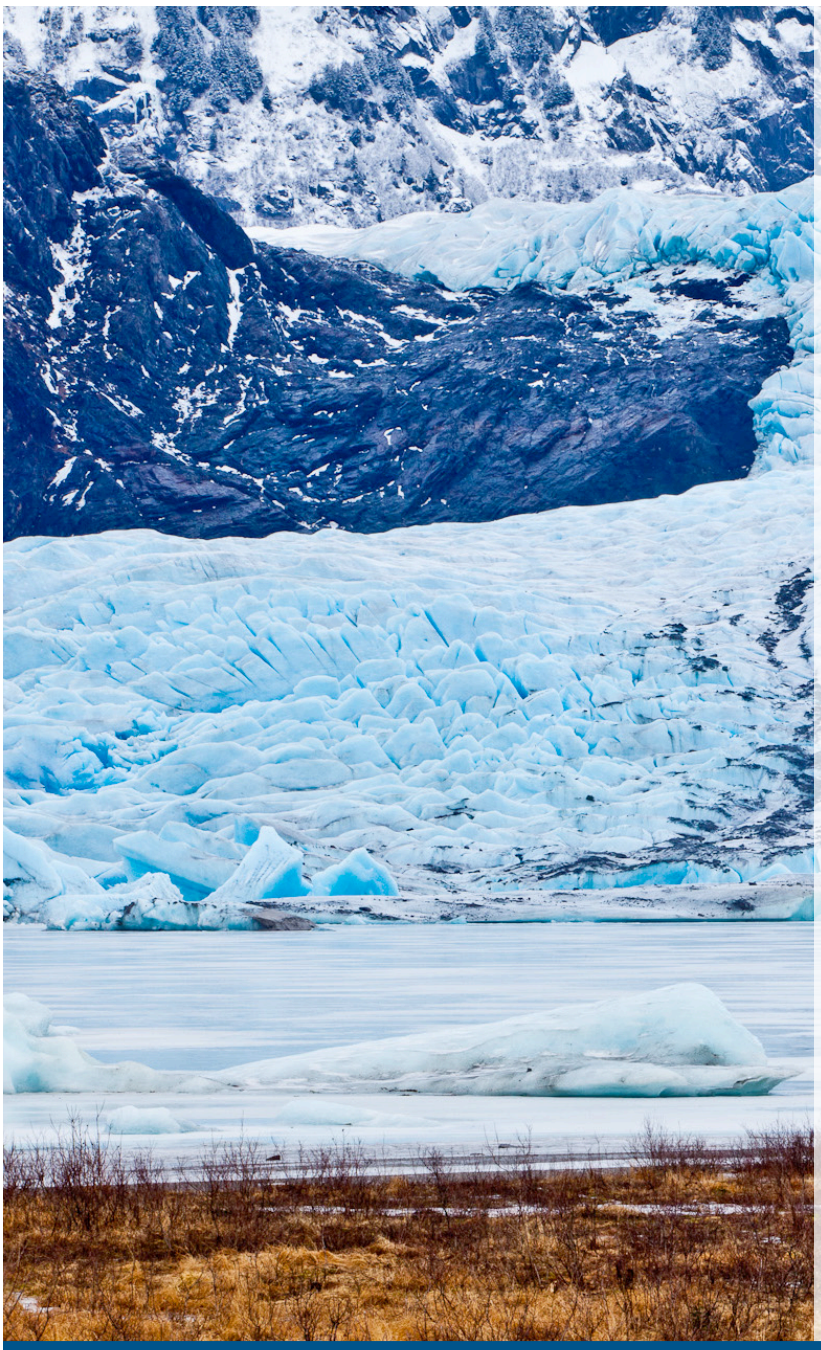

A Euro-Atlantic Action Plan for Cooperation and Enhanced Arctic Security

CONFERENCE REPORT AND RECOMMENDATIONS TO THE ARCTIC COUNCIL AND INTERESTED PARTIES

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EXECUTIVE SUMMARY AND KEY RECOMMENDATIONS TO THE ARCTIC COUNCIL

The Arctic is a region where North America, Europe and Russia, working with indigenous peoples and interested non-Arctic states, have taken initial steps to make the Arctic a zone of peace, cooperation and stable, sustainable development. The Arctic Council remains the primary structure for Arctic-wide governance and policy formulation. Key to achieving greater and more effective cooperation is now to build, strengthen and sustain greater involvement of interested non-Arctic states, indigenous peoples organizations, public/private partnerships, and industries active in the Arctic. The Arctic has become a venue that demonstrates the advantages and benefits to be derived from inclusive cooperation among Russia, Western Europe's Arctic states, and North America.

Because of the accelerating pace of global warming and rapidly receding sea ice, linked with accelerating economic and social change in the region, Arctic states and a growing number of non-Arctic states and organizations are showing increased interest in and attention to a growing range of northern policy issues. These stakeholders recognize that Arctic environmental and security challenges affect all of them and require cooperation at multiple levels. The Arctic coastal states are pursuing claims for extending their territorial shelf and are acting to delineate and protect their borders. Differences are being adjudicated under the procedures of the U.N. Convention on the Law of the Sea (UNCLOS) and through diplomatic channels. Cooperation is the norm.

The prospects for resolving issues in the region by military force are presently slight; on the contrary, Arctic nations today accept that cooperation represents the most effective and efficient means to build sustainable, mutual security in the Arctic on issues such as oil spill preparedness and prevention; environmental pollution and food security; shipping regulation and maritime safety, especially cruise ship operations; threats to individual and community health and the cultural well-being of indigenous peoples; and natural disasters. The Arctic Council should strengthen this trend by encouraging cooperation between the respective militaries and coast guards in areas such as search and rescue and emergency-response joint

training exercises; development of a common operating picture to increase situational awareness in the Arctic; and establishment of an Arctic Maritime Forum to share maritime information to further stability and shipping safety.

The Arctic is rich in energy and other natural resources, which are becoming more accessible with warming conditions and eventually will be developed. But access and development will be expensive, and world prices will be a major factor in determining the pace of energy development. The sharp increase in the world supply of gas is already producing uncertainty for some Arctic energy development projects. Arctic shipping is increasing as seasonal sea ice declines, but will remain largely destinational for the transport of Arctic energy and mineral resources. Economic considerations stemming from difficult sea ice conditions and the unpredictability of shipping schedules under Arctic conditions will severely limit the growth of trans-Arctic container shipping.

