

# Science Diplomacy and the Arctic

Professor Rasmus Gjedssø Bertelsen, PhD (Cantab), UiT, [Rasmus.Bertelsen@uit.no](mailto:Rasmus.Bertelsen@uit.no)

## Abstract

Arctic science diplomacy historically and today illustrates the potential of science for diplomacy to maintain track two dialogue during the Russian-West crisis and for regional governance to adapt to global change of power transition from West to East with the rise of China. Arctic international politics and security reflect the international system historically and today. The region is characterized by a relatively high level of scientific activity, which is particularly expensive and so invites international cooperation. The Arctic is therefore a useful region to observe science diplomacy, the foreign policy use of science, for general international research and policy lessons.

## Introduction

The Arctic is a well-integrated part of the international system and international politics and has been so for centuries (Heininen and Southcott 2010, 320). The Arctic is also the seat of much scientific activity, scientific cooperation, and use of science for foreign and security policy purposes (International Arctic Science Committee (IASC) 2015). Therefore, the Arctic is a useful region to explore and discuss science diplomacy and its application. This chapter will discuss what is science diplomacy and how it can be used for confidence-building in the Arctic and in general.

The Arctic has been an integrated part of the international system for centuries and conflict or militarization in the region has closely mirrored conflict at the international system level. This integration was clear during World War II and the Cold War. Today, the Arctic is also affected by the two processes of post-post-Cold War relations between Russia and the West and the rise of China and power transition from West to East. Science diplomacy in the Arctic has played and continues to play important and interesting roles during these conditions of conflict or tension.

Science diplomacy in the Arctic offers important and interesting lessons for general international policy and scholarly challenges, because the situations in the Arctic where science diplomacy has played a role are generalizable situations and not exceptional Arctic situations. The chapter will provide a historical account of the role of Polar science diplomacy during the Cold War. The chapter will emphasize the role of Arctic science diplomacy in first, the current post-post-Cold War situation between Russia and the West and second, in adapting Arctic governance to global changes of power transition from West to East. Post-post-Cold War Russia-West relations pose significant challenges in, for instance, the Baltic Sea Region, where science diplomacy can and should play a significant role. Power transition from West to East, especially driven by the rise of China, pose challenges around the world, hence lessons from Sino-Arctic science diplomacy are valuable not only for developing policy, but also for advancing policy and scholarship around the role of science diplomacy in global governance under global change.

The Russia-West Arctic science diplomacy experiences under post-post-Cold War politics show that science diplomacy can maintain relations between Russia and the West in the civilian educational and research domain, while political, defense and commercial relations are more vulnerable to political crisis. Sino-Arctic science diplomacy offers valuable lessons on adapting regional

governance to global change. Sino-Arctic science diplomacy is an example of how status quo powers can integrate a rising power with less conflict.

## What is Science Diplomacy?

Science diplomacy is the foreign policy use and role of science. It is the use of science to achieve a certain foreign policy goal. In this chapter, science covers all fields of academic research, health, humanities, natural sciences, social sciences, technology, etc. “Science” in English often means natural sciences, whereas it is much more useful when discussing the foreign policy use and role of science to think of the German *Wissenschaft* or Scandinavian *videnskab/vitenskap/vetenskap*, which covers all areas of research. It is important to keep in mind that although science diplomacy may be a recent concept for analysis and theoretical discussion, the practice of using science for foreign policy aims is old.<sup>1</sup>

In an influential 2010 report on science diplomacy, the Royal Society and the American Association for the Advancement of Science introduced a grid of science diplomacy activities, which is very useful for discussing science diplomacy, also in the Arctic (The Royal Society and AAAS 2010, 1-34).

**Science IN diplomacy** is when science is used to inform foreign policy, diplomatic action and diplomatic negotiations. It is common to think of science IN diplomacy as positive-sum activities, where injecting scientific knowledge into negotiations helps to solve common problems of mankind. An obvious example would be the work of the International Panel on Climate Change and their assessments feeding into the political negotiations at the successive Conferences of the Parties (COP) of the United Nations Framework Convention on Climate Change. The Arctic – and the Antarctic – play prominent roles in this science IN diplomacy concerning climate change because the Arctic (and Antarctic) play key roles in the global climate system and are the locations of especially crucial ice core climate research. The other great environmental convention of the UN is on biodiversity, where there is also a large body of scientific work inserted into these negotiations.

However, Langenhove raises the question that applying knowledge in diplomacy can also be an adversarial, competitive zero-sum activity. Negotiations on various industrial standards hold great economic interests, and here the application of scientific and technological knowledge is competitive and potentially zero-sum. If hard security and military activities is considered a part of diplomacy, then there is a large scientific and technological component (Langenhove 2017, 1-35).

