

Olav Schram Stokke

# Environmental security in the Arctic

*The case for multilevel governance*

Can the rapid changes associated with a warmer Arctic give rise to international conflicts and undermine the environmental security of the region? What division of labour between Arctic institutions and broader regimes can provide governance of regional economic activities that is effective as well as legitimate? In this article, I argue that the conditions are favourable for adaptive and peaceful management of the Arctic: a dynamic governance framework is already in place and interstate jurisdictional rivalry is modest. Globally applicable regimes like those based on the law of the sea convention offer most of the support for Arctic environmental security but regional institutions too can play important roles in strengthening substantive regulations and enhancing their implementation, not least by influencing other institutions.

My argument, that the Arctic governance framework is strong and dynamic, contrasts with recent reports about an “ongoing race for natural resources”<sup>1</sup> in which the Arctic states are allegedly engaging in “unilateral

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<sup>1</sup> “Resolution of 9 October 2008 on Arctic governance, item 13,” European parliament, 2008, doc. P6\_TA(2008)0474, [www.europarl.europa.eu](http://www.europarl.europa.eu).

grabs” and approaching a “diplomatic gridlock.”<sup>2</sup> In the next section, I substantiate the political stability inherent in the firm jurisdictional bases that exist for adopting and enforcing binding regulation of regional economic activities, the advanced state of affairs regarding delimitation of Arctic maritime zones, and the clear articulation of cooperation in Arctic policy documents from major states in recent years. My view, that circumpolar institutions derive their regulatory potential primarily from their ability to affect other institutions, runs counter to recent claims by some scholars, practitioners, and civil-society organizations that a new and legally binding comprehensive treaty for protecting the Arctic environment is badly needed.<sup>3</sup> To back up my position, I show in the subsequent section why the eight member-states of the Arctic Council are either too few or too many for dealing effectively with the management challenges associated with greater commercial interest in the Arctic. The final section summarizes the argument and draws some political implications for Arctic governance, including the highly topical issue of non-Arctic state involvement in work under the council.

#### ENVIRONMENTAL SECURITY IN A CHANGING ARCTIC

The alarmist propositions that melting polar ice will rapidly make hitherto inaccessible natural resources and trading routes economically viable, in turn triggering latent jurisdictional issues and politically explosive situations, do not stand up to closer scrutiny. A warmer Arctic is equally likely to entail rougher weather conditions, greater density of moving ice, and thawing permafrost—all rendering Arctic operations more difficult and costly. Any increases in the commercial use of Arctic resources and sea routes will therefore occur gradually. The allocation among states of competence to regulate those activities is clear-cut and firmly based in international law, with unsettled boundaries managed cooperatively and the Arctic states emphasizing their commitments to legal rules that are strongly compatible with their self-interest. This section examines the economic, legal, and political factors that serve to uphold Arctic environmental security.

2 Scott G. Borgerson, “Arctic meltdown: The economic and security implications of global warming,” *Foreign Affairs* 87 (2008): 71, 73.

3 Timo Koivurova and Erik J. Molenaar, “International governance and regulation of the marine Arctic,” *World Wildlife Fund*, 2010; Kristin Noelle Casper, “Oil and gas development in the Arctic: Softening of ice demands hardening of international law,” *Natural Resources Journal* 49 (2009): 825–82. See also “Resolution of 9 October 2008 on Arctic governance, item 15,” European parliament.

Inherent in the concept of environmental security is the understanding that threats arising from environmental degradation and resource rivalry may prove severe enough to generate violent conflict. As Deudney shows, those promoting this concept have implied the need for strong international institutions with cross-sectoral mandates and the capacity to take extraordinary measures to mitigate such risks.<sup>4</sup> For instance, in 1988 Soviet Foreign Minister Eduard Shevardnadze proposed “a discussion on how to turn the United Nations environmental program into an environmental council capable of taking effective decisions to ensure ecological security.”<sup>5</sup> The same underlying worry—that rapid changes are stretching existing international regimes beyond their capacity—has led some observers and practitioners in Arctic affairs to call for urgent measures, like a freeze “of commercial fishing activities in the high seas of the Arctic Ocean,”<sup>6</sup> a “moratorium on certain new oil exploration activities in deep waters,”<sup>7</sup> and as noted, the creation of a new and comprehensive regional agreement for environmental protection.