Arctic governance as provided by the Arctic Council, including its rotating chairmanship, working groups, the Permanent Participants (indigenous peoples organizations) and a newly established permanent secretariat, has proven sufficiently flexible to handle effectively an evolving agenda of Arctic issues. The Arctic Council serves as a valuable forum for the Arctic states, which themselves primarily define the norms and rules of the Arctic governance regime. There would be little if any benefit to Arctic governance in making the Council a formal international organization at this time, nor is there a perceived need for a new, comprehensive Arctic treaty.

Arctic Council member states, Permanent Participants, and observers should, however, continue to strengthen Council structures and improve outreach to increase international awareness of the importance of the Arctic region to global security and environment.

Key Recommendations for the Arctic Council:

- Support the urgent adoption of a mandatory Polar Code through the International Maritime Organization (IMO) for ships operating in polar waters along with regulations for the safe operation of cruise ships in the Arctic.

- Establish a dialog with the armed forces and coast guards of the Arctic states to increase the safety of operations in Arctic waters and encourage confidence-building mechanisms.
- Establish an Arctic economic or business forum, which would promote public-private partnerships, foster job creation, and facilitate resolution of Arctic issues involving private sector interests.
- Develop the capacity to foster relationships between industry and communities, including identifying public-private partnerships that promote sustainable communities and best practices.
- Develop a structure to collect Arctic-specific and international data dealing with oil spill preparedness, prevention, and remediation and establish a clearinghouse for information sharing and publication of public and private data.
- Consider the creation of one or more additional mechanisms, beyond Arctic Council observer status, for engaging with non-Arctic states and other interested entities that have interests in specific Arctic issues. Conduct periodic reviews of the structure, activities and charters of Council working groups.
- Strengthen the capacity of Arctic indigenous peoples to work through their Permanent Participant representatives in engaging with the Arctic Council.
- Support capacity for more indigenous peoples to become leaders in health care delivery and research to develop a health care system that is consonant with their culture and respects self-determination.
- Improve communication efforts and outreach, including to international fora, to enhance regional and global understanding of the importance of the Arctic and of the Arctic Council and its work.

REPORT: EURO-ATLANTIC ACTION PLAN FOR COOPERATION AND ENHANCED ARCTIC SECURITY

INTRODUCTION

The forum on "Euro-Atlantic Action Plan for Cooperation and Enhanced Arctic Security," held February 11–12, 2013, was convened by the University of the Arctic Institute for Applied Circumpolar Policy (IACP), which is co-chaired by Dartmouth College's Institute of Arctic Studies at the Dickey Center for International Understanding and by the University of Alaska Fairbanks, in partnership with the Russia and Eurasia Program of the Carnegie Endowment for International Peace and its Euro-Atlantic Security Initiative.

The 2013 conference was the fifth convened by the IACP since its inception in 2008, and was designed to serve as a follow-up to the IACP's first conference, "Arctic Climate Change and Security." A complete list of IACP conferences, links to workshop reports, and applicable citations can be found at the end of this report. Conference participants examined the many new and evolving Arctic security issues that have emerged during the intervening years. Participants were also asked to develop actionable recommendations for the Arctic Council, governments and organizations, and to discuss the creation of an ongoing Virtual Arctic Forum, which would continue the work of the conference.

Over forty scientists, academics, policy experts, military officials, representatives of indigenous peoples and viewpoints, and private-sector leaders in shipping and energy held wide-ranging, invitation-only discussions on five subject areas: Arctic health and societal issues; energy; commercial shipping; the security dimension; and governance. Representatives from all eight Arctic Council member states (Canada, Denmark/Greenland, Finland, Iceland, Norway, Russia, Sweden and the United States) attended the forum, which opened with remarks by Alaska senators Lisa Murkowski (R) and Mark Begich (D). Both senators emphasized the importance of the Arctic to U.S. and global interests. They urged the U.S. government and public to become better informed about the Arctic and to recognize that, as an Arctic nation, the U.S. can and should play a more prominent leadership role in the region. They also suggested that the U.S.

should appoint an Arctic ambassador to better signal the importance of the Arctic to U.S. foreign policy.

This report records discussion and recommendations from each of the five panels and reflects our best attempt to capture the dialog and major points of agreement, but the final report is the sole responsibility of the authors. This conference summary is not intended as an exhaustive and fully documented analysis of Arctic-associated security issues. Rather, we provide a synopsis of the most pressing policy issues identified by a diverse and highly qualified set of experts. This summary is followed by policy recommendations agreed upon by the panels to address the accelerated rate of environmental, social and political change in the Arctic, and it provides the Arctic Council and other Arctic and international fora with expert opinion on issues of critical importance to Arctic nations and peoples.

Opening statements by the organizers and hosts called attention to the significant changes in the Arctic since the 2008 IACP conference. The scientific evidence of climate change and global warming is now irrefutable, and the pace of global warming, sea ice melt, and permafrost thaw has accelerated; the “new“ Arctic and its abundant energy and natural resources are now, more than ever, exposed to development; policy-level interest in the Arctic has grown within the region and from the emergence of hopeful non-Arctic stakeholder nations and organizations; commercial and cruise shipping has increased; the Arctic Council has a permanent secretariat, with the first binding agreement on search and rescue in the Arctic concluded under its auspices; Arctic states have committed themselves to rely on the U.N. Convention on the Law of the Sea (UNCLOS), the Arctic Council, and diplomacy to resolve differences on boundaries and the limits of extended continental shelves; and Russia and Norway have resolved a long-standing dispute over their maritime boundary in the Barents Sea.

