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A photograph of a red and white icebreaker ship navigating through a field of sea ice under a pale, overcast sky. The ship is viewed from a slightly elevated angle, showing its deck and superstructure.

CIRCUMPOLAR Challenges

AN AMBITIOUS AGENDA FOR THE ARCTIC COUNCIL

Michael Byers

Circumpolar Challenges:
An Ambitious Agenda for the Arctic Council

Pre-conference report, September 27, 2012

Michael Byers

Rideau Institute
63 Sparks, Suite 608
Ottawa, ON K1P 5A6
www.rideauinstitute.ca

Introduction

In 1996, the eight Arctic countries – Canada, Denmark, Finland, Iceland, Norway, Russia, Sweden, the United States – created the Arctic Council as an intergovernmental forum for discussing issues other than “military security.”¹

The Arctic Council has achieved a string of modest but nevertheless significant successes. These include the Arctic Climate Impact Assessment,² the Arctic Marine Shipping Assessment,³ and the Arctic Search and Rescue Agreement,⁴ with the latter being the first legally binding treaty negotiated under the auspices of the Arctic Council.

Just as importantly, the Arctic Council has included indigenous peoples as “permanent participants” in its ongoing, highly iterative process of consensus-basis decision making.⁵ In addition to becoming the central location for Arctic diplomacy and standard-setting, the Arctic Council has thus become the proverbial “town square” for an expanding community of experts and stakeholders.

“We need all hands on deck because there is a huge amount to do, and not much time to do it.”

– Hillary Clinton, Secretary of State

As melting sea-ice opens the region to shipping and resource extraction, the Arctic Council has become essential; if it did not exist, it would have to be created. In 2010, U.S. Secretary of State Hillary Clinton spoke of the need for Arctic countries to work together: “We need all hands on deck because there is a huge amount to do, and not much time to do it.”⁶

In 2011, the eight Arctic countries created a permanent secretariat for the Arctic Council, thus transforming it from an intergovernmental forum into a regional organization.⁷ Although the Arctic Council is not based on a founding treaty, this 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 intergovernmental forum into a regional organization.⁸

The eight Arctic states take turns chairing the Arctic Council for two-year periods. Canada served as the first-ever chair from 1997 to 1999 and will assume the chair again from 2013 to 2015. Several excellent reports have already recommended a number of procedural improvements that Canada should pursue during this period.⁹ These include the following:

1 See <http://www.arctic-council.org/>. On the origins of the Arctic Council, see Evan T. Bloom, “Establishment of the Arctic Council,” *American Journal of International Law* 93 (1993), p. 712.

2 *Impacts of a Warming Arctic: Arctic Climate Impact Assessment* (Cambridge: Cambridge University Press, 2004), available at <http://www.acia.uaf.edu/>.

3 2009 Arctic Marine Shipping Assessment, available at <http://www.pame.is/amsa/amsa-2009-report>.

4 Agreement on Cooperation on Aeronautical and Maritime Search and Rescue in the Arctic, 12 May 2011, available at <http://www.arctic-council.org/index.php/en/about/documents/category/20-main-documents-from-nuuk>.

5 The Permanent Participants are the Aleut International Association, Arctic Athabaskan Council, Gwich'in Council International, Inuit Circumpolar Council, Russian Association of Indigenous Peoples of the North (RAIPON), and Saami Council.

6 “Hillary Clinton criticises Canada over Arctic talks,” BBC News, 30 March 2010, available at <http://news.bbc.co.uk/2/hi/8594291.stm>.

7 Nuuk Declaration, 7th Ministerial Meeting of the Arctic Council, 12 May 2011, available at http://arctic-council.org/filearchive/nuuk_declaration_2011_signed_copy-1.pdf.

8 See Final Act of the Conference on Security and Cooperation in Europe, *International Legal Materials* 14 (1 August 1975), p. 1292, available at <http://www1.umn.edu/humanrts/osce/basics/finact75.htm>.

9 See, for example, Terry Fenge, “Canada and the Arctic Council: Our Turn to Conduct the Arctic Orchestra,” *Policy Options*, April 2012, available at <http://www.irpp.org/po/archive/apr12/fenge.pdf>; “Canada as an Arctic Power: Preparing for the Canadian Chairmanship of the Arctic Council,” Walter and Duncan Gordon Foundation, May 2012, available at <http://gordonfoundation.ca/CanadaasanArcticPower>.

- Developing funding arrangements to promote the fuller participation of indigenous peoples;
- Holding Arctic Council ministerial meetings every year, as opposed to every other year;
- Developing a common Canada-U.S. agenda for the two countries' successive chairmanships (2013-2017);
- Encouraging the Arctic Council to recognize the special roles played by regional, state, and territorial governments in Arctic governance.

All these recommendations would make a positive contribution to the functioning and therefore the effectiveness of the Arctic Council. This report, however, takes a different approach, by focusing on several *substantive* issues that Canada could usefully – and ambitiously – pursue.

Pacific sockeye salmon, Atlantic cod, Pollock and other commercially attractive species may well move northward

Environmental Protection

FISHERIES PROTECTION AND MANAGEMENT

Fishing in the Arctic Ocean has been limited by an absence of commercially attractive species and the near-constant presence of sea-ice. But with the ocean warming and sea-ice melting, Pacific sockeye salmon, Atlantic cod, pollock and other commercially attractive species may well move northward. Within 200 nautical miles from shore, jurisdiction to regulate fishing falls exclusively to the coastal state. However, stocks that live in the high seas beyond the “exclusive economic zone” (EEZ), or move between the high seas and the EEZ, are vulnerable to over-exploitation by the long-range fishing fleets of non-Arctic countries.

In the face of scientific uncertainty as to how fish populations will respond to changing water temperatures and ice conditions, an international agreement on fisheries protection and management for the Central Arctic Ocean (i.e., beyond 200 nautical miles) is needed. Ideally, such an agreement would be negotiated and implemented before any commercial fishing commences – and before the interests of non-Arctic fishing nations become vested in this uncertain and inherently fragile fisheries frontier.

Such an agreement has strong and compelling precedents, in the form of existing treaties concerning high seas fisheries in the Barents and Bering seas, as well as the 1995 UN Agreement on Straddling and Highly Migratory Fish Stocks, the North Atlantic Fisheries Organization, and the North East Atlantic Fisheries Commission.

BARENTS SEA “LOOPHOLE”

In 1975, in the middle of the Cold War, Norway and the Soviet Union concluded an “Agreement on Cooperation in the Fishing Industry” that emphasized the principles of conservation and rational utilization of the Barents Sea fisheries and also established a Joint Fisheries Commission.¹⁰ The Commission, relying heavily on scientific advice from the International Council for the Exploration of the Sea, has each year recommended “total allowable catches” for various species.¹¹ The total allowable catch is divided equally between Norway and Russia.

10 Agreement between the Government of the Kingdom of Norway and the Government of the Union of Soviet Socialist Republics on Co-operation in the Fishing Industry, *United Nations Treaty Series* 983 (11 April 1975), p. 8.

11 See Norwegian Ministry of Fisheries and Coastal Affairs “Fisheries collaboration with Russia,” at http://www.fisheries.no/resource_management/International_cooperation/Fisheries_collaboration_with_Russia/.

In 1976, a follow-up agreement explicitly recognized that both Norway and the Soviet Union had fisheries jurisdiction out to 200 nautical miles from shore.¹² However, the extension of the two countries' fisheries jurisdiction left an area of roughly 24,700 square miles of high seas in the middle of the Barents Sea. By the 1990s, overfishing by Icelandic vessels in this unregulated area had depleted straddling stocks and created tensions with both Norway and Russia.

In 1999, Norway, Russia and Iceland concluded the so-called "Loophole Agreement," which included bilateral protocols between Norway and Iceland and between Russia and Iceland.¹³ Under the regime, Iceland received fishing quotas in the Norwegian and Russian EEZs. In return, Norwegian fishermen obtained access to the Icelandic EEZ, Russia received cash payments, and all three countries were required to prevent their nationals from fishing in the Barents Sea under flags of convenience or landing catches without a quota.

BERING SEA "DONUT HOLE"

The Bering Sea is approximately 663,000 square nautical miles in area. The "Donut Hole" is a 36,000-nautical-square-mile oval-shaped enclave of high seas surrounded and defined by the seaward limits of the Russian and U.S. exclusive economic zones.

In the 1980s, fishing boats from China, Japan, Poland, South Korea and elsewhere began fishing in the Donut Hole for pollock, which move between international waters and the EEZs of both Russia and the United States. The fishing quickly progressed to overfishing and, in 1992, the pollock stocks collapsed. The Russian and U.S. governments responded by negotiating the Convention on the Conservation and Management of the Pollock Resources in the Central Bering Sea.¹⁴ Significantly, the treaty was also signed by China, Japan, Poland and South Korea.

The treaty established a temporary moratorium on pollock fishing in the Donut Hole and a Scientific and Technical Committee charged with assessing the biomass of the species on an ongoing basis. An annual conference of the parties uses those assessments to establish an allowable harvest level for the following year. If the biomass is less than 1.67 million metric tonnes, the allowable harvest level is zero – and no directed fishing for pollock in the Donut Hole is permitted. The Convention also commits the parties to enforcement measures that include a mandatory observer program, as well as allowing the boarding and inspection of their vessels by officials from other parties. The Convention also requires the parties to make violations of its provisions offences, albeit ones that can be tried and punished only in the offending vessels' flag states.

12 Agreement between the Government of the Union of Soviet Socialist Republics and the Government of the Kingdom of Norway concerning Mutual Relations in the Field of Fisheries, 15 October 1976, 1157 *United Nations Treaty Series* 1157 (15 October 1976), p. 147, Article 1.

