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Cold War Legacy of Science Cooperation Offers Hope Today

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Abstract

Although current political tensions hinder international studies in the Arctic, science partnerships helped tunnel through barriers during the Cold War. One of the most successful models of U.S.–Russian collaboration was the “Environmental Bilateral” agreement of 1972. During an era of political tension, it brought together a multidisciplinary group of top professionals and early carrier scientists in both countries. Acting through science diplomacy, this group communicated sound scientific messages about global climate change to top level policymakers well before the United Nations’ Intergovernmental Panel on Climate Change came into existence. Similar models today can help the U.S. and Russia remove obstacles for scientific collaboration and implement the 2017 Agreement on Enhancing International Arctic Scientific Cooperation signed by both countries.

Addressing Arctic Change Requires All Hands

Political tensions are undermining flourishing international research linking scientists from East and West. Many fields of natural and social sciences have already seen difficulties. Of particular concern are collaborative projects that address topics transecting national boundaries, such as multidisciplinary environmental and geopolitical studies in the Arctic, where the U.S. and Russia are key players.

Understanding the changes taking place in the Arctic is crucial since it is a harbinger of climate change elsewhere. In recent decades, the far north has been warming at about twice the global rate, and some of the climate impacts predicted in theoretical studies have already been observed there (1). More careful work is needed because the common assertion that all climate change consequences are negative does not completely hold up in the Arctic. Regional climate risks exemplified by the damage to infrastructure built upon thawing permafrost come with potential benefits for the economy and some residents of the Arctic or those who would like to work there. These benefits include reductions in heating energy demand, less severe winters and longer warm periods with potential positive implications for public health, tourism, recreation, and northern agriculture; an increase in the water resources of the great Siberian rivers, and a more navigable Northern Sea Route (2). Public perceptions are shaped by these contradictory trends and many individuals do not have a clear sense of the overall picture. The combination of risks and new opportunities raises the question of how best to calculate the net costs of climate change impacts in the Arctic and elevates its role in the geopolitical arena (3).

Challenges presented by the changing climate necessitate scientists from the circumpolar countries to work

on evaluating critical climate thresholds beyond which changes become irreversible, balancing risks and new opportunities with the ultimate goal of developing climate adaptation and mitigation policies that meet the targets of the 2015 Paris agreement and secure the sustainability of the natural, built, and human systems in the Arctic. While national policies are normally couched in general terms and imbued with the argot of diplomatic discourse, they currently do not provide a holistic way to address the interests of stakeholders throughout the north.

Developing broad encompassing policies based on strong evidence of changing Arctic conditions will not be easy. The situation calls for multi-national and multidisciplinary teams that integrate the wide diversity of what we know about Arctic conditions with implementable policies designed to promote the interests of the indigenous and settler populations of the far north as well as the younger generations that will inherit the Earth from its current leaders.

What Are the Difficulties?

Cross-national connections among researchers, civil institutions, and policymakers play a pivotal role in accomplishing this task. During the previous decade such connections were in decline and reached their minimum since the times of the U.S.–USSR Cold War in the 1970s. Many of the well-established links at the institutional level have lapsed or been terminated. Nevertheless, individual contacts between the U.S. and Russian scientists remain in place and they are carrying out scores of joint circumpolar research projects in the Arctic.

Unfortunately, the political and sociocultural settings in both countries do not favor flourishing collaboration or training international students and young professionals. Russia’s government is conduct-

ing a broad campaign against “foreign agents” by harassing groups and academics who are accused of taking funding from western partners for alleged intervention into Russia’s domestic politics, proposing measures that would complicate contacts between Russian scientists and their Western counterparts, and engaging in high level discussions about limiting Internet access to the domestic “Runet” for national security purposes. In the U.S. President Trump’s administration has sought to slash funding for scientific research, tainted legitimate connections with Russia, and undermined popular trust in fact-based analysis. The U.S. continues to impose sanctions on Russia for its actions in Crimea and support of the pro-Russian rebels in southeast Ukraine while Putin claims that his country is encircled by hostile forces.

These restrictions impact all levels of the scientific endeavor, including students, undermining our very capacity to study and address the situation. Arctic experiential education is inherently expensive and best informed with international perspectives. However, limited funds and restricted visas inhibit and discourage student and young professional participation in international courses and research programs. Although these issues have no easy resolution, both countries have an interest in maintaining broad and deep scientific contacts to address global challenges.