Unresolved issues and uncertainties, however, abound: a legally binding Polar Code for shipping has not yet been agreed upon; concerns are growing over environmental and safety issues stemming from energy exploration, development and transport; a poorly regulated cruise ship industry in the Arctic could lead to a shipping disaster; unsubstantiated press headlines warn of military buildups and a “new great game” in the Arctic; unresolved boundary issues and

lingering sovereignty questions regarding key Arctic waterways remain; the applications of key non-Arctic states to become observers in the Arctic Council are unresolved; the delivery of health care and mental health services for indigenous peoples is inadequate; more local community involvement in designing and carrying out research is desired; the discovery of new energy supplies outside the Arctic, especially natural gas, is impacting the economic feasibility and pace of key resource development projects in the region; and confidence-building steps are needed to increase security cooperation in the Arctic, including the use of military assets. Underlying these issues is the perceived need to improve Arctic governance and develop the requisite scientific knowledge, public-private partnerships, and agreements to develop and manage the Arctic in a peaceful, comprehensive, and sustainable manner while protecting the well-being of all Arctic peoples. The Arctic is a region where Russia, Europe, and North America, working with indigenous peoples and interested non-Arctic states, have taken initial steps to make the Arctic a peaceful and stable region where productive, sustainable development is achievable. The compelling issue now is how to build, strengthen, and sustain this cooperation—the key subject areas explored in the five conference panels.

PANEL 1. ARCTIC HEALTH AND SOCIETAL ISSUES

Arctic health challenges are multifaceted and complicated by the vastness of the region, the lack of infrastructure, and the influence of external factors often beyond local control. Several public health issues were highlighted: the importance of food security for personal health and cultural vitality; the high rates of mental health disorders, alcoholism and suicide (especially among young people); and exposure to environmental contaminants.

With global warming and globalization as significant drivers, diets in the Arctic are shifting away from local traditional foods such as animals, fish, and plants to expensive, imported, processed foods, which bring with them "Western diseases" such as obesity, vascular disease, and diabetes. Traditional foods increasingly run the risk of contamination by heavy metals and organic pollutants, and indigenous people are left unsure about what foods are safe to eat and by whom. Threats to traditional food sources affect traditional ways of life, and subsistence activities suffer. As a consequence, mental health and physical well-being are seriously affected, especially for youth, and as a result, individuals and communities no longer feel in control of their lives and their destinies. Another growing concern is the impact extractive industries may have on the Arctic environment; industry will utilize large amounts of water and land, affect air quality, and can negatively impact not only the local population but, through emissions, others in the region and beyond. It was emphasized that much of the pollution affecting food security and health originates from outside the Arctic and is transported there by ocean and air. And with greater permafrost thaw, increasing rates of methane and carbon dioxide are being released into the atmosphere, where they add to future global warming. The Arctic is highly connected to the global climate and economic systems, and both have direct impact on Arctic health.

Conference participants acknowledged that Western-type health care delivery in the Arctic is very expensive and may not be sustainable. Further, such health care regimes focus on treating diseases rather than preventing them, and significantly, do not take into account either the socioeconomic sources of health problems or the perspectives and place-specific health goals of indigenous peoples. In short, effective health care delivery in the Arctic needs to build on

traditional knowledge; incorporate applicable, appropriate, and sustainable Western health care strategies and regimes; and focus efforts on strengthening and enabling further resilience of communities. To foster this outcome, research partnerships are critical and should be based on innovative models leading to co-research where bidirectional communication and co-education build trust and productive outcomes between medical researchers and the community.

Education and training and the use of regional capacity and expertise are essential elements in the improvement of health care and the development of a health care system that meets local and regional needs. In the West, a disproportionate fraction of health care expenditures is directed at a small segment of the population, mainly the elderly. This model is not well suited to the Arctic, where investments focused on education and building local capacity would be more effective. Such a focus would give due attention to proven and effective local medical practices, and insights from across the Arctic should be gathered in a repository and broadly shared. Medical education and student exchanges across the Arctic should be supported both to improve health care and increase mobility and knowledge sharing. A residence program in Greenland to increase the number of physicians who study there or return to practice there was cited as a possible model. It was agreed that local populations provide an invaluable contribution to the development of health care in the Arctic region, where the culturally sensitive problems of mental health and addiction demand effective delivery of services.

The links between climate change and health are becoming more evident. However, for many residents and communities, other factors may be more immediate. For example, large-scale resource development projects may lead to a major influx of outside workers, which can affect community life and services. Health-impact studies should be an important part of any social-impact assessment required for development projects in the North.

PANEL 2. ENERGY

The panel's members were unanimous in the view that the Arctic will be a major source for energy in the future, though new, unconventional sources, especially of gas, will affect the pace of development. The Arctic is rich in oil and gas; natural gas reserves are expected to have their highest concentration in the offshore regions of Russia's Arctic. Substantial oil discoveries are expected in the Canada/Alaska region and may be present along Greenland's coasts. The actual role of Arctic energy in the world energy picture is, nevertheless, somewhat unclear. Major Arctic resources have been identified, but in the case of offshore deposits, their commercial production will be costly. The further offshore the project, the more complex and expensive it becomes. This means global energy prices and the size of a given field will determine development potential and timing. What is certain, however, is that marine operations in the Arctic environment present serious challenges, and because exploration and development are restricted by season, Arctic projects will require longer lead times than in most other locations, regularly taking up to 15–20 years from discovery to production.

Despite these difficult considerations, one important factor that ultimately will affect the pathway for Arctic oil development is accessibility. Most other oil deposits and reserves today are in OPEC countries or have already been leased. The Arctic is a place where international oil companies can play major roles in future development. But as discussed above, price will affect both the attractiveness of the region and the pace of development. A price of U.S. $100 per barrel of oil may be the minimum needed for companies to make a profit. Recent increases in global energy supply (U.S. shale gas and tight oil) and relatively low demand under current global economic conditions make it difficult for industry to project future returns on Arctic projects.

There was, nonetheless, consensus that Arctic energy resources will be developed. The challenge will be to do it in an environmentally sensitive and sustainable way and without harming indigenous peoples and local economies.

On the plus side, there are no major political issues or claims to complicate the development of the resources. There are no major conflicts among the coastal states over ownership of these

resources; most energy and mineral deposits identified as commercially viable are located within the 200-mile Exclusive Economic Zones of the Arctic coastal states or on land and are thus undisputed; boundary issues that do exist are being dealt with through negotiations and procedures established under UNCLOS.