13 Agreement between the Government of Iceland, the Government of Norway and the Government of the Russian Federation concerning Certain Aspects of Co-operation in the Area of Fisheries, *United Nations Treaty Series* 2070 (15 May 1999), p. 204.

14 1994 Convention on the Conservation and Management of Pollock Resources in the Central Bering Sea (with Annex), *International Legal Materials* 34, p. 67, available at <http://www.afsc.noaa.gov/REFM/CBS/Docs/Convention%20on%20Conservation%20of%20Pollock%20in%20Central%20Bering%20Sea.pdf>.

AN ARCTIC OCEAN FISHERIES ORGANIZATION

In view of the increased potential and interest for commercial fishing in the Central Arctic Ocean, the Pew Environment Group released an open letter in 2012 that was signed by more than 2,000 scientists from 67 countries.¹⁵ The letter advised that in the absence of adequate scientifically informed management, the Central Arctic Ocean is at risk of damage, including but not limited to overfishing. It called for the creation of an international fisheries agreement to protect the Central Arctic Ocean through catch quotas. It also pointed out that, in contrast to the case of the pollock in the Bering Sea, there still exists an opportunity to obtain data and create management prior to high levels of fishing and “before precautionary management is no longer an option.”¹⁶

...the Central Arctic Ocean is at risk of damage, including but not limited to overfishing

Some politicians are also concerned. In 2008, Senators Ted Stevens and Lisa Murkowski of Alaska co-sponsored a U.S. Senate resolution that directed the executive branch to “negotiate an agreement or agreements for managing migratory, transboundary, and straddling fish stocks in the Arctic Ocean and establishing a new international fisheries management organization or organizations for the region.” The resolution further directed that this agreement or agreements “should conform to the requirements of the United Nations Fish Stocks Agreement,” and that in the meantime the United States should “support international efforts to halt the expansion of commercial fishing activities in the high seas of the Arctic Ocean.”¹⁷ The resolution was passed unanimously and signed into law by President George W. Bush.

In 2009, the Obama administration followed the direction set by Congress and banned commercial fishing in U.S. federal waters north of Alaska.¹⁸ Announcing the ban, Commerce Secretary Gary Locke said: “As Arctic sea ice recedes due to climate change, there is increasing interest in commercial fishing in Arctic waters. We are in a position to plan for sustainable fishing that does not damage the overall health of this fragile ecosystem. This plan takes a precautionary approach to any development of commercial fishing in an area where there has been none in the past.”¹⁹

The ban on fishing in U.S. Arctic waters caused some controversy in Canada because it purported to include a 6,250-square-mile disputed area of water and seabed in the Beaufort Sea.²⁰ Canadian diplomats also indicated that no ban was needed in Canadian waters because no commercial fishing was occurring there – an argument that missed the point of the U.S. initiative, which was to allow for the establishment of regulations before fishing began. If Canada does not adopt a ban, and if commercial

15 The Pew Environment Group, “More than 2,000 Scientists Worldwide Urge Protection of Central Arctic Ocean Fisheries,” available at <http://www.oceansnorth.org/arctic-fisheries-letter>.

16 Ibid.

17 S.J. Res. 17 [110th], “A joint resolution directing the United States to initiate international discussions and take necessary steps with other Nations to negotiate an agreement for managing migratory and transboundary fish stocks in the Arctic Ocean,” available at <http://www.govtrack.us/congress/billtext.xpd?bill=sj110-17>.

18 Allison Winter, “U.S. Bans Commercial Fishing in Warming Arctic,” *New York Times*, 21 August 2010, <http://www.nytimes.com/gwire/2009/08/21/21greenwire-us-bans-commercial-fishing-in-warming-arctic-33236.html>.

19 Ibid.; Randy Boswell, PostMedia News, “Advocates push for temporary ban on Arctic fishing,” 1 May 2011, available at http://www.nunatsiaqonline.ca/stories/article/185776_advocates_push_for_temporary_ban_on_arctic_fishing/. On the dispute, see: James S. Baker & Michael Byers, “Crossed Lines: The Curious Case of the Beaufort Sea Maritime Boundary Dispute,” *Ocean Development & International Law* 43 (2012), p. 70.

20 Randy Boswell, “Canada protests U.S. Arctic fishing ban,” CanWest News Service, 4 September 2009, available at <http://www2.canada.com/nanaimodailynews/news/nation/story.html?id=b8757b5b-0b10-4769-9696-cdf9c315a754>.

fishing commences at some point on the Canadian side of the Beaufort Sea, difficult negotiations between Canada and the United States will be required – since fishing on one side while a ban exists on the other would be tantamount to opening a drain on one side of a shared swimming pool.

The same is true along the U.S.-Russia boundary in the Chukchi Sea, to the north of the Bering Strait and outside the area dealt with in the Bering Sea Fisheries Agreement. Fortunately, such shared stock arrangements are relatively standard practice between adjoining states.

The more intriguing prospect – foreseen in the Congressional resolution – is a regional fisheries organization for the Central Arctic Ocean, one that would operate within the framework of the UN Agreement on Straddling and Highly Migratory Fish Stocks that was concluded in 1995 and came into force six years later.²¹

Straddling stocks are composed of fish that migrate between the EEZ of a coastal state and the high seas. They have traditionally posed a problem for fisheries management because any conservation measures undertaken by the coastal state could be rendered ineffective by unregulated fishing just outside its EEZ. The 1995 Straddling Stocks Agreement enables coastal states to create a regional fisheries organization to manage straddling and highly migratory stocks in the areas beyond 200 nautical miles from shore, by setting quotas as well as other means. However, any such organization must be open, on a non-discriminatory basis, to states from outside the region. Any state wanting to fish within the region must join the organization, but on doing so it is able to participate fully, and this includes participating in the setting of quotas. The Northwest Atlantic Fisheries Organization (NAFO), for instance, counts Japan and South Korea among its members – even though the NAFO Convention applies only to the waters immediately offshore the EEZs in the northeast United States, eastern Canada and southwest Greenland.²²

To the east of the NAFO Convention Area, the North East Atlantic Fisheries Commission (NEAFC) has a massive regulatory area, divided into three parts that include the central portions of the Norwegian and Barents seas – areas that fall squarely within the Arctic.²³ NEAFC was established by the 1980 Convention on Future Multilateral Cooperation in North East Atlantic Fisheries, which counts among its members Iceland, Norway, Russia, the European Union and Denmark on behalf of Greenland and the Faroe Islands.²⁴ The Commission deals with the difficult issue of regulating non-member fishing while respecting the freedom of the seas. If vessels flagged by non-member countries fish in the NEAFC area in a manner that “undermines the effectiveness” of the Commission’s regulations, they can be prohibited from landing fish or taking on fuel or supplies in NEAFC member states.²⁵ They can also be placed on a list of vessels presumed to be engaged in “illegal, unreported and unregulated fishing,” a list that is transmitted to other regional fisheries organizations, the member states of which can then choose to also deny access to their ports.

21 1995 UN Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks, available at http://www.un.org/Depts/los/convention_agreements/convention_overview_fish_stocks.htm.

22 For a useful map, see <http://www.nafo.int/about/frames/about.html>.

23 For a useful map, see <http://www.neafc.org/page/27>.

24 1980 Convention on Future Multilateral Co-operation in the North East Atlantic Fisheries, Official Journal of the European Communities, available at <http://www.jus.uio.no/english/services/library/treaties/08/8-02/northeast-atlantic-fisheries.xml>. The NEAFC adopted amendments to the Convention in 2004 and 2006 that the parties have accepted on a provisional basis, pending ratification. See http://www.neafc.org/system/files/london-declaration_and_new_convention.pdf.

25 See “NEAFC Scheme of Control and Enforcement,” especially Chapter VII (Measures to promote compliance by non-Contracting Party fishing vessels), available at <http://www.neafc.org/scheme/chapter7>.

Establishing an Arctic Ocean Fisheries Organization would therefore likely require the participation of some non-Arctic states, since those states would, necessarily, be allowed to join if they wished. These countries would then have access to the fisheries beyond 200 nautical miles – if and when science-based consensus on quotas was achieved.

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However, there is no need to hold off on negotiations while waiting to see which non-Arctic states demonstrate an interest in Arctic Ocean fisheries. The Arctic Ocean coastal states already have an interest and, under Article 8 of the Straddling Stocks Agreement, are perfectly entitled to establish a regional fisheries organization on their own – provided it remains open to other states with “a real interest in the fisheries concerned” to join in the negotiations, or join the organization later.²⁶ Again, such states would have to join the organization in order to have access to the fish.

Moreover, it can sometimes be easier to find the political will to conclude a treaty before national interests and public opinion are fully engaged. Political will clearly already exists on the part of the United States, which – despite its frequent caution with respect to international law and organizations – is taking the initiative here. Other Arctic states would be wise to consider whether this is an opportunity that they can afford to miss. The high seas north of the Bering Strait are already ice-free in late summer, and located closer to South Korea, Japan and China than many of the areas where their long-range fishing boats currently operate.

All that said, a word of caution is required with regard to the possibility of using the Arctic Council for the purposes of managing Central Arctic Ocean fisheries. Arguably, the Arctic Council may not be the ideal venue, since Sweden and Finland are members of the European Union and do not control their own fisheries policies. (Denmark is also a member of the EU, but Greenland is not – a decision, implemented in 1985, that was rooted in a desire to manage its own fishery.²⁷)

However, including the EU in fisheries negotiations under the umbrella of the Arctic Council would also offer benefits. First, in order for an Arctic Oceans Fisheries Organization to succeed, the EU will have to join at some point – because of the size and geographic proximity of long-range fishing fleets in EU member states such as Spain, Portugal and the United Kingdom. To secure the full and timely participation of the EU, it might be considered advantageous to include it from the outset.