Global warming undoubtedly affects the Arctic with particular force, with rebound effects further south. Temperature rises of more than twice the global average are influencing the heat exchange between land, air, and water. Recent atmospheric studies indicate a new connectivity between changing Arctic wind patterns and colder, snowier weather in southern locations.<sup>8</sup> Multiyear ice is diminishing at an alarming rate: the 2010 sea-

4 Daniel Deudney, “The case against linking environmental degradation and national security,” *Millennium* 19 (1990): 461-76.

5 Nico Schrijver, “International organization for environmental security,” *Bulletin of Peace Proposals* 20, no. 2 (1989): 118.

6 “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,” US congress, Washington, DC, 3 June 2008.

7 Terry Macalister, “UK winning fight to soften international scrutiny of offshore drilling,” *Guardian*, 23 December 2010, [www.guardian.co.uk](http://www.guardian.co.uk). Quoted by Macalister from a proposal, reportedly tabled by Germany, during a 2010 ministerial meeting under the OSPAR convention; on the response by Greenland Deputy Foreign Minister Inuuteq Holm Olsen, see Terry Macalister, “EU clashes with Greenland over international stewardship of Arctic,” *Guardian*, 15 October 2010, [www.guardian.co.uk](http://www.guardian.co.uk).

8 James E. Overland, Muyin Wang, and John Walsh, “Atmosphere,” in Jacqueline A. Richter-Menge and James E. Overland, eds., “Arctic report card 2010,” 10 November 2010, 8-15, [www.arctic.noaa.gov](http://www.arctic.noaa.gov).

ice minimum is the third lowest in 30 years, and the past four summer minimums are the lowest in satellite history.<sup>9</sup> These developments are amplified by a distinctly Arctic feedback mechanism: receding snow and ice exposes darker ocean surface, thereby enhancing heat absorption and accelerating further melting. Contributing to the Arctic amplification is also the weakening of the ocean-circulation regime known as the Beaufort gyre, which results in cold water masses increasingly flowing out of the Arctic into adjacent seas. The calving of a 290 km<sup>2</sup> segment of the Petermann glacier in northwest Greenland during the summer of 2010 amounted to nearly three times the average annual area loss of marine-terminating glaciers during the 2000s.<sup>10</sup> Within a few decades—considerably sooner than predicted in the Arctic climate impact assessment—these various processes are likely to transform the Arctic Ocean from an ice-covered sea to a seasonally open sea for the first time in more than 13 million years. Particularly threatened by these developments are ice-dependent species like ice algae, marine mammals, and certain sea birds. Changes in water temperatures and salinity will also impinge on the migratory patterns of boreal fish stocks. On land, significant movement of the permafrost boundary and of tree lines is already underway, entailing a gradual displacement of Arctic deserts by tundra, and of tundra by forests, with corresponding changes in the spatial distribution and diversity of species.<sup>11</sup> These rapid and interconnected changes explain why the Arctic is sometimes called “a global weather kitchen.” They will certainly influence the occurrence of marine and terrestrial living resources in the region and the physical conditions for shipping.

However, the relationship between these environmental changes and the commercial viability of Arctic economic activities is not straightforward. Whereas the receding ice will improve access to some onshore and offshore areas, other effects—like higher mobility of sea ice, more frequent calving, wilder weather, and greater coastal erosion—can be expected to create new operational challenges and risks for Arctic offshore transport and petroleum

9 Donald K. Perovich, Walter N. Meier, and James A. Maslanik, “Sea ice cover,” in *ibid.*, 16-20.

10 Jason Box, John Cappelen, David Decker, Xavier Fettweis, Thomas L. Mote, Marco Tedesco, Roderik Sylvester, and Willo van de Wal, “Greenland,” *ibid.*, 55-64.

11 *Arctic Climate Impact Assessment* (Cambridge: Cambridge University Press, 2005), 998.

operations.<sup>12</sup> Thawing permafrost already undermines existing onshore infrastructures for Arctic resource exploitation, including roads, buildings, and pipelines. Similarly, as the Arctic marine shipping assessment points out, it is only the multiyear ice that is expected to disappear: throughout this century, navigation through the northeast and the northwest passages will continue to struggle with sea ice except for a few months during summer.<sup>13</sup> This continuity has significant impact on the commercial viability of trans-Arctic shipping as compared to the longer routes through the Suez or Panama canals, because navigation in ice requires purpose-built vessels, greater energy use, higher insurance costs, and costly ice-breaker escort.<sup>14</sup> With regard to living resources, higher temperatures will increase the primary production of plankton, but growth conditions may deteriorate due to the light impairment induced by rougher weather. In the European segment of the Arctic, the zooplankton species *Calanus finmarchicus* is crucial to the food chain that links the primary production to commercial species like capelin and cod, and researchers fear that higher temperatures will favour less nutritious *Calanus* species currently found further south.<sup>15</sup>