The panelists found that today the main challenges linked to resource development are associated with the environment and health, and with broader questions of economic development and problems related to managing those issues effectively. The panel drew attention in particular to problems linked to oil spills under Arctic conditions and the impact of exploration, economic development, and transportation (air pollution and black carbon emissions).

Environmental risks from oil spills lend themselves to resolution using public-private cooperation to develop the specialized technology and infrastructure needed to deal with difficult Arctic conditions where remote locations, ice cover and extreme weather present problems not seen in other energy production regions. Given the high costs of operating in the Arctic, cooperation between the private sector and other stakeholders (governments, indigenous peoples' organizations and NGOs) is essential to reduce costs and improve capabilities, preparedness, and emergency procedures. Participants concluded that economically viable and sustainable development of resources in Arctic conditions demands agreed-upon standards and interoperability together with development of an integrated oil spill response regime and steps to determine accident liability. Energy development and environmental policy need to go hand in hand to assure sustainable development.

Oil spills are a global issue, and there is a growing need for global standards and technology development. At the same time, it will be essential that Arctic-specific policies for spills are framed, outlined, and integrated in action plans. Leadership in the development of scientific assessments of energy production practices for the region is an important task for the Arctic Council. There are special techniques and procedures that pertain only to the Arctic environment, with each field having its own character; it might be best to develop drilling and environmental protection requirements and procedures by site and basin.

Primary responsibility for dealing with these issues rests with those same coastal states hosting the development. At the same time, the Arctic Council is taking on a vital role. It is completing an agreement on oil spill preparedness and response for signature at the May 2013 Ministerial in Kiruna, Sweden, and panelists urged that the Council should make it a priority to spur cooperation in developing standards and guidelines as well as in addressing liability considerations. It was proposed that the best course could be to establish international standards but leave implementation largely to the companies based in the locale. Industry-developed, performance-based standards might provide more immediate and effective regulatory oversight than prescriptive government policies. This could also set the stage for more cooperation among companies. The Macondo Gulf of Mexico oil spill demonstrates the need for companies to cooperate on safety and oil spill technology, and to develop integrated oil spill response capability in the Arctic.

Managing the economic dimension of development of the energy resources will present significant human, governmental, and political challenges. Moreover, jobs from these projects will not be plentiful, so there is a need to develop other types of commercial activity in the Arctic that are sustainable and under local control. An important and difficult conversation should be focused on how energy income could be distributed more widely to include communities outside the immediate zone of economic activity. It was agreed the Arctic Council should develop working groups on commerce and education and welcome the formation of an Arctic “chamber of commerce” or business council to facilitate job creation and sustainable economic development.

There is a high priority for Western Arctic nations to engage and partner with Russia on energy development. Russia has the dominant position in Arctic offshore hydrocarbon resources, but prospects for full-scale exploration and development are clouded. Russia has limited offshore experience, and there have been significant difficulties in attracting foreign investment, including taxes, laws, and bureaucratic procedures. Russia would benefit from international cooperation in developing Arctic resources and oil spill containment, safety, and environmental protection procedures. The Russian firm Rosneft has signed three Arctic exploration joint

ventures with Western firms, but it is unclear how high a priority Arctic development now is for Russia compared to competition for funds and management attention from “advanced conventional” sources onshore. Price/demand factors are critical as shown by the postponement of the Shtokman gas project due to competition from shale gas development. The Yamal LNG project, however, seems to be proceeding to its startup date in 2016, with the LNG being shipped via the Northern Sea Route to Asia as well as Europe during summer navigation seasons.

The future of Arctic energy development must also be viewed as a political issue. The lack of a long-term U.S. strategic energy policy and clear commitments on priorities and investments for energy production by sector (renewables) creates an uncertain energy development future for the Arctic. It was noted among the energy scenarios for the Arctic that leaving the oil and gas reserves in place and slowing development should be considered as an alternative while policy questions about environment, local economies, and health are resolved.

PANEL 3. COMMERCIAL SHIPPING

The accelerating loss of summer sea ice has created considerable speculation and public-private interest in the development of more destinational and transit (trans-Arctic) shipping in the Arctic. It has also brought the Arctic the new issue of tourism on a large scale in summer. Globalization of the Arctic—the linkage of Arctic natural resources to global markets—has also been a major driver in bringing large tankers and bulk carriers into the Russian maritime Arctic and along the Northern Sea Route. The promise of a new Arctic transportation future must be balanced with the stark realities of shipping in the Arctic environment. Most of the Arctic Ocean is ice-covered for 9–10 months, and even in summer ice can accumulate in near-shore channels, presenting a hazard to non-ice-strengthened ships. In winter, icebreakers are needed to escort ships, making the economies of shipping in that region problematic. In these circumstances, safe, responsible Arctic shipping requires significant actions by authorities in coastal states as well as investment. Less than 10% of the Arctic waters are charted to international navigation standards, and there is little maritime infrastructure in the Arctic to service ships or respond to emergencies. Substantial work remains to develop minimally adequate procedures, training protocols, and shipping technology to prevent accidents. Above all there is growing urgency to put in place steps to deal with the threat of a human catastrophe presented by the growing presence of large cruise ships, which are not built for the Arctic and are operating in waters far from emergency services and land-based support. This problem is especially acute for Greenland.

Although shipping, including use of small ships, in the Arctic is not a new phenomenon and the International Maritime Organization (IMO) already regulates the shipping industry, there are no comprehensive and mandatory international regulations in the Arctic. Only national regulations such as those managed by Russia and Canada address Arctic conditions. Cruise ships are not covered by a common set of industry standards such as the code of conduct developed by International Association of Antarctic Tour Operators for tour operators in the Antarctic. The lack of a Polar Code leaves a major policy gap for ensuring safe shipping in the Arctic, and progress toward completion of the code has been slow. Some participants suggested that

separation of the environmental chapter from the Polar Code might lead to more rapid approval for sections dealing with construction and operation standards. Canada and the U.S., the succeeding chairs of the Arctic Council after Sweden, were urged to support completion of the Polar Code at the IMO as a top priority.