Secondly, the inclusion of the EU as a partner in fisheries negotiations under the umbrella of the Arctic Council might usefully be linked to the EU’s application for permanent observer status at the Council. If one takes the view – as this report does – that a regional organization gains rather than loses by involving powerful non-regional actors in consultative and supporting roles, admitting the EU as a permanent observer *and* including it in fisheries negotiations could quickly result in an Arctic Oceans Fisheries Organization that had widespread and enthusiastic support. Obviously, the same argument applies vis-à-vis China, its application for permanent observer status at the Arctic Council, and its interests and influence as a long-range fishing state.

26 1995 UN Agreement, p. 9.

27 “Greenland Out of E.E.C.,” *New York Times*, 4 February 1985, available at <http://www.nytimes.com/1985/02/04/business/greenland-out-of-eeec.html>.

Oil Spill Prevention

There are several steps that Canada could take as Chair of the Arctic Council to address the threat of oil spills. Canada should encourage the Arctic Council to repeat its previous two calls – in 2009 and 2011²⁸ – for the International Maritime Organization to transform its 2009 “Guidelines on Ships Operating in Polar Waters” into a legally binding “Polar Code” (as was originally intended).²⁹

Canada will assume the chairmanship of the Arctic Council just as the organization is adopting a new treaty on oil spill preparedness and response. The treaty is unlikely to include any new substantive obligations: All eight Arctic Council states have already ratified the 1990 Convention on Oil Pollution Preparedness, Response and Co-operation (OPRC), a treaty negotiated within the framework of the International Maritime Organization.³⁰ Parties to OPRC are required to establish measures for dealing with pollution incidents; these include the stockpiling of oil spill equipment, the development of cleanup plans, and the holding of exercises. They are also required to co-operate in the event of a spill; this may include providing equipment when requested by another party. However, despite the fact that the new treaty on oil spill preparedness and response will not include new obligations, its very existence will likely promote regional consultations, coordination and co-operation. As Chair of the Arctic Council, Canada can and should play a lead role in promoting such interactions.

At the same time, the new treaty will fall short of what is needed. The crux of the matter was set out in a 2010 World Wildlife Fund report: “Mounting an effective response to a major oil spill in the Arctic is presently not possible due to enormous environmental challenges, a lack of capacity and the severe limitations of current response methods in ice-covered waters.”³¹ The same report identified a so-called “response gap” whereby, “Due to the Arctic’s remoteness and extreme weather, there is also a high percentage of time when no response, however ineffective, could even be attempted.”

... an Arctic-wide treaty that focuses on oil spill prevention, including by forcing companies to internalize the full costs of offshore drilling

What is really needed is an Arctic-wide treaty that focuses on oil spill *prevention*, and this might involve forcing companies to internalize the full costs of offshore drilling in the region. Oil companies will develop and implement the enhanced safety measures needed in the Arctic, but only if they are forced to bear the full risk and cost of the damage caused by spills. During its chairmanship of the Arctic Council, Canada should take the lead in negotiating such a treaty.

28 See Tromso Declaration (2009) and Nuuk Declaration (2011), both available at <http://www.arctic-council.org/index.php/en/about/documents/category/5-declarations>.

29 Guidelines for Ships Operating in Polar Waters, 2 December 2009, available at [http://www.imo.org/blast/blastDataHelper.asp?data_id=29985&filename=A1024\(26\).pdf](http://www.imo.org/blast/blastDataHelper.asp?data_id=29985&filename=A1024(26).pdf).

30 1990 International Convention on Oil Pollution Preparedness, Response and Co-operation, available at <http://www.ifrc.org/docs/idrl/I245EN.pdf>.

31 World Wildlife Fund, “Drilling for Oil in the Arctic: Too Soon, Too Risky,” 1 December 2010, p. 3, available at <http://www.worldwildlife.org/what/wherewework/arctic/WWFBinaryitem18711.pdf>.

SAME-SEASON RELIEF WELL CAPABILITY

In the summer of 2012, Shell deployed two drill ships to U.S. waters north of Alaska.³² The deployment of two drill ships was required by the U.S. government to provide the capability of drilling a “relief well” during the same drilling season as the primary well. When a blowout occurs, drilling an adjacent intercepting well can reduce the pressure from the escaping oil, allowing the primary well to be capped.

During the 1970s and 1980s, 93 wells were drilled in the Canadian portion of the Beaufort Sea, while another 40 wells were drilled in offshore areas near Canada’s High Arctic islands.³³ At the time, Canada led the world in providing a regulatory regime for Arctic offshore drilling, including a requirement – introduced in 1976 – that oil companies have the capability to drill a same-season relief well.

During the 1990s, government subsidies for Arctic oil and gas exploration were eliminated and no offshore drilling took place. However, as oil prices have risen, oil companies have returned to the Beaufort Sea, purchasing large exploration leases from the Canadian government. Prior to the Deepwater Horizon blowout in the Gulf of Mexico, some of those leaseholders were lobbying Canada’s National Energy Board (NEB), the federal body responsible for regulating offshore drilling in the Canadian Arctic, for a relaxation of the same-season relief well requirement.³⁴ After the Deepwater Horizon blowout, the companies themselves called for a pause, so that any regulatory changes could be informed by the incident.³⁵

In 2011, the NEB issued a report into Arctic offshore drilling in which it retained the relief well requirement, while adding an important potential loophole:

The intended outcome of the Same Season Relief Well Policy is to kill an out-of-control well in the same season in order to minimize harmful impacts on the environment. We will continue to require that any company applying for an offshore drilling authorization provides us with specific details as to how they will meet this policy. *An applicant wishing to depart from our policy would have to demonstrate how they would meet or exceed the intended outcome of our policy.*³⁶

Norwegian oil companies have considerable experience with deep water drilling in the North Sea and, increasingly, the Norwegian Sea: that part of the North Atlantic between the North Sea, the Barents Sea, Greenland and the west coast of Norway. Norway has some of the highest safety standards for offshore drilling of any country in the world, including a long-standing requirement for the capability to initiate a relief well within 12 days of a blowout.³⁷

32 John M. Broder and Clifford Krauss, “New and Frozen Frontier Awaits Offshore Oil Drilling,” *New York Times*, 23 May 2012, available at <http://www.nytimes.com/2012/05/24/science/earth/shell-arctic-ocean-drilling-stands-to-open-new-oil-frontier.html>.

33 National Energy Board, “Review of Offshore Drilling in the Canadian Arctic,” December 2011, p. 3, available at <http://www.neb-one.gc.ca/clf-nsi/rthnb/pplctnsbfrthnb/rctcfffshrdllngrvw/fnlrprt2011/fnlrprt2011-eng.pdf>.

34 *Ibid.*, p. 5.

35 Shawn McCarthy, “Oil giants contest Arctic relief well requirement,” *Globe and Mail*, 5 April 2011, available at <http://www.theglobeandmail.com/report-on-business/industry-news/energy-and-resources/oil-giants-contest-arctic-relief-well-requirement/article582755/>.

36 National Energy Board, “Review of Offshore Drilling in the Canadian Arctic,” December 2011, p. 40, available at <http://www.neb-one.gc.ca/clf-nsi/rthnb/pplctnsbfrthnb/rctcfffshrdllngrvw/fnlrprt2011/fnlrprt2011-eng.pdf>.

37 “Norsok Standard D-010 Rev. 3 (Well integrity in drilling and well operations),” August 2004, Section 4.8.2, available at <http://www.standard.no/PageFiles/1315/D-010r3.pdf>.

Greenland has adopted Norway's high standards. In 2010 and 2011, a Scottish oil company, Cairn Energy, drilled a number of wells in Davis Strait off the west coast of the island. Two drill ships were required to be in the area at all times, leaving one available to drill a relief well if a blowout occurred.³⁸

A new treaty on oil spill prevention should follow the best practice displayed by the United States, Norway and Greenland, and require a same-season relief well capability at all times.

A new treaty on oil spill prevention should follow the best practice displayed by the United States, Norway and Greenland...

LIABILITY CAPS

A number of treaties govern liability for pollution from oil tankers, beginning with the 1969 International Convention on Civil Liability for Oil Pollution Damage and the 1971 International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage.³⁹ Negotiated and managed under the umbrella of the International Maritime Organization, these treaties operate on the basis of strict liability for ship owners (i.e., liability even in the absence of fault) and create a system of compulsory liability insurance. In return, ship owners benefit from liability caps that are based on the tonnage of the vessels, with damages above the caps being compensated – up to set limits – from a fund that is supported by levies on oil shipments.

However, no treaty deals with liability and compensation for pollution caused by offshore oilrigs, pipelines or sub-sea wellhead production systems. As governments struggle to address the unique challenges of regulating offshore drilling in the Arctic, one particularly important issue concerns liability limits set out in domestic laws. BP has estimated its total costs from the Deepwater Horizon blowout at approximately \$41 billion, including compensation for environmental and economic damage.⁴⁰ These costs eclipsed the liability limits under U.S. law, with the 1990 Oil Pollution Act setting a limit of just \$75 million for natural resource and economic damages.⁴¹ However, the limit does not apply in cases of fault or gross negligence, and BP, rather than contesting the point, chose to waive the limit from the outset. Other companies might not feel similarly compelled. In May 2010, Senator Lisa Murkowski of Alaska blocked a bill that would have raised the cap under the Oil Pollution Act to \$10 billion.⁴²

In the Canadian Arctic, liability for an offshore oil spill is limited to just \$40 million by regulations adopted under the 1970 Arctic Waters Pollution Prevention Act.⁴³

38 See "Media Backgrounder: Cairn's Prevention and Response Capabilities offshore Greenland," available at <http://www.cairnenergy.com/files/pdf/greenland/PreventionandResponseCapabilities.pdf>.