Is the Situation Unique?

A situation in which domestic and international political tensions build barriers hindering cross-boundary connections is more frequent than times of détente. Cold War science left a legacy of tunneling through such barriers, providing a model that can be useful today. At the peak of the Cold War in 1972, the U.S. and Russia signed several agreements, one of which, known as the “Environmental Bilateral” established the joint Commission on Environmental Protection (4). The many scientific activities carried out under Environmental Bilateral auspices culminated in an official communiqué from the 1986 summit meeting between President Reagan and General Secretary Gorbachev in which they called for a joint U.S.–Russia report on climate change. The joint report came out in 1990 as a book entitled *Perspectives for Future Climate* (5), and its contents hold up well even now. The document correctly anticipated increasing temperatures, particularly in high latitudes and during the winter, and increasing precipitation in some areas. Another notable document produced by the Environmental Bilateral is the assessment of the climatic consequences of nuclear conflict, the so-called “nuclear winter” scenario. In the early 1980s scientists demonstrated that military ambitions could lead to global biospheric collapse, with no winners (6).

The Pugwash Conferences on Science and World Affairs, launched in 1957, are another success story of how scientists managed to overcome numerous Cold War barriers for cooperation between the West and East and force politicians to start a dialogue on nuclear arms control and disarmament (7). The success of those efforts provides hope for current times.

What we propose

Although the current political context differs from the 1970s, science diplomacy is still one of the few instruments that could effectively tunnel through the barriers imposed by difficult realities. Science diplomacy does not ignore political problems, but provides a forum for focusing on common challenges. Its benefits far exceed any scientific results.

In practical terms, we call on both governments to remove obstacles for scientific collaboration. This means easing visa requirements and restoring consulates that have closed in recent years. Both sides should restore the professional diplomatic staff that facilitate trade, scientific exchange, and other mutually beneficial interactions between the two countries.

The U.S. and Russia should fully implement the 2017 Agreement on Enhancing International Arctic Scientific Cooperation that resulted from the U.S.–Russian joint initiative within the Arctic Council framework (8, 9). Specifically, they should facilitate access by the agreement’s participants to national civilian research infrastructure and facilities and logistical services such as transportation and storage of equipment and material as well as to terrestrial, coastal, atmospheric, and marine areas in the identified geographic areas, consistent with international law, for the purpose of conducting scientific activities. They also should support full and open access to scientific metadata and should encourage open access to scientific data and data products and published results with minimum time delay, preferably online and free of charge. Lowering the obstacles to collaboration will allow scientists to develop their potential to reduce the broader policy conflicts.

The U.S. and Russian agencies responsible for the implementation of the Arctic agreement—the U.S. Arctic Research Commission and the Russian Ministry of Higher Education and Science—should establish a joint working group to identify priorities for Arctic research and potential sources of funding for joint academic projects. This body should consist of authoritative Arctic experts representing both natural and social sciences.

The U.S. and Russian federal governments should support international scientific organizations, professional associations and forums dealing with the Arctic, such as the International Arctic Science Committee, International Arctic Social Sciences Association, Uni-

versity of the Arctic, as well as the numerous related organizations.

Moscow should reciprocate Washington by establishing a program similar to the Fulbright Arctic Initiative that provides grants to both established experts and early career specialists from Arctic Council member nations to carry out collaborative research that will study and analyze the Arctic from a multi-disciplinary perspective. Opening such channels would particularly benefit young researchers in Russia who are often tempted to emigrate because they feel cut off from international developments in both science and public policy.

Likewise, the two governments should encourage ways to work together, such as through the successful

Belmont Forum which allows nationally based scientific funders to coordinate research efforts across borders while providing funding to their own scientists. Organizations like the Belmont Forum incentivize interdisciplinary and cross-national collaboration in ways that help to produce areas of agreement in times of conflict.

While scientist-to-scientist contacts cannot resolve the concrete disputes between the U.S. and Russia, they can help to create multiple arenas of contact. Working together to address issues such as increasing resilience to climate change in the Arctic may ultimately provide the basis for other models of conflict resolution.

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