**Diplomacy FOR science** is the application of diplomatic activity to support scientific activities. UNESCO is the clearest example of multilateralism in the service of science. At the regional level, the European Union makes great investments in science through the framework programs and in educational diplomacy through the Erasmus program. The Nordic countries pursued common scientific and educational purposes through the Nordforsk common research funding body and the Nordplus exchange scheme. The Arctic Council concluded at the Fairbanks ministerial meeting in 11 May 2017 the Agreement on Enhancing International Arctic Scientific Cooperation which facilitates

---

<sup>1</sup> See the history-driven H2020 project Inventing a shared Science Diplomacy for Europe, [www.insscide.eu](http://www.insscide.eu). InsSciDE has received funding under the European Union's Horizon 2020 research and innovation programme (grant agreement no 770523), 2018-2021.

cross-border scientific cooperation in the Arctic and is a particularly clear example of diplomacy FOR science and in the Arctic.

**Science FOR diplomacy** is when scientific cooperation supports diplomacy and foreign policy. This is often the dimension of science diplomacy that receives most interest. Science FOR diplomacy can play a useful role of keeping lines of communication and dialogue open during political conflict, when states cannot speak together. Science FOR diplomacy can be resilient lines of communication between parties in conflict. Such dialogue and communication can perform important confidence-building purposes. This dialogue also has potentially interesting and important socialization effects on decision-makers and can create epistemic communities across political dividing lines.

This chapter will devote most attention to the science FOR diplomacy dimension as the most interesting Arctic cases for discussing science diplomacy concern such confidence-building and mutual learning in epistemic communities.

### Science Diplomacy for Confidence-Building – also in the Arctic

Science FOR diplomacy entails scientific cooperation across borders. As mentioned, the Arctic has been and remains a well-integrated part of the international system, so the conflict lines of the international system are also well represented in the Arctic. For the purposes of this chapter, these conflict lines were and are between the USSR and the West during the Cold War, and today between Russia and the West in the context of the Ukraine crisis and between rising China and the Western status quo powers.

Science FOR diplomacy often entails the formation of epistemic communities, which the chapter will show, can play an important role for building confidence and increasing levels of shared knowledge and understanding across such conflict lines. Epistemic communities are transnational expert communities, who share and co-create knowledge about and understanding of the problem and the acceptable solutions. Such shared beliefs about problems and their solution can be important for international policy coordination (Haas 1992, 1-35; Adler and Haas 1992, 367-390; Haas 2011, 788-792).

### Arctic Science Diplomacy during the Cold War – IPY, Polar Bear Treaty, Norwegian-Soviet Fishing Commission, the Danish National Museum

The Cold War deeply affected the Arctic for systemic and not local reasons, which makes East-West science diplomacy in the Arctic during the Cold War interesting and important cases for analyzing and discussing science diplomacy and security in the Arctic and in general. The first case to mention is the International Geophysical Year 1957-1958, which was an attempt to reanimate East-West scientific connections, which had suffered seriously during the early Cold War. The International Geophysical Year was modelled after the International Polar Years of 1882-1883 and 1932-1933. Great efforts were made to shield the International Geophysical Year from being tainted by national politics. The year played a foundational role for the Antarctic Treaty System regulating the Antarctic and keeping it out of the Cold War competition between the USA and USSR (Launius, Fleming, and DeVorkin 2010).

The first East-West environmental Arctic treaty was the Polar Bear Protection Treaty of 1973 between Canada, the Kingdom of Denmark, Norway, the USA and the USSR. A less-known, but important and interesting case which laid groundwork for later better-known science diplomacy in the Arctic was the Norwegian-Soviet fisheries commission, which started work in 1974. Norway and the USSR (now Russia) share some of the world's most profitable cod stocks in the Barents Sea, so the two countries had great interest in optimal co-management. The two countries did so very well based on both marine science and game-theory (sharing 50/50 so stock optimization was best way to increase own share). This marine science cooperation built an important Norwegian-Soviet epistemic community between Tromsø and Murmansk institutions, which was the foundation for later and more visible science diplomacy when the Cold War ended (Jørgensen and Hønneland 2013, 353-376).

According to Igor Krupnik, Arctic ethnologist and historian of studies of Arctic indigenous people, Danish Eskimology specialists, particularly those centered around the Danish National Museum in Copenhagen, played critical intermediary role between Soviet and Western Arctic ethnology/ethnography since the late 1930s and particularly during the Cold War era (Krupnik 1998, 199-226; Krupnik 2016, 1-32). The Danish National Museum had important Arctic ethnographic collections and forged professional lines of communication with the Russian/Soviet ethnographic institutions. In the 1950s and up to the late 1980s, the USSR considered Denmark a 'safe place' in multiple political dimensions for Soviet anthropologists to meet their Western counterparts. Therefore, Danish Arctic institutions played an early convening role prior to the era of perestroika and glasnost in facilitating the East-West Arctic science cooperation. The important Circumpolar Arctic scientific bodies were formed in the last years of the USSR, such as the International Arctic Science Committee (IASC, in 1990) and the International Arctic Social Sciences Association (IASSA, also in 1990) (Krupnik 2010; Krupnik 2018)