39 See International Oil Pollution Compensation Funds, *Liability and Compensation for Oil Pollution Damage: Texts of the 1992 Civil Liability Convention, the 1992 Fund Convention and the Supplementary Fund Protocol* (2011 edition), available at http://www.iopcfund.org/npdf/Text%20of%20Conventions_e.pdf.

40 Jonathan L. Ramseur, "Liability and Compensation Issues Raised by the 2010 Gulf Oil Spill," Congressional Research Service, 11 March 2011, available at http://assets.opencrs.com/rpts/R41679_20110311.pdf.

41 P.L. 101-380, primarily codified at 33 U.S.C. § 2701 *et seq.* For a useful summary of the issues, see Ramseur, "Liability and Compensation Issues."

42 Jake Sherman, "Murkowski blocks oil liability bill," *Politico*, 13 May 2010, available at <http://www.politico.com/news/stories/0510/37207.html>.

43 *Arctic Waters Pollution Prevention Regulations*, C.R.C., c. 354, s. 8 ("For the purposes of section 6 of the Act, the maximum amount of liability of an operator in respect of each deposit of waste is as follows: ... (f) in the case of an operation engaged in exploring for, developing or exploiting oil and gas, \$40 million.")

A good argument can be made for eliminating the liability caps on Arctic oil exploration, development and shipping. The existing limits are a form of public subsidy to the oil industry, since potential costs above the limits need not be factored into insurance costs, and therefore also not into any assessment of the economic viability of a potential project. Liability caps prevent the full internalization of costs, and can thus promote activities that do not make economic sense from a comprehensive perspective. Greenland has been showing some leadership on this issue, demanding that oil companies provide a \$2 billion guarantee in advance of exploratory drilling. Smaller companies are required to provide the money up front, with the “bond” being designated specifically for meeting the cleanup costs resulting from any spill.⁴⁴

A new treaty on oil spill prevention should address the issue of liability and compensation for pollution caused by offshore drilling, either by raising liability caps substantially or eliminating them altogether.

Arctic Haze

The term “Arctic haze” first appeared in a 1956 paper published by J. Murray Mitchell, Jr., who described visible atmospheric layers of undetermined origin.⁴⁵ Mitchell was involved in the “Ptarmigan flights” which were conducted by the U.S. Air Force between 1948 and 1967 to record meteorological conditions in the Arctic.⁴⁶ The paper garnered little attention at first. It was not until the late 1970s that other researchers established that Arctic haze was caused by human activities,⁴⁷ and until the mid-1980s that researchers used Mitchell’s paper to better understand the phenomenon. One of their findings concerned the “greater frequency of occurrences in later winter” due to the lower rate of particle and gas removal during the “cold, dark, and rather stable system” that prevails in the Arctic during that season.⁴⁸

Researchers have also learned that only a small percentage of Arctic haze originates in the Arctic.⁴⁹ For the most part, it is “long-range transported air pollution”⁵⁰ composed primarily of sulfates with varying amounts of “particulate organic matter, nitrogen compounds, dust and black carbon, as well as trace elements such as heavy metals and other contaminants.”⁵¹ The sulfates originate from a number of sources, including power plants, oil and gas production, smelters, and pulp and paper mills, while the nitrates come mostly from vehicle exhausts.⁵²

44 Tim Webb, “Greenland wants \$2bn bond from oil firms keen to drill in its Arctic waters,” *The Guardian*, 12 November 2010, available at <http://www.guardian.co.uk/business/2010/nov/12/greenland-oil-drilling-bond>.

45 J.M. Mitchell, Jr., “Visual range in the polar regions with particular reference to the Alaskan Arctic,” *Journal of Atmospheric and Terrestrial Physics* (1956), p. 195.

46 Ken Wilkening, “Science and International Environmental Nonregimes: The Case of Arctic Haze,” *Review of Policy Research* 28 (2011), p. 131, available at <http://www.highbeam.com/doc/1G1-253536411.html>.

47 Arctic Monitoring and Assessment Programme, “AMAP Assessment 2006: Acidifying Pollutants, Arctic Haze, and Acidification in the Arctic,” p. 1, available at <http://amap.no/documents/index.cfm?dirsub=%2FAMAP%20Assessment%202006%20-%20Acidifying%20Pollutants%2C%20Arctic%20Haze%20and%20Acidification%20in%20the%20Arctic&sort=default>.

48 See Glen E. Shaw, “The Arctic Haze Phenomenon,” *Bulletin of the American Meteorological Society* 16 (August 1995), pp. 2403-2404, available at <http://journals.ametsoc.org/doi/pdf/10.1175/1520-0477%281995%29076%3C2403%3ATAHP%3E2.0.CO%3B2>; and Arctic Monitoring and Assessment Programme, “AMAP Assessment 2006,” p. ix.

49 Arctic Monitoring and Assessment Programme, “AMAP Assessment 2006,” p. ix.

50 Ibid.

51 Shaw, “The Arctic Haze Phenomenon,” p. 2405.

52 Arctic Monitoring and Assessment Programme, “AMAP Assessment 2006,” p. 1.

Arctic haze has both direct and indirect effects on the environment and climate. It changes the “radiation balance” in the Arctic by creating a “layer of light-absorbing material” over otherwise light-reflecting ice and snow surfaces.⁵³ The aerosols in the haze may even affect the properties of clouds, especially their “emissivity” – the rate at which the clouds emit radiation. It seems that Arctic haze increases the amount of solar radiation retained at the Earth’s surface, leading to an increase in the rate of ice- and snow-melt, especially during the spring.

Arctic haze has both direct and indirect effects on the environment and climate

In 1979, the UN Economic Commission for Europe adopted the Convention on Long-range Transboundary Air Pollution.⁵⁴ The Convention provides a framework for scientific collaboration and policy coordination that has been filled in by eight protocols setting out specific measures for reducing emissions. One of the protocols – the 1999 Gothenburg Protocol to Abate Acidification, Eutrophication and Ground-level Ozone⁵⁵ – has been identified by the Arctic Council’s Arctic Monitoring and Assessment Program (AMAP) as having particular importance for the reduction of Arctic haze.⁵⁶ The Gothenburg Protocol sets emission ceilings for sulfates, nitric oxides, volatile organic compounds and ammonia. It also establishes strict levels for particular emission sources such as power plants and vehicles, and requires that the best available methods be implemented to reduce emissions.⁵⁷ The United States and the four Scandinavian members of the Arctic Council have ratified the Gothenburg Protocol; Russia, Canada and Iceland have yet to do so.⁵⁸ Canada, as the upcoming Chair of the Arctic Council, should show leadership here – and ratify the Gothenburg Protocol within the next year.

AMAP has also recommended the establishment of more monitoring stations for air and precipitation chemistry in the Canadian, American and Russian Arctic.⁵⁹ These stations would help scientists develop a better understanding of how Arctic haze operates and changes over time.⁶⁰ Unfortunately, Canada has taken the opposite track, shutting down its Polar Environment Atmospheric Research Laboratory (PEARL) in Eureka, Nunavut, at 80 degrees north.⁶¹ Canada, as the upcoming Chair of the Arctic Council, should reverse that decision immediately.

Canada should also take the lead in negotiating a treaty on Arctic haze within the framework of the Arctic Council, reiterating the obligations of the Gothenburg Protocol in the Arctic context – and adding to its substantive reach.

53 Ibid., p. 38.

54 United Nations Economic Commission for Europe, 1979 Convention on Long-range Transboundary Air Pollution, available at http://www.unece.org/env/lrtap/lrtap_h1.html.

55 “Protocol to Abate Acidification, Eutrophication and Ground-level Ozone” (adopted 30 November 1999), available at <http://www.unece.org/fileadmin/DAM/env/lrtap/full%20text/1999%20Multi.E.Amended.2005.pdf>.

56 Arctic Monitoring and Assessment Programme, “AMAP Assessment 2006,” p. ix.

57 United Nations Economic Commission for Europe, “The 1999 Gothenburg Protocol to Abate Acidification, Eutrophication and Ground-level Ozone,” at http://www.unece.org/env/lrtap/multi_h1.html.

58 United Nations Economic Commission for Europe, “Status of ratification of The 1999 Gothenburg Protocol to Abate Acidification, Eutrophication and Ground-level Ozone as of 24 May 2012,” at http://www.unece.org/env/lrtap/status/99multi_st.html.

59 Ibid., p. 97.

60 Ibid., p. 98.

61 “High Arctic research station forced to close: PEARL played a key role in ozone measurements, international collaborations,” CBC News, 28 February 2012, available at <http://www.cbc.ca/news/politics/story/2012/02/28/science-pearl-arctic-research.html>.