It was agreed that Arctic shipping must also be differentiated. Most shipping is destinational transport of energy and natural resources (mineral ores), which will be the key growth area. On the other hand, local shipping is essential to support isolated coastal communities. There must be more discussion originated by and with indigenous peoples on shipping issues, including developing shipping routes that do not negatively impact subsistence activities. The Council's Arctic Marine Shipping Assessment, released in 2009, addresses in its recommendations many of these critical issues regarding indigenous peoples and new Arctic marine uses.

The conference heard that transit shipping—using Arctic Ocean and coastal routes (the Northern Sea Route and Northwest Passage) to shorten established, global shipping routes—will not be significant in the growth of Arctic shipping. The Arctic routes are not conducive to large-scale container shipping. Fuel costs and reliability of delivery are important concerns to shippers, and the uncertainty of polar transit favors operations in more reliable waters even if longer transits are the result. The Northwest Passage (Canada) will likely never be an Arctic Panama Canal due to weather and floating ice. The Northern Sea Route (NSR), on the other hand, is already an important transportation system for Russia as it develops oil and gas production and related industrial activity along its Arctic Coast. The NSR has more economic potential than the Northwest Passage, but limited infrastructure and poor weather conditions make schedules unpredictable, all creating economic challenges. Russia's need for the development of the NSR as an extended summer passage to carry energy and natural resources for Russia's economic growth was emphasized. Russia can do this alone, but with Western cooperation and the use of international fora for planning, this could be accomplished better and more quickly.

New Arctic shipping policies will require close coordination between the private sector and public institutions, cooperation between Arctic research and shipping operations, and sharing

of information and technologies by companies and states. Shipping requires accessible, reliable, and affordable data products on ice conditions and weather from national organizations such as the Canadian Ice Service and the U.S. National Ice Center. The industry will also benefit from long-term, science-based initiatives such as the Sustained Arctic Observation Network to understand longer-term changes in climate and environmental conditions that impact it. The Arctic Council is urged to support strong scientific research and to initiate a dialog with the shipping industry. The U.S. National Science Foundation and other nations support ship-based research in the Arctic and are operating in waters not yet used by commercial vessels. The ship-based research community should be included in the larger dialog about shipping policy needs and information sharing. In turn, research agencies are encouraged to support research, workshops, and conferences that would contribute to making more informed and effective Arctic shipping policies.

PANEL 4. THE SECURITY DIMENSION

Despite recurrent articles in the press about Arctic resource wars and a new "cold" war in the North, there was clear agreement among conference participants that the Arctic is not now and need not be in the future a zone of conflict. On the contrary, participants believe that through careful management and development of strong practices and institutions promoting cooperation, the Arctic can remain a zone of peace and cooperation. Security is not solely a military issue, especially in the Arctic. In this unique region, security makes sense only if broadly defined to include the environment and human needs. There are nuclear weapons in the Arctic, but these have global security significance and have, thus far, not been a significant issue for Arctic communities. The Arctic is not a militarized zone, although small-scale military forces routinely operate in the Arctic. Some expressed the view that more conventional military and police forces and coast guards will be needed in the Arctic as the retreat of sea ice leads to more open borders and increased possibilities for illegal immigration or criminal activity. The panel found that limits on military and security resources available for Arctic duty are likely to continue, and that providing effective security in the region will continue to put a premium on cooperation among the Arctic states. Participants suggested that developing shared programs to deal with accident prevention and environmental protection can serve as effective military confidence building mechanisms (CBMs) between nations and as the means to build long-term productive patterns of cooperation. It was agreed that any buildup of security infrastructure and operations should be carried out in an open and transparent fashion, employing exchanges of information and joint activities to assure the maintenance of mutual confidence.

The panel also noted that the path to greater Arctic security links military, private sector, and environmental interests. The Arctic Council's founding declaration specifically excludes consideration of military security issues, but security issues must be discussed somewhere, and it is clear these issues impact areas of direct concern to the Council. For example, the cleanup of environmental waste and radioactive materials from Cold War military sites is important to the health of Arctic peoples and ecosystems. The conference urged the Arctic states to consider whether the Arctic Council's mandate should be revised or whether another forum is needed to

address the broader security dimension. While NATO needs to be aware of changes in the Arctic, the consensus was that an alliance is not needed to deal with Arctic issues. Rather, it should be up to the Arctic states to develop the necessary cooperation, taking into account the interests of non-Arctic states.

What then are the main security challenges? These include: unprotected borders and illegal immigration; search and rescue; environmental contamination and oil spills; and communications. There are no organized terrorist threats in the Arctic but there is concern about linkages between criminal elements involved in smuggling and government corruption. Organized crime has also moved into illegal fishing, including gaining fishing rights. In the Arctic Ocean, Norway, Russia and the U.S. are cooperating to prevent illegal cod fishing in the Barents Sea. There may also be a need for an international fishing agreement in the Central Arctic Ocean. It was argued that these seas should be closed to fishing until information on stocks and sustainable harvest quotas is developed.

Each Arctic state's military has a national security role but there is a need for constructive cooperation and CBMs outside that role. The military defense chiefs of the Arctic Council states met one year ago and agreed that the Arctic must be kept a zone of peace. They will meet again in June 2013. The military have a critical role in search and rescue and have a history of bilateral and multilateral operations. For example, the U.S. and Canada have signed the Tri-Command Framework for Arctic Cooperation, which also acts to strengthen U.S./Canada implementation of the binding Arctic Council Agreement on Cooperation in Aeronautical and Maritime Search and Rescue. Shared military assets; joint exercises and training; and information sharing on search and rescue, oil spills, and law enforcement are essential to maintaining the Arctic zone of peace. Regional models of cooperation such as the SUCBAS (Sea Surveillance Cooperation Baltic Sea), an agreement between the navies and coast guards of the Baltic States, are very promising. Icebreakers will be needed even as ice diminishes in the Arctic. There was agreement the U.S. must regenerate an ice-breaking fleet of appropriate number and capability, and opinions varied whether the acquisition strategy should be lease, buy or a combination of the two. The U.S. should develop promptly an icebreaker acquisition strategy.

Other possible areas for cooperation were discussed: a collective effort to chart the Arctic Ocean; development of new communications technologies to increase marine domain awareness, considering the scheme used in the Baltic as a starting point; and structuring infrastructure, communications and permanent cooperative facilities to support search and rescue and health emergency and disaster response. All of these are ripe for public-private-sector cooperation.