## Post-Cold War Arctic Science Diplomacy, AEPS, Barents Region, Arctic Council

The end of the Cold War in the Arctic was initiated in the famous speech by Mikhail Gorbachev in Murmansk in 1987, where he called for the Arctic as a zone of peace, environmental protection and scientific cooperation in stark contrast to the extreme levels of nuclear militarization in the region during the Cold War. Finland quickly followed up on these Soviet overtures with the Rovaniemi Process from 1989, which led to the adaptation of the Arctic Environmental Protection Strategy by the eight Arctic states in 1991 and established some of the working groups continuing under the Arctic Council. This initiative by Finland was a clear-cut example of a small state in a very exposed position neighboring the USSR, which because of a relaxed international system got the opportunity to use environmental monitoring, science and protection to pursue foreign and security policy goals (Heininen and Southcott 2010, 320; Heininen 2013, 294-319).

Norway followed on the same path quickly taking the initiative to establish the Barents Euro Arctic Council and Barents cooperation in 1993. Norway pursues an ambitious High North policy towards Russia, where Norway employs the full range of educational, scientific, environmental, cultural and economic development dimensions to develop and deepen a comprehensive relationship with Northwest Russia in the strategic pursuit of a stable and predictable High North. This strategy is easily understandable in view of Norway's key foreign and security policy interests related to its

common land and sea border the Russian Federation (the USSR) (Hønneland 2005; Hønneland 2017). The Finnish and Norwegian initiatives are both good illustrations of how small, highly-developed states in exposed geostrategic positions can employ science (and education) diplomacy especially in the Arctic environmental field for foreign and security policy aims.

Canada followed up on the Finnish AEPS initiative proposing and establishing the Arctic Council with the Ottawa Declaration of 1996, which centers on environmental monitoring, research and protection and sustainable development through the work of its eight working groups, where some were initiated under the AEPS. Canada is the example of a middle power, geographically distant from the dangerous USSR or Russia, which could use a relaxed international order to take on and further develop the Finnish small-state Arctic environmental science diplomacy initiative to promote itself (Canada) (English 2013).

### Post-Post Cold War Arctic Science Diplomacy and the Ukraine Crisis

Two shifts in the international system are also affecting the Arctic. The first is that Russia is again a great power pursuing its interests in its surroundings (Mearsheimer 2014, 77-89). Russian and post-Soviet society went through a social, economic and political crisis which is difficult to imagine for outsiders. This dissolution of the USSR and the ensuing crisis greatly reduced Russia's power (projection) potential. With the presidencies of Vladimir Putin and rising oil prices, Russia is returning to a more normal great power status, although still well below that of the USSR. Russia lost its Central and Eastern European sphere of influence during the 1990s and early 2000s. That process came to a halt first with the Russo-Georgian war in 2008, and on much greater scale with the Ukraine and Crimea crisis since 2014. In this struggle, Russia, the USA, the EU and European great powers are escalating the conflict horizontally into different regions and functional areas, with military posturing and sanctions, while continuing cooperation in other geographic and functional regions. A big question has been whether the Ukraine and Crimea crisis would affect the Arctic.

Referencing the Russian military buildup in the Arctic, some Western voices have raised concerns about Russian aggression in Ukraine and Crimea being replicated in the Arctic (Bittner 2016). With respect to the Georgian and Ukrainian situation, Russia responded with military force to specific strategic problems in the Caucasus and Eastern Europe. Russia does not have any such strategic problems in the Arctic, and there is little reason to expect Russia to act with military force there. Concerning Arctic military buildup, it is necessary to keep in mind that Russian Arctic military installations and forces had deteriorated deeply with the dissolution of the USSR, so this buildup may be a correction. Secondly, especially Russian strategic nuclear forces in the Arctic and the conventional forces protecting them have no particular connection to the Arctic, except being placed there for geostrategic reasons.

It is rather the West that escalated the Ukraine and Crimea crisis horizontally to the Arctic through financial and technological sanctions against Russian Arctic offshore oil and gas developments. This horizontal escalation from the West reflects a calculated desire to punish a key sector of the Russian domestic political economy built around oil and gas rents (Rosen 2016). In addition, Canada boycotted some Arctic Council meetings in Russia, which may have been motivated by Canadian domestic politics. The scientific and educational cooperation in the Arctic continues despite the Ukraine and Crimea crisis with some noteworthy exceptions. Both Western and Russia students and

scholars seem determined to continue this cooperation and most funding support structures, etc., continue. However, the exceptions are noteworthy.