Black Carbon

Black carbon is particulate matter produced during the combustion of hydrocarbon fuels when there is insufficient oxygen present for the fuel to be completely converted to carbon dioxide and water.⁶² It is sometimes referred to as “soot” – a general term that includes various types of carbon-based particulates.⁶³ In developed countries, the main source of black carbon is the exhaust from diesel engines. In developing countries, black carbon commonly originates from the burning of biomass – including wood, vegetable oil and animal dung – for fuel.⁶⁴

When black carbon is deposited onto snow and ice, it dramatically reduces the “albedo,” or reflectivity.⁶⁵ This causes the snow and ice to melt more quickly, and as the melting progresses, the particles become more concentrated on the surface, which accelerates the melting further. Even when carbon particles remain in the air column they can still increase the rate of melting by absorbing solar energy and warming the surrounding air.⁶⁶

Until recently, the contributions of black carbon and other “short-lived climate pollutants” (SLCPs) to climate change were largely overlooked. Although black carbon particles remain in the atmosphere for only a few weeks, whereas carbon dioxide molecules persist for years, recent research suggests that black carbon may be responsible for “25 percent of observed global warming over the past century.”⁶⁷ There is little doubt that black carbon is a significant factor in the melting of Arctic sea-ice, glaciers and permafrost.⁶⁸

The short lifespan of black carbon in the atmosphere means that reducing these emissions might be the quickest way to slow global warming. According to Mark Jacobson, the director of Stanford University’s Atmosphere/Energy Program, it “may be the only method of saving Arctic ice.”⁶⁹

In 2009, the Arctic Council established a task force to identify the primary sources of black carbon and recommend “immediate actions.”⁷⁰ Although reducing black carbon emissions anywhere on the planet would have positive consequences in the Arctic, the task force reported that reducing sources in or

...research suggests that black carbon may be responsible for “25 percent of observed global warming over the past century.”

62 P.K. Quinn et al, *The Impact of Black Carbon on the Arctic Climate* (Oslo: Arctic Monitoring and Assessment Programme, 2011), p. 4, available at <http://www.amap.no/documents/>.

63 James Hansen and Larissa Nazarenko, “Soot climate forcing via snow and ice albedos,” *Proceedings of the National Academy of Sciences* 101(2), p. 423, available at <http://www.pnas.org/content/101/2/423.full.pdf+html>.

64 Cath O’Driscoll, “Soot warming significant,” *Chemistry and Industry* 17 (2011), p. 10, available at http://findarticles.com/p/articles/mi_hb5255/is_17/ai_n58261837/.

65 See Arctic Council Task Force on Short-Lived Climate Forcers, “Technical Report: An Assessment of Emissions and Mitigation Options for Black Carbon for the Arctic Council,” 2 May 2011, p. 2, available at http://arctic-council.npolar.no/accms/export/sites/default/en/meetings/2011-nuuk-ministerial/docs/3_1_ACTF_Report_02May2011_v2.pdf.

66 See National Aeronautics and Space Administration, “Black Soot and Snow: A Warmer Combination,” 22 December 2003, available at <http://www.nasa.gov/centers/goddard/news/topstory/2003/1223blacksot.html>.

67 Ibid.

68 Ibid.

69 O’Driscoll, “Soot warming significant,” p. 10.

70 Alister Doyle, “Arctic nations plan soot crackdown,” *Boston Globe*, 30 April 2009, available at http://www.boston.com/news/world/europe/articles/2009/04/30/arctic_nations_plan_soot_crackdown/.

near the Arctic would have more of an impact there.⁷¹ It found that the greatest sources of black carbon in the Arctic are diesel vehicles, agricultural and prescribed forest burning, wildfires and residential heating. It identified marine shipping as “a potentially significant source, especially in the Arctic due to its projected increase over time and its proximity to snow and ice.”⁷²

In the lead-up to the 2011 meeting of Arctic Council ministers, U.S. Deputy Secretary of State Jim Steinberg indicated that a specific treaty on black carbon would not be negotiated; instead, there would be a “coordinated focus” on taking “strong actions domestically.”⁷³ Most Arctic countries do not yet have measures in place that specifically address black carbon, though they do have programs that restrict SLCP emissions and therefore indirectly black carbon.⁷⁴ In 2011, the U.S. Environmental Protection Agency (EPA) solicited proposals for research on mitigating diesel sources of black carbon in the Russian Arctic, research that will then be applicable in other Arctic countries.⁷⁵

... the United States is leading efforts to reduce black carbon emissions beyond the Arctic

In addition, the United States is leading efforts to reduce black carbon emissions beyond the Arctic. In February 2012, the United States, Canada, Bangladesh, Ghana, Mexico, Sweden and the United Nations Environment Program (UNEP) announced the creation of a “Climate and Clean Air Coalition to Reduce Short-Lived Climate Pollutants.”⁷⁶ The Coalition is a voluntary initiative meant to promote measures that reduce SLCPs such as black carbon, with the areas identified for “immediate action” including “heavy duty diesel vehicles and engines” and “oil and gas production.”⁷⁷ In May 2012, the rest of the G8 countries (France, Germany, Italy, Japan, Russia and the U.K.) agreed to join the Coalition.⁷⁸

During Canada’s chairmanship of the Arctic Council, it should encourage the United States and other Arctic countries to revisit the decision not to negotiate a treaty on black carbon and other short-lived climate pollutants. A binding regional agreement on the issue is important, because of the significant and direct impact that Arctic-sourced emissions have on snow and ice, and because of the moral and political influence that exercising regional leadership on the issue could have on other, non-Arctic countries.

71 Arctic Council Task Force on Short-Lived Climate Forcers, “Technical Report,” p. 2.

72 Arctic Council Task Force on Short-Lived Climate Forcers, “Progress Report and Recommendations for Ministers,” 2 May 2011, p. 3, available at http://arctic-council.npolar.no/accms/export/sites/default/en/meetings/2011-nuuk-ministerial/docs/3-0a_TF_SPM_recommendations_2May11_final.pdf.

73 Joby Warrick and Juliet Eilperin, “Arctic Council to address role of soot in global warming,” *Washington Post*, 11 May 2011, available at http://www.washingtonpost.com/national/arctic-council-to-address-role-of-soot-in-global-warming/2011/05/11/AFourXsG_story.html.

74 For an overview of each Arctic country’s pollution measures that may affect black carbon emissions, see Arctic Council Task Force on Short-Lived Climate Forcers, “Technical Report,” Section 5, pp. 34-51.

75 Environmental Protection Agency, Request for Proposals, “Arctic Black Carbon: Reduction of Black Carbon from Diesel Sources,” 2011, pp. 1-2, available at <http://www.epa.gov/international/grants/Arctic-Black-Carbon-ModifiedRFP.pdf>.

76 United Nations Environment Program, “New Climate and Clean Air Coalition Expands to 13 Members: New Initiatives Assessed for Fast and Scaled-up Action on Black Carbon, Methane, and HFCs,” 24 April 2012, available at <http://www.unep.org/newscentre/default.aspx?DocumentID=2678&ArticleID=9116>. The coalition website is located at <http://www.unep.org/ccac/Home/tabid/101612/Default.aspx>.

77 Climate and Clean Air Coalition to Reduce Short-Lived Climate Pollutants, “Focal Areas,” available at <http://www.unep.org/ccac/FocalAreas/tabid/102153/Default.aspx>.

78 UNEP News Centre, “All G8 Countries Back Action on Black Carbon, Methane and Other Short Lived Climate Pollutants,” 22 May 2012, available at <http://www.unep.org/newscentre/default.aspx?DocumentID=2683&ArticleID=9134>.

Security

In 2011, Russian Defence Minister Anatoly Serdyukov announced that two army brigades would be created to protect his country's Arctic resources, though he declined to give any details of the plan.⁷⁹ In 2012, Russia's RT News reported on another plan to establish 20 border posts in the Arctic, including along the Northern Sea Route, with 15 to 20 guards stationed at each.⁸⁰ Neither plan seems to be directed at other countries; instead, they likely address the non-state threats that will accompany increased commercial activity in and around Russia's northern regions, such as smuggling and illegal immigration.

Other Russian military plans have met with considerable skepticism from some quarters, as the following passage from a 2012 report published by the Center for Climate and Energy Solutions shows:

The 2007–2015 Russian State Armament Programme emphasizes the rebuilding of their northern naval capabilities. Under this program the Russians will build new nuclear-powered submarines, including both fast attack (SSNs) and nuclear missile-carrying submarines (SSBNs). The Russian geographic reality means that these vessels will be based in northern waters. The head of the Russian Navy has stated that the Russians also plan to build five or six carrier battle-groups, which would be primarily based at their northern bases. . . . The Russians have also resumed a significant military presence in the Arctic. In August 2007 they restarted long-range bomber patrols. In the same year they also resumed northern patrols of naval surface units. They have been careful to remain within international airspace, but in some instances have approached the borders of Canada, Norway, and the United States.⁸¹

Assessing Russia's plans and actions regarding the Arctic is always challenging because its principal naval ports are by necessity along the southwest coast of the Barents Sea where the Gulf Stream ensures open water throughout the year. Murmansk and other ice-free Arctic ports became even more important after the dissolution of the Soviet Union, which resulted in Russia's losing access to its naval installations in the Baltic States, and Kaliningrad's separation from the rest of Russia by the newly independent countries of Belarus and Lithuania. This makes it difficult to distinguish between Arctic-specific deployments and investments, and those aimed at maintaining or increasing Russia's capabilities elsewhere.⁸²

Both Russia and the United States continue to deploy nuclear submarines in the Arctic Ocean and fly military aircraft there. Sometimes these manoeuvres cause undue excitement in neighbouring countries. After one exercise in 2009, when two Bear bombers were intercepted more than 110 miles from the

79 Thomas Grove, "Russia creates two brigades of Arctic troops," Reuters, 1 July 2011, available at <http://uk.reuters.com/article/2011/07/01/russia-arctic-troops-idUKLDE76017D20110701>.

80 "Russia to set up Arctic frontier posts," RT News, 16 April 2012, available at <http://rt.com/politics/arctic-border-posts-russia-132/>.