Despite rapid environmental changes, therefore, continuity marks many of the factors that constrain trans-Arctic shipping, while the climate effects on the economics of resource use in the Arctic remain ambiguous. From the perspective of environmental security, the significance of such continuity is to give states and other actors more time to adapt and improve the governance system surrounding regional commercial activities.

Another stabilizer, in addition to the continuing relevance of operational constraints on economic activities, is the law of the sea convention, which is globally applicable and provides for differentiated competence to regulate ocean use by activity and distance from the coast.<sup>16</sup> This treaty has 162 parties as of August 2011 and, although the US has yet to ratify it, its major provisions codify international customary law and are binding on all states. It reflects

12 "Arctic oil and gas," Arctic monitoring and assessment program, Oslo, 2007, [www.amap.no](http://www.amap.no), 12.

13 "Arctic marine shipping assessment 2009 report," Arctic Council, 2009, [www.arctic-council.org](http://www.arctic-council.org), 25.

14 See also Lawson W. Brigham, "The fast-changing maritime Arctic," proceedings of the US Naval Institute, no. 410, 2010, 55-59.

15 Ellen Øseth, "NorACIA report on climate change in the Arctic: Consequences for life in the north," report series no. 136, Norwegian Polar Institute, Tromsø, 2010.

16 United Nations convention on the law of the sea, <http://untreaty.un.org>.

a political balance struck between coastal-state demands for control over natural resources and maritime-state requests for unrestricted navigation.<sup>17</sup> Coastal states have sovereignty over the territorial sea, which may extend 12 nautical miles from the baselines, but cannot deny foreign-vessel passage that is “innocent”—that does not involve certain specified activities like threats of force, deliberate pollution, and the like. Coastal-state regulatory leeway is more circumscribed in straits used for international navigation and in the exclusive economic zones. An exclusive economic zone may extend to 200 nautical miles and involves sovereign rights to regulate and exploit natural resources in the water masses, seabed, and subsoil. Where seabed and subsoil resources like mineral nodules, oil, and gas are concerned, those rights extend even further, throughout the natural prolongation of the coastal state’s land territory (the continental shelf), within certain overall limits. Finally, on the high seas beyond the exclusive economic zones, flag states retain their near-monopoly on the regulation of vessel operations but must cooperate with other states on the management of marine living resources. For all the activities expected to increase in the Arctic, therefore, the convention allocates regulatory competence in undisputed ways. The Arctic coastal states have been leading proponents and clear beneficiaries of the jurisdictional differentiation that emerged in this convention, and thus have little interest in undermining it.

The political stability inherent in a clear jurisdictional allocation is supported by the political determination among Arctic states to deal with potentially contentious issues cooperatively and peacefully. Here we can note how they have dealt with the maritime boundary delimitations that became necessary when coastal states obtained extended jurisdiction over their continental shelves and exclusive economic zones. A large proportion of these international boundaries are now settled, including all those in the European segment of the Arctic, and the remaining ones are managed cooperatively.

Denmark/Greenland’s western continental shelf boundary towards Canada up to 82° N was already agreed upon in 1973. A 1990 treaty drawing up the boundary between Russia and United States in the Bering and Chukchi seas is applied provisionally, pending ratification by the Russian duma. The main unsettled international boundary today is that between Canada and the US in the Beaufort Sea. In addition Russia, Denmark/Greenland, and

17 Olav Schram Stokke, “A legal regime for the Arctic? Interplay with the law of the sea convention,” *Marine Policy* 31 (2007): 402-08.