The University of Northern British Columbia in Prince George, BC, Canada, hosted the International Congress of Arctic Social Sciences in May 2014 coinciding with the Ukraine and Crimea crisis unfolding. A large number of Russian scholars did not manage to participate because Canada withheld their visa applications (Bennett 2014). Shortly after in August 2014, the Russian Federation Security Council hosted its annual high-level Arctic meeting in Naryan-Mar, Nenets Autonomous Okrug. This annual meeting usually gathers diplomats from Arctic states. The host of the meeting is the secretary of the security council, Nikolay Patrushev, former director of the FSB national security service. No Western Arctic diplomat participated in this meeting, but the security council together with the Northern Arctic Federal University (NARFU) in Arkhangelsk invited foreign Arctic scholars, where I represented Denmark. In September 2015, at this meeting in Arkhangelsk, Western Arctic diplomats had returned with the Danish Moscow ambassador as the highest ranked. Scholars were still invited and have remained so adding a resilience to this venue in light of outside potential political disruptions. However, Russia is suppressing and harassing civil society organizations collaborating with and receiving funding from abroad, including Arctic people-to-people cooperation. This policy has included demanding that the Nordic Council of Ministers' St. Petersburg Office change from NGO to foreign agent, raiding the Norwegian University Center in St. Petersburg, and expelling Norwegian and Swedish students there on visa charges. Both the Nordic Council of Ministers' Office and the Norwegian University Center have closed (Nordisk samarbeid 2015; Helle and Randen 2017; Hellesund 2018; Det norske universitetssenter i St. Petersburg nd). Suppression of transnational civil society should be seen both in a context of Russian domestic politics and foreign relations.

Despite the disruptions above, Russian-West Arctic science (and education) diplomacy continues to play a key role for science FOR diplomacy between Russia and the other seven Arctic nations. This science and education cooperation is continuously (re-) building epistemic communities of new generations of scholars and students from Russia and the West who get to know each other well personally and visit each other's locations. These epistemic communities co-create a shared understanding of the Arctic and mutual positions and interests. This science FOR diplomacy takes places parallel to the continuing national security interests in the Arctic surrounding especially strategic balance of nuclear deterrence (see Bertelsen and others elsewhere in this volume). Russian-West Arctic science diplomacy is therefore an illustration that with sufficient mutual political will, it is possible for Russia and the West to maintain extensive scientific and educational cooperation in a region with strong and competing national security interest.

Russia and the West should keep this Arctic lesson in mind concerning, for instance, the Baltic Sea and the Baltic states, where there is more dangerous national security competition in much more restricted air and sea space, with a higher risk of incidents than in the Arctic. There are marine environmental issues in the Baltic, for instance, in the vicinity of Kaliningrad and bordering two NATO countries, Poland and Lithuania, which could be explored as topics of science and education FOR diplomacy.<sup>2</sup>

---

<sup>2</sup> Visit by Dean Ainius Lasas, Kaunas University of Technology, to UiT The Arctic University of Norway, 21-23 February 2018.



## Power Transition and Arctic Science Diplomacy – Integrating Rising China in the Arctic

The other and more important global social, economic and political change in the international system today is the power transition from West to East driven by economic growth in Asia, especially in China. This change is also affecting the Arctic profoundly, as all other regions of the world. Sino-Arctic science diplomacy plays an important practical role in these changes with interesting policy and research lessons (Bertelsen 2016, 180-184; Bertelsen, Li, and Gregersen 2017, 442-460; Bertelsen and SU 2018, 147-160). Asia holds more than half the world's population, and Asia until the 1800s accounted for more than half the world's economic output. Asia's relative share was greatly diminished to less than 20% in the 1950s, while the West's relative share was greatly increased because of the industrial revolution, imperialism, and world wars. Asia is now reclaiming its historical share of the world economy. According to the Asian Development Bank, Asia now accounts for 34% of the world economy and will reach more than half in 2050. This development was first led by Japan's strong growth after World War II which made Japan the world's second-largest economy. China has experienced phenomenal economic growth since opening up its economy in 1978 and is now the world's second-largest economy and will eventually become the world's largest economy (Asian Development Bank 2011, 127).

The effects of such shifts in economic power are felt around the world, also in the Arctic. The largest or most advanced Asian economies, China, Japan, South Korea, India and Singapore, have in recent years engaged themselves in the Arctic and achieved regular observer status in the Arctic Council in 2013 (Arctic Council 2018). Especially China's interest and interests in the Arctic have attracted much attention and raised suspicions (Breum and Chemnitz 2013; Higgins 2013). The relationship between China and Greenland has caused particularly suspicion and arguments about a special Chinese interest for Greenland. Here it is important to keep in mind, that the second-largest and soon-to-be largest economy in the world can be expected to be engaged around the world, including in Greenland, as the USA is engaged around the world. This fact does not make China's engagement in the Arctic less strategically problematic, but it is a reminder that this engagement is the reflection of global change and not restricted to the Arctic.