PANEL 5. GOVERNANCE

There was broad agreement among conference participants that the Arctic Council serves the needs of Arctic states and indigenous peoples well and that a new Arctic Treaty is neither necessary nor likely. Three pressing governance issues were identified: What are the main topics that must be addressed? How can Arctic institutions be strengthened? And how can Arctic states best relate to non-Arctic states and non-state actors such as industry and NGOs?

Much is already being done in all three areas. The Arctic states have agreed that the law of the sea codified in UNCLOS is the functional international agreement to resolve ocean boundary issues; the Arctic Council now has a permanent secretariat; and the body of agreements to govern the actions of Arctic states is increasing, with a binding search and rescue agreement and an oil spill preparedness and response agreement to be signed in Kiruna, Sweden, in May 2013. Other agreements relevant to Arctic governance are in process, including the Polar Code under the auspices of the International Maritime Organization (IMO), the use of UNCLOS procedures regarding the delimitation of maritime boundaries and extended territorial shelves, and discussions of Council institutional changes, principally decisions on rules regarding the participation of observers in the Arctic Council. At the same time, U.S. failure to ratify UNCLOS remains a key weak point for governance of the region. It complicates efforts to assure compliance with the work of governing institutions by all the Arctic states. The conference was unanimous in urging the U.S. to ratify UNCLOS.

The region's dynamism, however, is raising new challenges: with sea ice receding, borders are increasingly open; environmental issues beyond those covered by the pending oil spill agreement remain unaddressed; there is a need for more scientific research and a sophisticated and effective public information strategy on the Arctic, especially in the United States; and finally, changes in the role and structure of the Arctic Council need to keep pace with the dynamic change in the region.

The panel focused on the latter question, particularly whether a broader forum or mechanism is needed to guide Arctic sustainable development measures in a more holistic, systemic fashion. The need was posited to integrate sector-specific issues (development, transportation,

health) into policies that sustain the Arctic as a large-scale ecosystem. This requires more focus on connections between the Arctic and the global system. Many issues affecting the Arctic, such as pollutants, contaminants, and climate change, originate outside the Arctic; therefore broader engagement is needed. Also, non-Arctic states have real interests in the region, such as shipping, fishing and natural resource development. This means strengthening Arctic governance also requires elevating Arctic issues within other international fora.

On the other hand, it was stressed that the Arctic Council is evolving and strengthening and should remain the key structure for Arctic-wide governance and policy formulation. The dialog at this conference between representatives of Arctic Council states, Permanent Participants, industry, and NGOs was seen as a model for future cooperation. The emergence of "foresight groups" and partnerships between academic, policy, and business interests can help the Arctic Council focus on the key issues and identify the highest-priority areas for assessment, policy, and agreements. Transforming the Arctic Council into a new international organization with regulatory powers was seen as unnecessary and unattainable. The Council serves as a valuable forum but the activities of the Arctic states themselves compose the core of the Arctic regime. If the Arctic Council were transformed into an international organization, it would weaken the capacity of the member states to decide whether to act or not. Such a step could also threaten the participation of indigenous peoples' organizations, which are essential partners in the Arctic Council.

The issue of Council permanent observer status for non-Arctic states is contentious. The Council adopted more explicit criteria in 2011, and it is expected that decisions on the large number of pending applications will be made at the May 2013 Ministerial. Some conference participants argued that dealing with a number of important Arctic issues on a regional basis is not possible and that the Arctic states need to engage with outside actors to address these issues effectively. Observers can bring new expertise and perspectives, and their presence could demystify and open the Council to outsiders, increasing international awareness of the Arctic. The Council has yet to determine how active observer states will be when they are brought into

the Arctic Council. Their participation might best be directed to focus on the Council's working groups and technical organizations like the IMO.

Other participants had different perspectives. It was argued that the formal observer status issue was essentially a sideshow, and that the real issue is to develop a process that allows non-Arctic states and other international actors with strong interests in Arctic issues to be included in the dialog in appropriate ways. For example, the Arctic Eight have to resolve search and rescue issues largely within their own community, but other issues such as black carbon and persistent organic pollutants require engaging other parties. Still other participants wanted to preserve the Arctic Council as a forum of the Arctic states based on consensus, with a limited role for observers.

Finally, there was a spirited discussion on the terms "Arctic government" and "Arctic governance." It was agreed there is not and will not be a supranational Arctic government or governing body. But there is an Arctic governance structure, where the Arctic Council holds a central position and includes other non-state actors, which focuses on how to achieve Council goals without affecting national sovereignty. The system works by consensus and is strengthened by the premise of cooperation and ensuring mutual security. The governance challenge now is to decide what is to be done and by whom, and how to improve Arctic governance while strengthening state-level policies that touch the Arctic and the mutual security, safety, and prosperity of those directly affected. It became clear that some misunderstandings in this area can be resolved through an understanding that the English term "governance" is not easy to translate into some other languages (e.g., Russian), a fact that makes it important to formulate proposals in mutually understandable terms.

VIRTUAL FORUM

The conference concluded with discussion about the possibility of creating an Arctic Virtual Forum to be developed and hosted by Dartmouth and the University of Alaska Fairbanks under the auspices of the University of the Arctic Institute for Applied Circumpolar Policy. This group would follow up on the recommendations of this conference, prepare papers and memos on subjects before the Arctic Council, and serve as an ongoing community for discussion and debate of issues before the Arctic community. In effect, the forum would serve as a quasi-think tank or foresight group for the Arctic Council and an asset on which Council participants could draw to explore the implications of various responses to questions before the Council. Members would be drawn from the conference participants, but others could be added as needed. The idea would be to prepare papers, discuss and revise them through a Web interface, and provide the final products for use by the Arctic Council and other interested stakeholders. There would be occasional plenary meetings (annual to biannual). The idea was met with interest, and it was agreed the conference organizers would develop the idea further and consult with participants.