81 Rob Huebert et al., "Climate change & international security: The Arctic as a Bellwether," Center for Climate and Energy Solutions, 2012, p. 18, available at <http://www.c2es.org/publications/climate-change-international-arctic-security/>.

82 Rob Huebert, "The Newly Emerging Arctic Security Environment," Canadian Defence & Foreign Affairs Institute, March 2010, p. 16, available at <http://www.cdfai.org/PDF/The%20Newly%20Emerging%20Arctic%20Security%20Environment.pdf>.

Canadian coast over the Beaufort Sea, Canadian Defence Minister Peter MacKay called a press conference. He pointed out that the incident had occurred just one day before U.S. President Barack Obama visited Ottawa, and stated: "I am not going to stand here and accuse the Russians of having deliberately done this during the presidential visit, but it was a strong coincidence."⁸³ Later, when Prime Minister Stephen Harper was asked about the matter, he suggested that the Russian planes had actually entered Canadian airspace. "This is a real concern to us," he said. "I have expressed at various times the deep concern our government has with increasingly aggressive Russian actions around the globe and Russian intrusions into our airspace." Harper promised to "respond every time the Russians make any kind of intrusion on the sovereignty of Canada's Arctic."⁸⁴

... a number of steps have been taken to reduce the militarization of the Arctic...

American and Russian responses to the Canadian comments were more informative about the actual security situation in the Arctic. The four-star U.S. general in charge of NORAD assured journalists that the Russians had "conducted themselves professionally" and not entered Canadian or U.S. airspace, while a Russian diplomat explained that NORAD had been notified of the flights in advance, in accordance with a long-standing agreement between Washington and Moscow.⁸⁵

As Charles Emmerson usefully reminds us, "the force projection capability of modern Russia does not approach that of the Soviet Union" and "the domestic legitimacy of the Putin-Medvedev regime depends on economic prosperity more than military might."⁸⁶ Siemon Wezeman described the situation accurately in a paper published by the Stockholm International Peace Research Institute in 2012:

While some media, politicians and researchers have portrayed the changes in the capabilities of the Arctic littoral states as significant military build-ups and potential threats to security, the overall picture is one of limited modernization and increases or changes in equipment, force levels and force structure. Some of these changes – for example, the strengthening of the Canadian Rangers, the move of the main Norwegian land units to the north of Norway or the new Russian Arctic units – have little or nothing to do with power projection into the areas of the Arctic with unclear ownership; rather they are for the patrolling and protecting of recognized national territories that are becoming more accessible, including for illegal activities.⁸⁷

In addition, a number of steps have been taken to reduce the militarization of the Arctic, including the U.S. withdrawal from the Keflavík airbase on Iceland in 2006, and Russia's acceptance of Western assistance with the decommissioning and cleanup of Soviet-era nuclear submarines and weapons along Russia's Arctic coast. Then, in 2011, the "New START" entered into force between the United

83 Steven Chase, "Ottawa Rebukes Russia for Military Flights in Arctic," *Globe and Mail*, 28 February 2009, available at <http://www.theglobeandmail.com/news/politics/ottawa-rebukes-russia-for-military-flights-in-arctic/article1149408/>.

84 Ibid.

85 Ibid.; and testimony of Dmitry Trofimov before Canadian House of Commons Standing Committee on National Defence, 23 March 2009, available at <http://www2.parl.gc.ca/HousePublications/Publication.aspx?DocId=3760417&Language=E&Mode=1&Parl=40&Ses=2>.

86 Charles Emmerson, *The Future History of the Arctic* (New York: Public Affairs, 2010), p. 121.

87 Siemon T. Wezeman, "Military Capabilities in the Arctic," SIPRI Background Paper, Stockholm, March 2012, pp. 13-14, available at http://books.sipri.org/product_info?c_product_id=442.

States and Russia.⁸⁸ Part of Barack Obama's effort to "reset" the relationship between the two countries, the treaty requires a further 50 per cent reduction in the number of strategic nuclear missile launchers.

All of which raises the question as to whether NATO has any continuing relevance for the Arctic.⁸⁹ For the foreseeable future, the answer is probably "no" – at least in terms of NATO's traditional collective defence mandate under the North Atlantic Treaty. However, NATO has progressively sought to expand its mandate, most significantly through a new "Strategic Concept" adopted by NATO ministers in 2010.⁹⁰ In that document, NATO tasks itself, not just with collective defence but also with crisis management and "cooperative security" – including the ongoing protection of trade routes, energy supplies and pipelines. Although the Strategic Concept does not mention the Arctic, it is clear that NATO's expanded mandate will take it northwards and that coordination and co-operation with other organizations, most notably the Arctic Council, will be required when it does so.

To date, the Arctic Council has shied away from security issues because of a footnote in the 1996 Ottawa Declaration that reads: "The Arctic Council should not deal with matters related to military security."⁹¹ The footnote was included at the insistence of the United States, which was at that time concerned about the new intergovernmental forum's potential effect on the delicate U.S.-Russian nuclear balance in the region.⁹² Today, in quite different circumstances that include a marked decline in military tension as well as a successful track record on the part of the Arctic Council, the member states would be well advised to revisit that decision. Canada could and should initiate this discussion during its chairmanship of the Council.

... raises the question as to whether NATO has any continuing relevance for the Arctic

88 2011 Treaty between the United States of America and the Russian Federation on Measures for the Further Reduction and Limitation of Strategic Offensive Arms (New START), available at <http://www.nti.org/treaties-and-regimes/treaty-between-the-united-states-of-america-and-the-russian-federation-on-measures-for-the-further-reduction-and-limitation-of-strategic-offensive-arms/>.

89 See, for example, Helga Haftendorn, "NATO and the Arctic: Is the Atlantic alliance a cold war relic in a peaceful region now faced with non-military challenges?" *European Security* 20 (2011), p. 337; Sven G. Holtmark, "Towards cooperation or confrontation? Security in the High North," Research Paper No. 45, NATO Defense College, February 2009, available at <http://www.ndc.nato.int/research/series.php?icode=1>.

90 "Strategic Concept for the Defence and Security of the Members of the North Atlantic Treaty Organisation," available at <http://www.nato.int/lisbon2010/strategic-concept-2010-eng.pdf>.

91 Declaration on the Establishment of the Arctic Council, Ottawa, 19 September 1996, *International Legal Materials* 35 (1996), p. 1387; available at <http://www.arctic-council.org/index.php/en/about/documents/file/13-ottawa-declaration>.

92 Rob Huebert, "New Directions in Circumpolar Cooperation: Canada, the Arctic Environmental Protection Strategy and the Arctic Council," *Canadian Foreign Policy* 5 (1998), p. 54.

Arctic Nuclear-weapon-free Zones

In 1968, an American B-52 bomber crashed into the sea near the U.S. base at Thule, Greenland, resulting in the loss of one unexploded nuclear bomb under the ice.⁹³ About the same time, it became apparent that U.S. and Soviet nuclear submarines were frequenting the waters around Greenland and Canada's High Arctic islands.⁹⁴ These developments were of concern to the Inuit, who were also aware that atmospheric nuclear weapons tests by the United States, Britain and France in the South Pacific had directly affected – and prompted a coordinated response from – the indigenous peoples there. The indigenous Pacific islanders were subsequently instrumental in the initiation of the inter-state negotiations that led to the 1985 South Pacific Nuclear Free Zone Treaty. That instrument, usually referred to as the “Treaty of Rarotonga,” has been ratified by Australia, the Cook Islands, Fiji, Kiribati, Nauru, New Zealand, Niue, Papua New Guinea, the Solomon Islands, Tonga, Tuvalu, Vanuatu, and Western Samoa.⁹⁵

In a parallel effort, the Inuit Circumpolar Council adopted a resolution in 1982 that called for “no nuclear testing or nuclear devices in the arctic or sub-arctic.”⁹⁶ But with NATO and the Soviet Union locked in the Cold War, and the Arctic Ocean a major theatre of operation for nuclear submarines, the Inuit initiative was destined to fail. Now, in fundamentally changed circumstances, it is time to return to the idea of a nuclear-weapon-free zone in the Arctic.

Already two treaties have, for decades, prohibited nuclear weapons in certain parts of the Arctic. In 1920, the Svalbard Treaty effectively demilitarized the Norwegian archipelago by prohibiting the establishment of any “naval base” or “fortification” and stating that the islands “may never be used for warlike purposes.”⁹⁷ Forty countries have ratified the Svalbard Treaty, including all the Arctic states.⁹⁸ In 1971, the Seabed Treaty, which applies to all the world's oceans, prohibited the deployment of nuclear weapons on the seabed beyond 12 nautical miles from shore.⁹⁹ Ninety-four countries have ratified the Seabed Treaty, including all the Arctic states and all the declared nuclear weapon states apart from France.¹⁰⁰ However, most proponents of a nuclear-weapon-free zone in the Arctic envisage a comprehensive, region-wide arrangement similar to the 1959 Antarctic Treaty, which requires that the entire Antarctic remain demilitarized.¹⁰¹

93 Gordon Corera, “Mystery of lost US nuclear bomb,” BBC News, 10 November 2008, available at <http://news.bbc.co.uk/1/hi/7720049.stm>.

94 See: Bob Weber, “Soviet subs cruised Canadian Arctic maps suggest,” Canadian Press, 6 December 2011, available at: <http://www.thestar.com/news/canada/article/1097530--soviet-subs-cruised-canadian-arctic-maps-suggest>.