Power transition is the great engine of international relations and extraordinarily complex and dangerous. Power transition is when the existing hegemon or leading power is being caught up with by a rising power with higher economic growth. Such power transitions or attempt of power transition have caused bloody world wars (Organski 1968 [1958]). A very rare peaceful power transition was between Britain and the USA in the early and mid 1900s. China's rise relative to the USA is therefore a cause for extraordinary concern for peace, first and foremost in East Asia (Allison 2017), but also other regions of the world, including the Arctic. Here Sino-Arctic science diplomacy offers interesting and valuable lessons and perhaps opportunities.

The mere talk of Chinese investments in land, natural resource extraction or infrastructure in the Arctic raises high levels of suspicion. Below I will show how Sino-Arctic scientific collaboration is received very differently. First, I will list some illustrative examples of suspicion from Iceland and Greenland. It is important to keep in mind that this suspicion is not unique to China nor the Arctic. Power transitions always cause high levels of suspicion of the rising power. Britain and France were in the early years of the 1900s highly suspicious of the German Berlin-Baghdad-Bahn railroad idea

of linking Germany over land to the Middle East bypassing British and French naval forces (McMeekin 2010).

A first example of suspicion of China in the Arctic was the saga of the Chinese real estate billionaire HUANG Nubo and his plans of buying land in Northeast Iceland for an eco-tourism resort. Huang had personal connections to Iceland through some of the first Icelandic students to study at Peking University after China readmitted foreign students, after the Cultural Revolution in the 1970s. Huang's plans of buying an apparently desolate area in Northeast Iceland caused extreme suspicions of ulterior strategic designs on natural resources, espionage or strategic strong points. Icelandic authorities delayed the project in various red tape on foreign entities buying land, and eventually Huang gave up on the idea (Higgins 2013). The strong growth in Chinese tourists to Iceland suggests that the idea may have been commercially viable contrary to the assertions that it had to be politically and strategically motivated.

The main forces in Greenlandic politics have been clear about the ultimate goal of independence since the 1970s (although most people in Denmark apparently weren't paying attention), and what is keeping Greenland back is primarily economic dependence on Denmark. Around 2012-2013, when world market commodity prices were high, there were high expectations in Greenland that a number of large mines could accelerate the road to independence. The most promising location was the iron ore deposit at Isua, where the license was owned by a British mining project development company, London Mining, but the likely investors and suppliers of manpower would have been China. This situation led to an exceptional crisis in Danish-Greenlandic-Chinese relations, with widespread Danish sentiments of suspicion of China and paternalistic distrust in Greenland's handling of this matter. The then Greenlandic Premier Kuupik Kleist gave an interview in a leading Danish newspaper, *Weekendavisen*, under the heading that "Are the Chinese worse than Other Capitalists?" and basically stating that other investors than Danes were preferable for the unprejudiced approach to Greenland unlike Danish post-colonial behavior (Andersen 2013). The Chinese Foreign Ministry made the highly unusual act of declaring in a press conference that there were no Chinese mining activities in Greenland. The Danish journalist Martin Breum and Greenlandic photographer and political columnist Jørgen Chemnitz wrote an op-ed in the *New York Times*, that "Greenland does not belong to China" (Breum and Chemnitz 2013).

A few years ago, the Danish Ministry of Defense put up for sale, Grønnedal, the abandoned and rundown former Danish navy main base in Greenland. A Chinese mining company expressed interest in the location as a logistical hub in Greenland, and quickly the Danish navy discovered that it needed the location again. It was clearly too controversial for the Danish government to sell even a run-down and abandoned naval facility in Greenland to a Chinese mining company. It was also too potentially provocative towards China to sell the base to another buyer (Hannestad 2016). Today Greenland is planning to build or expand two to three new airports with runways capable of receiving international flights. Six construction companies have been pre-qualified to submit offers, including China Construction Company, which again is raising great suspicion in Denmark (Matzen and Daly 2018; Breum 2018).

China's scientific engagement with the Arctic states is in stark contrast to the distrust above. China has been a member of the International Arctic Science Committee since 1996, and YANG Huigen,



director of the Polar Research Institute of China, serves as one of the vice-presidents of IASC. China has been a regular observer<sup>3</sup> at the Arctic Council since 2013 and has access to participate in the working groups of the Council. The most structured Chinese Arctic science engagement is with the Nordic countries through the China Nordic Arctic Research Center (CNARC), which is a virtual center of 8 Chinese and 10 Nordic institutions at the PRIC in Shanghai. CNARC originates in Sino-Icelandic Arctic research cooperation, which was quickly and wisely elevated to Sino-Nordic level and started in 2013. CNARC organizes an annual China Nordic Arctic Cooperation Symposium every second year in China and every second year in the Nordic countries, as well as researcher exchange, where I was CNARC guest researcher in Shanghai March-April 2016.