Canada may have overlapping central Arctic Ocean continental shelf claims associated with the Lomonosov ridge. This relatively high rate of boundary settlement is impressive, especially when we consider that the presence of ice has so far severely restricted the scope of marine activities in most of the region and hence reduced the practical need for delimitation.<sup>18</sup> Moreover, all Arctic coastal state-parties to the law of the sea convention have either submitted or are preparing geological and bathymetric documentation of claims to the commission on the limits of the continental shelf, in accordance with article 76 of the convention. No less important is the long-standing inclination of Arctic states to cooperate on resource management issues when boundaries are not finalized. Over 35 of the 40 years it took to negotiate the Barents Sea boundary, Norway and Russia operated and gradually deepened one of the most successful international shared-stock management regimes, which includes the world's biggest cod stock.<sup>19</sup> As early as 1977, Canada and the US developed a joint marine contingency plan in the contended Beaufort Sea, and have revised it regularly.<sup>20</sup> Since 2006, Canada and Denmark/Greenland have collaborated on the collection of seismic and bathymetric data in the area beyond their agreed boundary.<sup>21</sup> In a similar vein, Russia's Prime Minister Vladimir Putin recently noted that he had "no doubts at all that the existing issues in the Arctic, including those related to the continental shelf, can be resolved in a spirit of partnership through negotiations and on the basis of existing international law."<sup>22</sup> Both the high rate of Arctic boundary settlement and the manner in which Arctic states manage unsettled boundaries indicate strong determination to deal cooperatively with contested issues.

18 Robin Churchill, "Claims to maritime zones in the Arctic," in Alex G. Oude Elferink and Donald R. Rothwell, eds., *The Law of the Sea and Polar Maritime Delimitation* (The Hague: Martinus Nijhoff, 2001), 108.

19 Olav Schram Stokke, "Trade measures and the combat of IUU fishing: Institutional interplay and effective governance in the northeast Atlantic," *Marine Policy* 33 (2009).

20 Timo Koivurova, Erik Molenaar, and David VanderZwaag, "Canada, the EU and the Arctic Ocean governance: A tangled and shifting seascape and future directions," *Journal of Transnational Law and Policy* 18, no. 2 (2009), 248-98.

21 P. Whitney Lackenbauer, "From polar race to polar saga: An integrated strategy for Canada and the circumpolar world," Toronto, Canadian International Council, Toronto, 2009, 39.

22 Vladimir Putin, "Speech at at the international forum 'the Arctic: Territory of dialogue'," *RIA Novosti*, 23 September 2010, [www.arctic.ru](http://www.arctic.ru).

Recent Arctic policy documents prepared by the states of the region also indicate political determination to maintain regional stability. The US Arctic region policy strongly recommends that the senate ratify the law of the sea convention and emphasizes multilateral institutions and collaboration with other states in such key areas as environmental protection, safety at sea, and the improvement of maritime infrastructure.<sup>23</sup> International cooperation is prominent also in Russia's Arctic strategy, issued in 2008, with its emphasis on how agreements and coordination with other states can help ensure that regional natural resources under national jurisdiction and greater use of the northern sea route will benefit Russian society. According to this policy document, preserving the Arctic as a zone of peace and cooperation is among Russia's main interests in the Arctic, operationalized as "guaranteeing mutually beneficial bilateral and multilateral cooperation between the Russian Federation and other Arctic states on the basis of international treaties."<sup>24</sup> In a recent statement of its Arctic foreign policy, Canada makes clear that the "most important pillar...is the exercise of our sovereignty over the Far North," but quickly adds that it "will seek to resolve boundary issues in the Arctic region, in accordance with international law."<sup>25</sup> No less firm in its commitment to international rules and collaborative frameworks is Norway, whose recent high north strategy pledges to base "management of living marine resources...on the rights and duties set out in Law of the Sea," to "further develop people-to-people cooperation," and to "strengthen our cooperation with Russia."<sup>26</sup> Whether large or small, the states of the region have developed Arctic policy documents compatible with their highly cooperative "body language" regarding potentially conflictive issues like maritime boundary delimitation and transboundary resource management.

23 "National security presidential directive and homeland security presidential directive 66/HSPD 25," United States, 9 January 2009.

24 Russia, "The foundations of Russian Federation policy in the Arctic until 2020 and beyond," translation from Russian by M. Rusnak and I. Berman, issued 18 September 2008, *Journal of International Security Affairs* 18 (2010): 97-105; see also Roderick Kefferpütz, "On thin ice? (Mis)interpreting Russian policy in the high north", *CEPS Policy Briefs* no. 205, 2010.

25 "Statement on Canada's Arctic Foreign Policy: Exercising sovereignty and promoting Canada's northern strategy abroad," Department of Foreign Affairs and International Trade, 2010, [www.international.gc.ca](http://www.international.gc.ca).