FINAL SESSION: CONCLUDING DISCUSSION AND RECOMMENDATIONS

The conference concluded with each panel's presentation of recommendations for action by the Arctic Council, governments, and institutions. Several cross-cutting themes emerged as central for all future work:

- The Arctic Council needs to strengthen its ties with key sectors of industry and to encourage environmental and health security cooperation across the Arctic.
- The Arctic is an excellent area to improve cooperation between Russia and the Western states. Shipping safety and infrastructure, environmental protection, energy development, and confidence building mechanisms (CBMs) will help sustain the Arctic as a zone of peace.
- More and better data, research, and information exchange are essential in all sectors. The Arctic Council has a key role in enhancing communication in and about the Arctic.
- Human capacity building for sustainable development and improved human security is critical. Education programs for training indigenous health care personnel and developing community-based health care delivery systems are the highest priority for many areas of the Arctic. Students at the undergraduate, graduate, and professional levels across the Arctic must have mobility to enhance their training and create new networks.
- New and expanded public-private partnerships are essential in many sectors, including the research needed for sustainable development and environmental protection, especially in energy exploration, expanded shipping, and managing Arctic fisheries.
- Human well-being and safety, food security, and mental health are all related in the Arctic and must be approached in a comprehensive fashion using interdisciplinary approaches.
- Good leadership of the Arctic Council is essential. Canada and the U.S., the next two chairs, should work together to shape the continuing evolution of the Arctic Council as a policymaking body that is more inclusive of input from additional outside states and organizations.

ACTION RECOMMENDATIONS OF THE FIVE PANELS

PANEL 1

1) The participation of indigenous organizations greatly strengthens the Arctic Council. More public communication of decisions made at the Arctic Council is needed to emphasize the importance of the Arctic to international policy. More capacity is needed to enable permanent participants to carry out their work within the Arctic Council and with their constituents.
2) More research is needed to understand better how Arctic indigenous societies become resilient and adapt to climate transitions, resource extraction, and globalization and urbanization that lead to a loss of human security and associated problems related to mental health, loss of culture and self-dignity, and food security.
3) Actions are needed to build capacity for more indigenous peoples to become leaders in health care delivery and health research. Health career pathways should be culturally acceptable, and communities must have decision-making authority to develop a health care system, which is consonant with their culture and respects self-determination.

PANEL 2

1) The Arctic Council should develop a system to collect Arctic-specific and international data dealing with oil spill prevention, preparedness, and response, and establish a clearinghouse for information sharing and publication of public- and private-sector data.
2) The Arctic Council should seek to develop the relationship between industry and communities; identify the public-private partnerships that have been working to promote sustainable communities; study the social effects of energy and mineral development on local communities; work with industry to identify best practices; and consider establishing a business code of ethical conduct in the Arctic and focus on environmental and safety standards.
3) The Arctic Council should work with industry to share information on advances in oil spill remediation and prevention techniques in support of the recommendations of the working group on Emergency Prevention, Preparedness and Response (EPPR).

PANEL 3

1) The Arctic Council and governments should take actions to support the urgent completion and adoption of an International Maritime Organization (IMO) mandatory Polar Code for ships operating in polar waters, which would include specific regulations for the safe operation of cruise ships in the Arctic.
2) Arctic shipping infrastructure and operations are lacking and must be improved in the following fields: hydrography, marine domain awareness and communications, new ports and facilities, and ice information. An increase in the international icebreaker fleet is occurring, and public-private partnerships may be an option for nations to expand their ice-breaking capabilities.
3) The SAON process (Sustaining Arctic Observing Networks), created to measure Arctic change, must be enhanced. The Arctic Council needs to foster stronger relationships between the research community and operational parties. The SAON must be designed to also provide environmental information in timely ways to enhance Arctic marine safety and marine environmental protection.

PANEL 4

The chiefs of defense of Arctic states (ACHOD) will have their second annual meeting in June 2013 in Greenland. They should be encouraged to:

1) Develop a common operating picture in order to increase the situational awareness in the Arctic and assist all Arctic authorities in fulfilling their tasks in guaranteeing safety and security in the Arctic area.
2) Identify joint training opportunities to practice search and rescue and to refine emergency response procedures and capabilities. Establish a combined training base on a rotating basis among the Arctic coastal nations for a yearly large-scale search and rescue exercise, and allow the private sector and civil authorities to participate. These exercises, under the host lead, should last several months to more aggressively stress capabilities and capacity.

3) Deepen their cooperation through other confidence building mechanisms (CBMs). ACHOD could study the establishment of an Arctic Maritime Forum to share Arctic maritime information (hydrographic data, etc.), define future cooperation to fill other information gaps, and develop a comprehensive Arctic survey.

PANEL 5

1) The Arctic states should strengthen Arctic Council engagement and outreach efforts in a number of ways:
   - Establish an Arctic economic or business forum/council/chamber. This entity should have a relationship with the Arctic Council that would promote public-private partnerships and facilitate resolution of other Arctic issues involving private-sector interests;
   - Establish a dialogue between armed forces of the Arctic states and the Arctic Council (such as consultations or information sharing between the North Atlantic and North Pacific Coast Guard Forums and the Arctic Council);
   - Consider creating one or more additional mechanisms, beyond observer status, for engaging with non-Arctic states and other entities;
   - Improve communication efforts to enhance public understanding of the Arctic Council and its work; and
   - Seek further engagement with parliamentary groups concerned with Arctic issues.
2) The Arctic Council should enhance its ongoing operations and utility by:
   - Strengthening the capacity of Arctic indigenous peoples to work through their Permanent Participant representatives in engaging with the Arctic Council;
   - Conducting periodic reviews of the structure and charter of the working groups to keep them targeted at current and future issues; and
   - Playing a greater role in helping Arctic states address issues affecting the region in a holistic and integrated manner.

3) Arctic states should work together in appropriate fora to strengthen governance regimes on a number of specific topics:
    - Complete the Polar Code through the International Maritime Organizations and take other steps to facilitate safe, secure, and reliable Arctic shipping, including ship-borne tourism;
    - Take steps to reduce black carbon emissions affecting the Arctic region;
    - Strengthen Arctic domain awareness; and
    - Ensure that any commercial fishing operations in the high-seas areas of the Arctic are based on sound science and are properly regulated. Commercial fishing should not occur in areas in which there are insufficient data to support effective regulation.