There are bilateral initiatives such as the joint China-Iceland Aurora Observatory being built in Northeast Iceland, on the former farm Kárhóll, in the region of Huang's botched tourism project ideas. There have also been bilateral Sino-American Arctic dialogues. China and Russia are increasingly cooperating in areas centred around Chinese investments in Russian Arctic energy resources, the Yamal Liquefied Natural Gas project being a prime example. And there are since 2016 very interesting trilateral Arctic dialogues between China, Japan and South Korea, which is very noteworthy in light of the strained political relations especially between China and Japan (Bertelsen and SU 2018, 147-160; Bennett 2017).

From close observation of Sino-Arctic science diplomacy during the last four years, it is clear that there now exists a Sino-Arctic epistemic community of scholars and students who are familiar with each other personally and academically. There is a much higher degree of mutual understanding of positions and interests. Unlike the public outcries over possible Chinese investments in Arctic land and natural resources, science diplomacy has allowed for the Arctic states to integrate China into Arctic science and education without these public displays of distrust.

There are enormous strategic challenges and dangers surrounding power transition with the rise of China as pointed out by Graham Allison (Allison 2017). The lessons from the Arctic of how the Arctic states and China have used science to integrate China into Arctic institutions and build Sino-Arctic epistemic communities are therefore valuable and interesting. The Arctic lessons suggests building a foundation of scientific cooperation between China and other parties in different geographic and functional domains (Bertelsen, Li, and Gregersen 2017, 442-460). Although China's domestic political system raises serious issues encountering open societies and academic freedom.

## Conclusion: Arctic Science Diplomacy lessons for managing conflicts and transformations

Arctic science diplomacy offers interesting research and policy lessons to the wider international system. The Arctic is host to relatively intense scientific activity, compared to other human activity. Arctic science is among the most expensive after space and deep ocean research, which encourages international cooperation. Arctic and non-Arctic states have historically and continue to use scientific activities for foreign and security policy reasons. The Arctic has been a closely integrated part of the international political, economic, and security system for centuries, and international

---

<sup>3</sup> Regular observer is the correct form rather than permanent observer, as any observer can lose its status if not fulfilling its tasks.

politics and political economy in the Arctic has closely reflected the wider international system and continues to do so. Arctic science diplomacy therefore offers the opportunity to observe the use of science diplomacy in general international conflicts also present in the Arctic.

The Arctic was exceptionally militarized during the Cold War for geostrategic reasons, and not local Arctic reasons. The Barents Sea was – and remains – a particularly important geostrategic location. Under these conditions, the five Arctic coastal states managed to conclude the Polar Bear Treaty in 1973, and Norway and the USSR initiated particularly successful joint fisheries management of very valuable commercial fish stocks in the Barents Sea. This fisheries management cooperation founded epistemic communities of importance for later knowledge-based cooperation in the Barents Region. Finland and Norway as small states in exposed geostrategic positions immediately used a less constraining post-Cold War international system to use environmental and other civilian cooperation in the Barents Region for foreign and security policy reasons. Canada as a middle-power brought these initiatives onwards with the founding of the Arctic Council, whose function is based on the working groups as epistemic communities.

Today, the Arctic is also affected by two dominant systemic processes at higher level, post-post Cold War relations between the West and a recovering Russia, and power transition from West to East with the rise of China. The West and Russia are locked in geostrategic competition in the Caucasus (Georgia 2008) and Eastern Europe/Black Sea region (Ukraine/Crimea since 2014). Either side considers carefully whether to escalate this conflict horizontally into the Arctic, where neither side has similar geostrategic conflicts. Research and educational cooperation is generally continuing and reproducing epistemic communities. China is regaining its historical relative position as the or one of the world's largest economies, and as such has interests around the world, including the Arctic. Chinese potential or real investments in the Western Arctic (outside Russia) has been received with great suspicion typical of power transition. In contrast, research cooperation between China and the Arctic states continues to develop with increasing levels of mutual understanding and co-creation of knowledge. Sino-Arctic science diplomacy is therefore a potential lesson for building greater mutual understanding and co-creating knowledge between status quo powers and the rising power.