26 "The Norwegian government's high north strategy," Ministry of Foreign Affairs, Oslo, 2006, 8-9; "Nye byggesteiner i nord: Neste trinn i Regjeringens nordområdestrategi," Norway, 2009, [www.regjeringen.no](http://www.regjeringen.no).

To summarize, then, the rapid environmental changes underway in the Arctic do not pose severe threats to the environmental security of the region. Shifts in resource accessibility are slow and ambiguous, providing adequate time to devise appropriate responses. Arctic states deal with their jurisdictional issues, including boundary delimitation, in compliance with international law, and their statements on Arctic policy emphasize legal commitments and international institutions. The political stability deriving from this pervasive determination to deal cooperatively with interdependent management problems is reinforced by a legal framework that allocates regulatory and enforcement jurisdiction over Arctic economic activities in a way that is differentiated, globally legitimate, and clearly in the interest of all Arctic coastal states.

#### DEPENDENCE ON MULTILEVEL GOVERNANCE

A globally applicable governance framework supported by all the Arctic states certainly enhances environmental security, but dynamism regarding substantive regulation of economic activities is also necessary. Unlike those who see the adoption of a region-wide, binding, and comprehensive treaty for environmental protection as the best way to ensure such dynamism, I maintain that effective means for dealing with such key issues as climate change, marine pollution from land-based sources, shipping, fisheries management, and petroleum activities must be either broader or narrower than the leading circumpolar institution, the Arctic Council.

Many of the rapid changes currently underway in the Arctic natural environment are due to climate change, but a relatively young soft-law institution like the Arctic Council, with its narrow membership, can play only a modest role in efforts to combat this essentially global problem. For nearly two decades now, mitigation of greenhouse gas emissions has been addressed under the UN framework convention on climate change and other international institutions. Contributions from the Arctic Council have been primarily of the fact-finding type, most saliently in the Arctic climate impact assessment.<sup>27</sup> An associated policy document contains some of the clearest statements subscribed to by the George W. Bush administration on the need for action on global warming. The climate impact report has enjoyed greater and more positive media attention in the US than do the more comprehensive assessment reports regularly produced by the UN-based intergovernmental

*27 Arctic Climate Impact Assessment.*

panel on climate change.<sup>28</sup> Part of the explanation is the leading role played by US scientists in the climate impact assessment work, as well as the fact that the climate impact report singled out the indigenous peoples of Alaska as being among those most severely and most immediately affected by global warming. Findings from the climate impact assessment factored into the work under the global climate regime and contributing to broader processes is also what the Arctic Council task force on “short-lived climate forcers” aspires to do. This task force was set up in 2009 and focuses on such drivers as black carbon, methane, and tropospheric ozone, whose combined climate impact is comparable to that of carbon dioxide but whose shorter lifetimes mean that successful mitigation will have more immediate effects on global warming. Like carbon dioxide, however, short-lived climate forcers originate predominantly in the northern mid-latitudes, so effective mitigation will necessitate action by non-Arctic states as well.<sup>29</sup> Arctic Council contributions are highly relevant to combating climate change, but mostly by generating knowledge that may fuel regulatory processes in broader institutions.

The problem of hazardous compounds cold-trapped and bio-accumulating in Arctic ecosystems and threatening the health of Arctic residents also requires action beyond the eight Arctic states, since much of the discharge occurs further south. When seeking international regulatory action in the late 1980s, therefore, Canada focused on broader processes, notably under the convention on long-range transported air pollution, which covers Europe and North America, and the UN environmental program, which provided the venue for negotiating the global 2001 Stockholm convention on persistent organic pollutants.<sup>30</sup> In both cases, findings from the council’s Arctic monitoring and assessment program were important, demonstrating that persistent organic pollutants and heavy metals have more dramatic human effects in the Arctic than those documented at lower

28 Håkon Alf Hoel, “Climate change,” in Olav Schram Stokke and Geir Hønneland, eds., *International Cooperation and Arctic Governance: Regime Effectiveness and Northern Region Building* (London, Routledge, 2007).

29 “Update on selected Issues of concern: Observations, short-lived climate forcers, Arctic carbon cycle, and predictive capability,” Arctic monitoring and assessment program, Oslo, 2009, 7, [www.amap.no](http://www.amap.no).