95 For more information on the Treaty of Rarotonga, see <http://www.nti.org/treaties-and-regimes/south-pacific-nuclear-free-zone-spnfz-treaty-rarotonga/>. For the text of the treaty, see <http://cns.miis.edu/inventory/pdfs/aptspnfz.pdf>.

96 ICC, “Resolution on a Nuclear Free Zone,” available at <http://www.halcyon.com/pub/FWDP/Resolutions/ICC/inuit.txt>. A similar statement had been made five years earlier, though not in the form of a resolution. See Russel Barsh, “Demilitarizing the Arctic as an Exercise of Indigenous Self-Determination,” *Nordic Journal of International Law* 55 (1986), p. 211.

97 Treaty concerning the Archipelago of Spitsbergen, Article 9.

98 See “Traktat angående Spitsbergen (Svalbardtraktaten),” available at <http://www.lovdatab.no/cgi-bin/udoffles?doc=tra-1920-02-09-001.txt&>.

99 1971 Treaty on the Prohibition of the Emplacement of Nuclear Weapons and other Weapons of Mass Destruction on the Sea-Bed and the Ocean Floor and in the Subsoil Thereof, 955 UNTS 115, available at http://disarmament.un.org/treaties/t/sea_bed/text. See, generally, Jozef Goldblat, “The Seabed Treaty and arms control,” Paper 10 in Richard Fieldhouse (ed.), *Security at Sea: Naval Forces and Arms Control* (Oxford: Oxford University Press & Stockholm International Peace Research Institute, 1990), p. 187.

100 See “Status of the Treaty” at: http://disarmament.un.org/treaties/t/sea_bed.

101 1959 Antarctic Treaty, 402 UNTS 71, available at http://www.ats.aq/documents/ats/treaty_original.pdf. Article 1(1) reads: “Antarctica shall be used for peaceful purposes only. There shall be prohibited, *inter alia*, any measure of a military nature, such as the establishment of military bases and fortifications, the carrying out of military manoeuvres, as well as the testing of any type of weapon.”

The possibility of nuclear-weapon-free zones was encouraged by the 1968 Non-Proliferation Treaty, Article VII of which states: "Nothing in this Treaty affects the right of any group of States to conclude regional treaties in order to assure the total absence of nuclear weapons in their respective territories."¹⁰² In 1975, the UN General Assembly added more detail to the concept, defining a nuclear-weapon-free zone as

any zone recognized as such by the General Assembly of the United Nations, which any group of States, in the free exercises of their sovereignty, has established by virtue of a treaty or convention whereby:

(a) The statute of total absence of nuclear weapons to which the zone shall be subject, including the procedure for the delimitation of the zone, is defined;

(b) An international system of verification and control is established to guarantee compliance with the obligations deriving from that statute.¹⁰³

There are five nuclear-weapon-free zones in existence today: in Latin America,¹⁰⁴ the South Pacific,¹⁰⁵ Southeast Asia,¹⁰⁶ Africa¹⁰⁷ and Central Asia.¹⁰⁸

In 1975, the UN General Assembly attempted to create an obligation on the part of the declared nuclear weapon states – China, France, Russia, the U.K. and the U.S. – to ratify protocols or otherwise commit to "respect in all its parts the statute of total absence of nuclear weapons" in the zones and to "refrain from using or threatening to use nuclear weapons against the States included."¹⁰⁹ However, the General Assembly does not have the power to impose legal obligations and these so-called "negative security assurances" have not always been forthcoming. The United States has only provided one assurance, to the Latin American nuclear-weapon-free zone.¹¹⁰ Russia has provided two, to the Latin American and South Pacific zones.¹¹²

102 1968 Treaty on the Non-Proliferation of Nuclear Weapons, 729 UNTS, p. 161, available at <http://www.iaea.org/Publications/Documents/Infcircs/Others/infcirc140.pdf>.

103 UNGA Res. 3472 B (1975), available at <http://www.opanal.org/Docs/UN/UNAG30res3472i.pdf>.

104 1967 Treaty for the Prohibition of Nuclear Weapons in Latin America and the Caribbean (Treaty of Tlatelolco), available at <http://disarmament.un.org/treaties/t/tlatelolco/text>.

105 1985 South Pacific Nuclear Free Zone Treaty (Treaty of Rarotonga), available at <http://disarmament.un.org/treaties/t/rarotonga/text>.

106 1995 Treaty on the Southeast Asia Nuclear Weapon-Free Zone (Treaty of Bangkok), available at <http://disarmament.un.org/treaties/t/bangkok>.

107 1996 African Nuclear Weapon Free Zone Treaty (Treaty of Pelindaba), available at <http://disarmament.un.org/treaties/t/pelindaba/text>.

108 2006 Treaty on a Nuclear-Weapon-Free Zone in Central Asia (Treaty of Semipalatinsk), available at <http://disarmament.un.org/treaties/t/canwzf>.

109 UNGA Res. 3472 B (1975).

110 The negative security assurance is set out in Additional Protocol II to the Treaty of Tlatelolco, available at http://disarmament.un.org/treaties/t/tlateloco_p2/text "http://disarmament.un.org/treaties/t/tlateloco_p2/text". On U.S. ratification, see http://disarmament.un.org/treaties/t/tlateloco_p2.

111 Ibid.

112 "Status of the Protocol," available at http://disarmament.un.org/treaties/t/rarotonga_p2.

The most successful nuclear-weapon-free zones have been created in areas where nuclear weapons had not yet been deployed. That factual circumstance probably explains the success of the Svalbard, Antarctic and Seabed treaties. The Arctic represents a quite different reality, having been home for decades to thousands of nuclear warheads and delivery systems, including missiles, bombers and submarines. Given the continued importance of the Arctic Ocean as a deployment area for both Russian and American nuclear submarines, a comprehensive Arctic nuclear-weapon-free zone seems unlikely – at least until global nuclear disarmament is achieved.

... a number of incremental steps... be taken on the path towards a region-wide nuclear-weapon-free zone

That said, UN Security Council Resolution 1887, which was drafted by the United States and adopted unanimously in 2009, expressly supports the creation of nuclear-weapon-free zones as an effective way of preventing nuclear proliferation. The preamble to the resolution reads, in part:

*The Security Council, . . . Welcoming and supporting the steps taken to conclude nuclear-weapon-free zone treaties and reaffirming the conviction that the establishment of internationally recognized nuclear-weapon-free zones on the basis of arrangements freely arrived at among the States of the region concerned, and in accordance with the 1999 United Nations Disarmament Commission guidelines, enhances global and regional peace and security, strengthens the nuclear non-proliferation regime, and contributes toward realizing the objectives of nuclear disarmament*¹¹³

In another sign of the changing attitudes of the nuclear weapon states, the Obama administration, in 2011, announced that it would submit two protocols on negative security assurances to the U.S. Senate for its advice and consent to ratification, namely, the protocols to the South Pacific and African nuclear-weapon-free zones.¹¹⁴

In the Arctic, there are a number of incremental steps that might usefully be taken on the path towards a region-wide nuclear-weapon-free zone. One option is for one or more of the six Arctic non-nuclear-weapon states to simply declare themselves nuclear-weapon-free zones, as Mongolia did in 1992.¹¹⁵ After the five nuclear weapon states issued a joint statement providing security assurances to Mongolia in connection with its nuclear-weapon-free status, the UN General Assembly formally recognized that status in 2001.¹¹⁶

Although their actions would not be binding on nation-states, there is nothing to stop sub-state units such as Nunavut and Greenland from making similar declarations – as hundreds of cities around the world have done.¹¹⁷ It is difficult to see how declarations that simply recognized the non-existence of nuclear weapons in Nunavut or Greenland would infringe on the powers of the Canadian and Danish governments over defence and foreign affairs.

113 S/RES/1887 (2009), adopted 24 September 2009, available at <http://daccess-dds-ny.un.org/doc/UNDOC/GEN/N09/523/74/PDF/N0952374.pdf>.

114 Alfred Nurja, "Obama Submits NWFZ Protocols to Senate," *Arms Control Today*, June 2011, available at http://www.armscontrol.org/act/2011_06/NWFZ.

115 "Nuclear-Weapon-Free Status of Mongolia," available at <http://cns.miis.edu/inventory/pdfs/mongol.pdf>.

116 UNGA Res. 55/33/S, 20 November 2000, available at <http://www.un.org/depts/dhl/resguide/r55.htm>.

117 See Nigel Young, "Peace Movements in History," in S. Mendlovitz and R.B. Walker (eds.), *Towards a Just World Peace* (London: Butterworths, 1987), pp. 154-157.

More ambitiously, two or more of the six Arctic non-nuclear-weapon states could negotiate a nuclear-weapons-free zone among themselves – without seeking to involve Russia and the United States except in terms of subsequent negative security assurances. Indeed, the possibility of a Nordic nuclear-weapon-free zone has been discussed for more than half a century.¹¹⁸ Arguably, any such treaty could run up against the commitments of Canada, Denmark, Iceland or Norway under the North Atlantic Treaty Organization, to allow nuclear weapons to be deployed on their territory in wartime.¹¹⁹ But these countries could avoid any legal conflict by withdrawing from NATO's Nuclear Planning Group, membership of which is neither required under the alliance, nor as important as it might have been during the Cold War.

with the Arctic sea-ice disappearing, the risk of surface naval vessels deploying to the Arctic Ocean ...is increasing every year...