## References

- Adler, Emanuel and Peter M. Haas. 1992. "Conclusion: Epistemic Communities, World Order, and the Creation of a Reflective Research Program." *International Organization* 46 (1, Knowledge, Power, and International Policy Coordination (Winter)): 367-390.
- Allison, Graham. 2017. *Destined for War: Can America and China Escape Thucydides's Trap?*. New York, NY: Houghton Mifflin Harcourt.
- Andersen, M. K. 2013. "Er Kinesere Værre End Andre Kapitalister? [are the Chinese Worse than Other Capitalists?]." *Weekendavisen*, 2013/01/18.
- Arctic Council. "Observers." Arctic Council, last modified 2018/01/17, accessed 07/04, 2018, <http://www.arctic-council.org/index.php/en/about-us/arctic-council/observers>.
- Asian Development Bank. 2011. *Asia 2050: Realizing the Asian Century*. Singapore: Asian Development Bank.

- Bennett, Mia. "Iced Out: China, Japan, and S. Korea Hold Dialogue on the Arctic." Cryopolitics, last modified 2017/06/27, accessed 07/04, 2018, <http://www.cryopolitics.com/2017/06/13/iced-out-china-japan-and-s-korea-hold-dialogue-on-the-arctic/>.
- Bennett, Mia. "Reflections on the Eight International Congress of Arctic Social Sciences." Cryopolitics, last modified 05/28, accessed 11/21, 2016, <https://cryopolitics.com/2014/05/>.
- Bertelsen, Rasmus Gjedssø. 2016. "Triple-Helix Knowledge-Based Sino–Nordic Arctic Relationships for Trust and Sustainable Development." *Advances in Polar Science* 27 (3): 180-184.
- Bertelsen, Rasmus Gjedssø, Xing Li, and Mette Højris Gregersen. 2017. "Chinese Arctic Science Diplomacy: An Instrument for Achieving the Chinese Dream?" In *Global Challenges in the Arctic Region Sovereignty Environment and Geopolitical Balance*, edited by Sara Iglesias Sanchez and Elena Conde Perez, 442-460: Routledge.
- Bertelsen, Rasmus Gjedssø and Ping SU. 2018. "Knowledge-Based Institutions in Sino-Arctic Engagement: Lessons for the Belt and Road Initiative." In *Rethinking the Silk Road: China's Belt and Road Initiative and Emerging Eurasian Relations*, edited by Maximilian Mayer, 147-160: Palgrave Macmillan.
- Bittner, Jochen. "To Whom does the North Pole Belong?" Zeit Online, last modified 2016/04/09, accessed 11/21, 2016, <http://www.zeit.de/politik/ausland/2016-04/arctic-russia-america-conflict-zone>.
- Breum, Martin. "How a Dispute Over China and Greenland's Airports Worked its Way Toward a Solution." ArcticToday, last modified 2018/06/30, accessed 06/30, 2018, <https://www.arctictoday.com/dispute-china-greenlands-airports-worked-way-toward-solution/>.
- Breum, Martin and Jorgen Chemnitz . 2013. "No, Greenland does Not Belong to China." *The New York Times*.
- Det norske universitetssenter i St. Petersburg. "Velkommen Til Nettsidene for Det Norske Universitetssenter i St. Petersburg! [Welcome to the Webpages of the Norwegian University Center in St. Petersburg!]." Det norske universitetssenter i St. Petersburg, last modified nd, accessed 07/08, 2018, <http://www.st-petersburg.uio.no>.
- English, John. 2013. *Ice and water: Politics, Peoples, and the Arctic Council*. Toronto: Allen Lane.
- Haas, Peter M. 2011. "Epistemic Communities." In *International Encyclopedia of Political Science*, edited by Bertrand Badie, Dirk Berg-Schlosser and Leonardo Morlino, 788-792. Thousand Oaks, CA: SAGE Publications.
- Haas, Peter M. 1992. "Introduction: Epistemic Communities and International Policy Coordination." *International Organization* 46 (1): 1-35.
- Hannestad, Adam. 2016. "Nu Vil Kina Til at Kjøbe Et Militært Anlæg i Grønland, Men Lars Løkke Siger Nej [Now China Wants to Buy Military Installation in Greenland, but [PM] Lars Løkke Says no]." *Politiken*.
- Heininen, Lassi. 2013. "Finland as an Arctic and European State - Finland's Northern Dimension (Policy)." In *International Security and the Arctic: Understanding Policy and Governance*, edited by Robert Murray and Anita Dey Nuttall, 294-319. Amherst, NY: Cambria Press.
- Heininen, Lassi and Chris Southcott, eds. 2010. *Globalization and the Circumpolar North*. Fairbanks, AK: University of Alaska Press.
- Helle, Birk T. and Randen, Mads. "Ni Norske Studenter Kastes Ut Av Russland – Anklager UiO for Visumjuks [Nine Norwegian Students Expelled from Russia - Accusing University of Oslo of