APPENDICES

PARTICIPANTS BY PANEL

Welcome and Opening of Conference

Ambassador James F. Collins (ret.) — Russia and Eurasia Program, Carnegie Endowment for International Peace, Washington, DC

Ambassador Kenneth Yalowitz (ret.) — Dickey Center for International Understanding, Dartmouth College, Hanover, NH, and School of Public Policy, George Mason University, Fairfax, VA

Dr. Michael Sfraga — Office of the Vice Chancellor, University and Student Advancement, University of Alaska Fairbanks, Co-Director, University of the Arctic Institute for Applied Circumpolar Policy

Dr. Ross A. Virginia — Environmental Studies Program and Institute of Arctic Studies, Dickey Center for International Understanding, Dartmouth College, Hanover, NH, and Co-Director, University of the Arctic Institute for Applied Circumpolar Policy

Dr. Lars Kullerud — University of the Arctic, Arendal, Norway

Mr. Brian Rogers — Office of the Chancellor, University of Alaska Fairbanks

Panel 1: Arctic Health, Societal Issues, and Indigenous Perspectives

Dr. Bert B. Boyer — Center for Alaska Native Health Research, University of Alaska Fairbanks

Dr. Valerii V. Chashchin — Northwest Public Health Research Center, Russian Ministry of Health and Sciences, St. Petersburg, Russia

Mr. Aqqaluk Lynge — Inuit Circumpolar Council, Nuuk, Greenland

Dr. Gert Mulvad — Center of Arctic Environmental Medicine, Aarhus University, Denmark, and Centre for Primary Health Care, Nuuk, Greenland

Dr. Mark Nuttall — University of Alberta, Edmonton, Canada, and Greenland Climate Research Center, Nuuk, Greenland

Panel 2: Energy, Development, and Protecting the Environment

Mr. David Biette — Canada Institute, Woodrow Wilson International Center for Scholars, Washington, DC

Mr. Gerald Kepes — PFC Energy, Washington, DC

Dr. Lars Kullerud — University of the Arctic, Arendal, Norway

Mr. Arild Moe — Fridtjof Nansen Institute, Oslo, Norway

Dr. Mark Myers — Office of the Chancellor, Research, University of Alaska Fairbanks

Dr. Elena Nikitina — EcoPolicy Research and Consulting, Moscow, Russia

Mr. John Webb — Russian and Caspian Energy, IHS CERA, Cambridge, MA

Panel 3: Commercial Shipping

Dr. Lawson W. Brigham — Department of Geography, University of Alaska Fairbanks
Mr. Stephen M. Carmel — Maritime Services, Maersk Line, Limited, Norfolk, VA
Dr. Kelly K. Falkner — Office of Polar Programs, National Science Foundation, Arlington, VA
Mr. Timothy Keane — Canarctic Shipping, Fednav Group, Montreal, Canada
Mr. Reko-Antti Suojanen — Aker Arctic Shipping, Helsinki, Finland
Mr. Tero Vauraste — Arctia Shipping, Finland

Panel 4: The Military Dimension

Mr. Harry Bader — Polar Security Center, University of Alaska Fairbanks
Ambassador Daniel Benjamin — Dickey Center for International Understanding, Dartmouth College, Hanover, NH
Ms. Heather A. Conley — Europe Program, Center for Strategic and International Studies, Washington, DC
Dr. Lassi Heininen — University of Lapland, Rovaniemi, Finland
Captain Timo Junttila — Embassy of Finland, Washington, DC
Mr. Richard Pedersen — Embassy of Norway, Washington, DC
Admiral Gary Roughead — Hoover Institution, Stanford University, Stanford, CA
Dr. Stéphane Roussel — Department of Political Science, Université du Québec à Montréal
Commander Jonathan S. Spaner — U.S. Coast Guard, Washington, DC

Panel 5: Arctic Governance

Ms. Caitlyn L. Antrim — Rule of Law Committee for the Oceans, Washington, DC
Mr. Raymond V. Arnaudo — Office of Policy Planning, U.S. Department of State, Washington, DC
Ambassador David A. Balton — Bureau of Oceans and International Environmental and Scientific Affairs, U.S. Department of State, Washington, DC
Dr. Niels Einarsson — Stefansson Arctic Institute, Akureyri, Iceland
Ms. Julia Gourley — U.S. Department of State, Washington, DC
Mr. Pontus Melander — Embassy of Sweden, Washington, DC
Ambassador Peter Taksoe-Jensen — Ministry of Foreign Affairs of Denmark, Washington, DC
Ambassador Anton Vasiliev — Arctic Cooperation, Ministry of Foreign Affairs, Russia
Professor Lev Voronkov — European Integration, Moscow State Institute of International Relations, Russia
Dr. Oran Young — Bren School of Environmental Science and Management, University of California, Santa Barbara

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Dr. Samuel Watson	Office of Global Affairs, U.S. Department of Health and Human Services, Washington, DC
Dr. Brooks B. Yeager	Arctic Program, H. John Heinz Center for Science, Economics and the Environment, Washington, DC

KEYNOTE PRESENTATIONS

Keynote Address: *Perspectives on the Arctic Agenda, February 11, 2013*

Lisa Murkowski — United States Senate, Alaska

The Arctic Council and Arctic Governance, February 11, 2013

Ambassador Anton Vasiliev — Arctic Cooperation, Ministry of Foreign Affairs, Russia
Oran Young — Bren School of Environmental Science and Management, University of California, Santa Barbara

Keynote Address: *Strengthen Arctic Science, Health, and Diplomacy, February 11, 2013*

Mark Begich — United States Senate, Alaska

The U.N. Convention on the Law of the Sea and Shipping, February 11, 2013

Caitlyn L. Antrim — Rule of Law Committee for the Oceans, Washington, DC
Ambassador David A. Balton — Bureau of Oceans and International Environmental and Scientific Affairs, U.S. Department of State, Washington, DC
Timothy Keane — Canarctic Shipping, Fednav Group, Montreal, Canada

Indigenous Perspectives, February 12, 2013

Aqqaluk Lynge — Inuit Circumpolar Council, Nuuk, Greenland

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