30 Henrik Selin, “Towards international chemical safety: Taking action on persistent organic pollutants,” department of water and environmental studies, Linköping University, 2000, 133.

latitudes.<sup>31</sup> Those substances accumulate in the fatty tissue and blood of some species, including marine mammals and sea birds, central to the diet of Arctic indigenous residents.<sup>32</sup> Several distinctive features of the Arctic Council, especially the wide recognition of its specialization in collaborative knowledge building and its long-standing emphasis on indigenous concerns, combined to give saliency to these reports, but—as with climate change—the region’s vulnerability to hazardous substances requires action under regimes with broader membership.<sup>33</sup>

Regulatory advances in international regimes that involve non-Arctic states are necessary also to deal effectively with the challenges stemming from the expansion of Arctic maritime transport. The law of the sea convention sets maximum standards concerning what states may request of a vessel flagged by another state—and those regulatory ceilings are lower the further away from the coastline a vessel operates. In ports and internal waters, coastal states have the same monopoly on regulation and rule enforcement as they do on land, and also in the territorial sea they may “adopt laws and regulations for the prevention, reduction and control of marine pollution from foreign vessels” as long as they do not impede innocent passage. In the exclusive economic zones, however, coastal states can unilaterally only set rules “conforming to and giving effect to generally accepted international rules and standards established through the ‘competent international organization’”—meaning the International Maritime Organization, a specialized agency under the UN. Should the coastal state consider those rules and standards inadequate for certain sensitive areas, it must seek the organization’s approval even for relatively modest interventions like compulsory pilotage or requirements to use particular sea lanes to reduce the risks of grounding or collision. Further, it “shall not require foreign vessels to observe design, construction, manning or equipment standards other than generally accepted international rules and standards.” When, in the 1990s, states proposed negotiating a polar code specifying and harmonizing construction, design, equipment, and other requirements for vessel operations in partly

31 Olav Schram Stokke, “Protecting the Arctic environment: The interplay of global and regional regimes,” *Yearbook of Polar Law* 1 (2009): 349-70.

32 Eric Dewailly and Christopher Furgal, “POPs, the environment, and public health,” in D. L. Downie and T. Fenge, eds., *Northern Lights Against POPs: Combating Toxic Threats in the Arctic* (Montreal & Kingston: McGill-Queen’s University Press, 2003), 3-21.

33 Peter Stenlund, “Lessons in regional cooperation from the Arctic,” *Ocean and Coastal Management* 45 (2002): 837.

ice-covered waters, they focused on the International Marine Organization.<sup>34</sup> In 2002, the organization adopted the nonmandatory guidelines for ships operating in Arctic ice-covered waters,<sup>35</sup> which it revised in 2009 along with a decision to commence work on a mandatory code that is intended to be complete in 2012.<sup>36</sup> Elevation of the voluntary polar guidelines to mandatory status is among the recommendations of the Arctic Council's arctic marine shipping assessment.<sup>37</sup> As with climate and toxics issues, therefore, Arctic institutions certainly have a role to play when it comes to vessel construction and equipment rules, but only in conjunction with broader regimes.

With regard to governance of Arctic fisheries and petroleum resources, in contrast, the circumpolar institutions are eclipsed not by broader regimes but by narrower ones. Conservation and use of fisheries resources are among the issues where the law of the sea convention encourages regional management regimes (articles 63–64 and 116–119), but “regionality” here refers to the set of states engaged in harvesting the same stock, based either on zonal attachment or historical catches. For stocks straddling the high seas and coastal-state zones, parties to the 1995 UN fish stocks agreement may not legally allow their fishers to operate in an area regulated by a regional regime without joining or cooperating with it.<sup>38</sup> However, a stock that gradually changes its migratory pattern due to temperature changes and becomes increasingly available in Arctic waters is unlikely to be harvested by all Arctic states. Moreover, zonal attachment or historical catches might imply that certain non-Arctic states have legitimate interests in the stock. Non-Arctic state membership characterizes the North East Atlantic Fisheries Commission, which has regulatory competence with respect to high-seas areas in the European segment of the Arctic Ocean. In the Arctic Ocean, the

34 Lawson W. Brigham, “The emerging international polar navigation code: Bi-polar relevance?” in Davor Vidas, ed., *Protecting the Polar Marine Environment: Law and Policy for Pollution Prevention* (Cambridge: Cambridge University Press, 2000), 221-43.