- Visa Cheating]." Universitas, last modified 2017/12/08, accessed 07/08, 2018, <http://universitas.no/nyheter/63384/ni-norske-studenter-kastes-ut-av-russland-anklager>.
- Hellesund, Dag. "Kjenner Framleis Ikkje Grunnen Til St.Petersburg-Razzia [Still does Not Know Reason for St. Petersburg Raid]." Khrono, last modified 2018/01/03, accessed 07/08, 2018, <https://khrono.no/universitetet-i-oslo-studier-razzia/kjenner-framleis-ikkje-grunnen-til-stpetersburg-razzia/205868>.
- Higgins, Andrew. 2013. "Teeing Off at the Edge of the Arctic? A Chinese Plan Baffles Iceland." *The New York Times*, 03/22.
- Hønneland, Geir. 2017. *Arctic Euphoria and International High North Politics*. Arctic Euphoria and International High North Politics. Singapore: Palgrave Macmillan. doi:[https://doi.org/10.1007/978-981-10-6032-8\\_1](https://doi.org/10.1007/978-981-10-6032-8_1).
- Hønneland, Geir. 2005. *Barentsbrytninger: Norsk Nordområdepolitikk Etter Den Kalde Krigen ["Barents Breaking": Norwegian Foreign Policy in the North After the Cold War]*. Kristiansand: Høyskoleforlaget.
- International Arctic Science Committee (IASC). "25 Years of International Arctic Research Cooperation." International Arctic Science Committee, accessed 11/21, 2016, <http://iasc25.iasc.info>.
- Jørgensen, Anne-Kristin and Geir Hønneland. 2013. "In Cod we Trust: Konjunkturer i Det Norsk-Russiske Fiskerisamarbeidet [in Cod we Trust: Trends in Norwegian-Russian Fisheries Cooperation]." *Nordisk Østforum* 27 (4): 353-376.
- Krupnik, Igor. 2018. *Email Correspondance 2018-07-02-03 between Dr Igor Krupnik and Professor Rasmus Gjedssø Bertelsen*.
- Krupnik, Igor. 2016. "From Boas to Burch: Eskimology Transitions." In *Early Inuit Studies: Themes and Transitions, 1850s-1980s*, edited by Igor Krupnik, 1-32. Washington DC: Smithsonian Institution Scholarly Press.
- Krupnik, Igor. 1998. "Jesup Genealogy: Intellectual Partnership and Russian-American Cooperation in Arctic/North Pacific Anthropology. Pt.1: From the Jesup Expedition to the Cold War, 1897-1948." *Arctic Anthropology* 35 (2): 199-226.
- Krupnik, Igor. 2010. *Personal Communication "Cold War Arctic Ethnography Role of Danish National Museum" to Rasmus Gjedssø Bertelsen*.
- Langenhove, Luc Van. 2017. *Tools for an EU Science Diplomacy*. Brussels: Directorate-General for Research and Innovation (European Commission). doi:10.2777/911223.
- Launius, Roger D., James Rodger Fleming, and David H. DeVorkin, eds. 2010. *Globalizing Polar Science: Reconsidering the International Polar and Geophysical Years*, edited by Roger D. Launius. 1. ed. ed. New York, NY: Palgrave Macmillan.
- Matzen, Erik and Daly, Tom. "Greenland's Courting of China for Airport Projects Worries Denmark." Reuters, last modified 2018/03/22, accessed 07/03, 2018, <https://www.reuters.com/article/china-arctic-greenland/greenlands-courting-of-china-for-airport-projects-worries-denmark-idUSL4N1QP346>.
- McMeekin, Sean. 2010. *The Berlin-Baghdad Express: The Ottoman Empire and Germany's Bid for World Power*. Cambridge, MA: Belknap Press.
- Mearsheimer, John J. 2014. "Why the Ukraine Crisis is the West's Fault: The Liberal Delusions that Provoked Putin." *Foreign Affairs* 93 (5 September/October): 77-89.
- Nordisk samarbeid. "Nordiska Ministerrådets Kontor i St Petersburg Kontaktat Av Åklagarmyndigheten [Nordic Council of Ministers' Office in Saint Petersburg Contacted by

Public Prosecutor]." Nordisk samarbeid, last modified 2015/01/12, accessed 07/08, 2018, <https://www.norden.org/no/aktuelt/nyheter/nordiska-ministerraadets-kontor-i-st-petersburg-kontaktat-av-aaklagarmyndigheten>.

Organski, A. F. K. 1968 [1958]. *World Politics*. 2d ed. [rev.] ed. New York: Knopf.

Rosen, Mark E. "The Arctic is the First Stop in the United States Reset with Russia." *The National Interest*, last modified 2016/11/15, accessed 11/21, 2016, <http://nationalinterest.org/blog/the-buzz/the-arctic-the-first-stop-the-united-states-reset-russia-18409>.

The Royal Society and AAAS. 2010. *New Frontiers in Science Diplomacy: Navigating the Changing Balance of Power*. London; Washington, DC: The Royal Society; AAAS.