However, the most promising, immediately available opportunity was identified more than three decades ago, when Franklyn Griffiths proposed a multilateral treaty to de-militarize the surface water and sea-ice of the Central Arctic Ocean.¹²⁰ By focusing on maintaining the demilitarized condition of an area that was not yet militarized, the proposal followed the model of the Seabed Treaty. At the time, the surface of the Central Arctic Ocean was at no risk of being militarized, and the main benefit of such a treaty would therefore have been in fostering co-operation between the United States and the Soviet Union. Now, with the Arctic sea-ice rapidly disappearing, the risk of surface naval vessels deploying to the Arctic Ocean (beyond the historically ice-free areas of the Barents and Norwegian seas) is increasing every year, and Griffiths's proposal therefore deserves serious consideration.

An incidental, but strategic, benefit of Griffiths's proposal is that, by preventing ships equipped for surface anti-submarine warfare from being deployed to the Arctic Ocean, it would protect and stabilize the deterrent provided by nuclear submarines. This, of course, is something that the sea-ice historically did. Exceptions would have to be included in the treaty for peaceful military operations such as search-and-rescue, as well as the surfacing of submarines in emergencies.

A treaty to de-militarize the surface water and sea-ice of the Central Arctic Ocean would be relatively easy to negotiate, implement and verify – and could therefore be the first topic related to “military security” to be undertaken by the Arctic Council, if and when the member states choose to move beyond the now-dated constraint within the Ottawa Declaration. Again, Canada could and should take the lead here during its chairmanship of the Arctic Council.

118 Ingemar Lindahl, *The Soviet Union and the Nordic Nuclear-Weapons-Free-Zone Proposal* (London: Macmillan, 1988); Clive Archer, “Plans for a Nordic Nuclear-Weapon Free Zone,” *Kosmopolis* 34 (2004), p. 201 (supplement), available at <https://helda.helsinki.fi/bitstream/handle/10224/3635/archer201-207.pdf>.

119 See Douglas Roche and Ernie Regehr, “Canada, NATO and Nuclear Weapons,” Project Ploughshares Working Paper 01-3 (2001), available at <http://www.ploughshares.ca/content/canada-nato-and-nuclear-weapons>.

120 Franklyn Griffiths, “A Northern Foreign Policy,” *Wellesley Papers* 7 (1979) (Toronto: Canadian Institute of International Affairs), p. 61.

Permanent Observers

Six non-Arctic states – France, Germany, Netherlands, Poland, Spain and the United Kingdom – have been accorded “permanent observer status” at the Arctic Council. Nine intergovernmental and eleven non-governmental organizations have “observer status.”

In recent years, the issue of permanent observers has become entwined with the difficult relationship between the Inuit and the European Union. In response to widespread public concern about cruelty associated with seal hunting, the European Commission (the executive branch of the EU) banned the import of seal products in 2009.¹²¹ Seal hunting is an integral part of Inuit culture and an important source of food for them, with the sale of seal pelts also contributing much-needed income. However, seal hunting is also conducted on a much larger scale by non-Inuit hunters in Atlantic Canada, with the non-Inuit hunt accounting for more than 95 per cent of Canada’s seal product exports. To be fair, the European Commission did include an exemption for “seal products which result from hunts traditionally conducted by Inuit and other indigenous communities and which contribute to their subsistence.”¹²² However, somewhat counter-intuitively, the impact of the ban has been to destroy the market for seal products within the EU for non-Inuit and Inuit hunters alike.

The European Commission’s introduction of the import ban was poorly timed, for it came just as the Arctic Council member states were considering the EU’s application for permanent observer status. The Canadian government, at the encouragement of Inuit organizations and the Nunavut government, used the veto that is inherent in consensus decision making to block consideration of the application.¹²³ Then, in 2011, the Arctic Council adopted criteria for determining the “general suitability” of an applicant for observer status that include “the extent to which observers . . . [r]espect the values, interests, culture and traditions of Arctic indigenous peoples and other Arctic inhabitants.”¹²⁴ The adoption of the criteria could make it easier for Canada to justify blocking applications from the EU in the future, though ultimately the decision to exclude or admit will be based on political considerations rather than the (deliberately) ambiguous standards.

However, a regional organization gains rather than loses by involving powerful non-regional actors as observers, which is why Canada and the United States have been accorded observer status at the Council of Europe. Moreover, the Arctic Council needs the co-operation and support of the European Union if it is to be successful in protecting and managing Arctic Ocean fisheries, as well as a host of other efforts.

As for China, the rising superpower is fully aware of the enormous potential for offshore oil and natural gas development in the Arctic, which holds at least 20 per cent of the world’s undiscovered reserves. But it also knows that most of that oil and gas is in the sedimentary rocks of the continental shelves, and that under the law of the sea, coastal countries have exclusive rights to any natural resource within 200 nautical miles of their shores. Coastal states may also have jurisdiction over seabed resources even

Seal hunting is an integral part of Inuit culture and an important source of food for them, with the sale of seal pelts also contributing much needed income

122 Ibid.

123 “Canada against EU entry to Arctic Council because of seal trade ban,” CBC News, 29 April 2009, available at <http://www.cbc.ca/news/world/story/2009/04/29/cda-eu-arctic-seal.html>.

124 See “Observers,” at <http://www.arctic-council.org/index.php/en/about-us/partners-links>.

further out – if they can demonstrate scientifically that the shape and geology of the ocean floor constitute a “natural prolongation” of the continental shelf. China does not contest these rights, because it relies on exactly the same rules to support its claims in the East China Sea.

Nor is there any need for China to challenge the claims of the Arctic countries. Offshore oil and gas is expensive to find, extract and transport, especially in an extremely remote and often inhospitable region. To access these riches, Arctic countries will need strong markets and vast amounts of capital, both of which China is well positioned to provide. As for Arctic Ocean fisheries, China already works well with several regional fisheries organizations – in return for being allotted science-based quotas.

China’s law-abiding approach to the Arctic has, however, been shaken by the postponement of its application for permanent observer status at the Arctic Council. Unfortunately, the Chinese request came at the same time as the EU request and was collaterally suspended. Then, in 2011, when the Arctic Council adopted new criteria for permanent observers, it included the condition that they recognize “the Arctic States’ right to administer the Arctic Ocean under the Convention of the Law of the Sea.”¹²⁵ China will likely never accept this condition, which as currently worded implies that Arctic states have the right to administer the *entire* Arctic Ocean. In actual fact, China and other non-Arctic countries are fully entitled to navigate freely beyond 12 miles from shore, to fish beyond 200 miles from shore, and to exploit seabed resources that lie beyond the continental shelf.

China’s law-abiding approach has... been shaken by the postponement of its application for permanent observer status...

The Arctic Council states made a mistake by failing to acknowledge explicitly that their own rights, while extensive, are not unlimited. As it stands, they could hardly have devised a better strategy for stoking Chinese fears about *their* intentions in the North.

China is respecting international law and has legitimate interests in the Arctic. Its request for permanent observer status should be granted forthwith – and Canada should make this a priority of its chairmanship of the Arctic Council.

Recommendations

This report focuses on making ambitious recommendations of a substantive rather than procedural nature, since numerous recommendations of the second kind have already been made elsewhere.

RECOMMENDATION 1

Canada should persuade the Arctic Council to play a lead role in the establishment of an Arctic Ocean Fisheries Organization that is open to any interested non-Arctic states, including the European Union and China.

RECOMMENDATION 2

Canada should persuade the Arctic Council to negotiate an Arctic-wide treaty on oil spill *prevention* (i.e., not just preparedness and response) that forces companies to internalize the full risks and costs of offshore drilling in the region.

¹²⁵ See “Observers,” at <http://www.arctic-council.org/index.php/en/about-us/partners-links>.

RECOMMENDATION 3

The new treaty on oil spill prevention should follow the best practice displayed by the United States, Norway and Greenland – and require a same-season relief well capability at all times.

RECOMMENDATION 4

The new treaty on oil spill prevention should address the issue of liability and compensation for pollution caused by offshore drilling, either by raising liability caps substantially or by eliminating them altogether.

RECOMMENDATION 5

Canada should begin addressing the issue of Arctic haze by ratifying the Gothenburg Protocol to Abate Acidification, Eutrophication and Ground-level Ozone, as all the other Arctic countries except Russia and Iceland have done.

RECOMMENDATION 6

Canada should maintain its essential contribution to research and monitoring of Arctic haze by reversing the decision to close the Polar Environment Atmospheric Research Laboratory (PEARL) at Eureka, Nunavut.

RECOMMENDATION 7

Canada should take the lead in negotiating a treaty on Arctic haze within the framework of the Arctic Council, reiterating the obligations of the Gothenburg Protocol in the Arctic context and adding to its substantive reach.

RECOMMENDATION 8

Canada should encourage the United States and other Arctic countries to revisit their decision not to negotiate a treaty on black carbon and other short-lived climate pollutants.

RECOMMENDATION 9

Canada should persuade the Arctic Council to drop the now-dated constraint, set out in the 1996 Ottawa Declaration, against addressing issues of “military security.”

RECOMMENDATION 10

Canada should persuade the Arctic Council to play a lead role in the negotiation of a treaty to demilitarize the surface of the Central Arctic Ocean, as was proposed by Franklyn Griffiths three decades ago.

RECOMMENDATION 11

Canada should support the admission of the European Union and China as permanent observers at the Arctic Council.

About the Author

Michael Byers holds the Canada Research Chair in Global Politics and International Law at the University of British Columbia. He holds major research grants from ArcticNet and the Social Sciences and Humanities Research Council of Canada. Dr. Byers has been a Fellow of Jesus College, Oxford University, and a Professor of Law at Duke University. He has also taught as a visiting professor at the universities of Cape Town, Tel Aviv, and Novosibirsk. Dr. Byers is the author of *Who Owns the Arctic? Understanding Sovereignty Disputes in the North*.