35 Øystein Jensen, “Arctic shipping guidelines: Towards a legal regime for navigation safety and environmental protection?” *Polar Record* 44 (2008): 107-14.

36 Heike Deggim, “International requirements for ships operating in polar waters,” International Maritime Organization, London, 2009, 7.

37 “Arctic marine shipping assessment 2009 report.”

38 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, article 8, United Nations, <http://treaties.un.org>.

operation of regional fisheries regimes will be necessary, but probably not a circumpolar regime.

For petroleum, as well, international law supports a regional approach, but again, the Arctic eight are not the most promising grouping to achieve regulatory progress. According to the law of the sea convention, in adopting laws and regulations to prevent, reduce, and control pollution from sea-bed activities under national jurisdiction, states “shall endeavour to harmonize their policies in this connection at the appropriate regional level” (article 207). Despite this encouragement, the Arctic Council has made no attempts to create rules that are more ambitious or exercise greater normative pull than those already provided by broader international forums. The soft-law standards contained in its Arctic offshore oil and gas guidelines, reviewed and updated in 2009, are derived from and invoke existing and legally binding instruments, including the law of the sea convention, various agreements drawn up under the International Maritime Organization, and regional treaties.<sup>39</sup> One reason for such non-assertiveness on the part of the Arctic Council is that vulnerability to oil-spill damage is primarily subregional rather than circumpolar. Moreover, the five Arctic coastal states have few incentives for negotiating constraint on their exercise of sovereignty concerning a sector of strategic significance within a framework that includes non-coastal states as well. Third, there is in the European segment of the Arctic an existing institution that covers also non-Arctic areas and is already engaged in rule-making: the regime based on the 1992 OSPAR convention for the protection of the marine environment of the north-east Atlantic has passed several legally binding decisions under an offshore oil and gas industry strategy pertaining to best available technology requirements and discharges from platforms. Russia is currently the only state bordering on the northeast Atlantic that is not a signatory to that agreement. As with fisheries, various subregional institutions are probably better placed than the Arctic Council to provide venues for negotiating stronger international commitments regarding coastal-state rules on petroleum activities on their continental shelves.

In all the sectors likely to see rising economic activity, therefore, the Arctic Council is either too big or too small to play a decisive regulatory role. In such important areas as climate change, hazardous compounds,

39 Kristine Offerdal, “Oil, gas and the Arctic environment,” in Stokke and Hønneland, *International Cooperation and Arctic Governance*; Stokke, “Protecting the Arctic environment,” 349-70.

and maritime transport, broader institutions are more important because much of the activity that gives rise to environmental challenges either occurs outside the region or falls under the jurisdiction of non-Arctic states. Narrower institutions, whether coastal states or international arrangement involving subsets of them, are better placed for effectively managing the rise of regional offshore petroleum activities or the greater availability of commercial fish stocks.

#### CONCLUSIONS AND POLICY IMPLICATIONS

Environmental security remains satisfactory in the Arctic despite rapid environmental changes and increasing economic activities. The Arctic states have relatively few unsettled maritime boundary issues, manage the remaining ones in a cooperative manner, and articulate their Arctic aspirations in policy documents that emphasize the rule of law and the need for international cooperation. Moreover, there already exists a legally binding, globally legitimate legal framework governing those economic uses of the region that are likely to expand in the years ahead, one capable of responding flexibly to the new challenges emanating from greater economic activity. Those adequate responses must involve other institutions besides regional ones like the Arctic Council because many of the regional environmental problems originate outside the Arctic or involve actors beyond the jurisdictional reach of the states of the region.

The fact that Arctic environmental challenges cannot be addressed without significant contributions from broader or global institutions brings us to the question of how those operating the Arctic Council should deal with the interest shown by some non-Arctic states in obtaining permanent observer status with the council. Already, assessment reports in areas such as shipping, toxics, and climate change have raised the saliency of the Arctic dimension of broader problems and helped mobilize political energy among states outside the region. Wider involvement of non-Arctic states would expand the set of states and actors with knowledge about and ownership in Arctic Council assessments and recommendations, thereby enhancing the council's ability to act as a catalyst for regulatory advances in broader institutions with relevant competence. Such regulatory dynamism in broader regimes is indeed necessary for the effectiveness of the overall governance system and for maintaining environmental security in the Arctic.