable ice-capable commercial, scientific and naval fleet, including investment of at least \$10 billion in building ten new icebreakers, with another \$1 billion for maintenance of existing ships until the new ones are ready for use. The time for action is now. Let's get on with the job!