understanding of Arctic issues and scenarios and stakeholders' national interests may result in synergies. Also, building better and more efficient institutions in the High North may serve as a guarantee against conflict and tension. And this book is a substantial step in that direction.

WHY THE ARCTIC MATTERS FOR THE REST OF EUROPE

Kristīne Bērziņa

As temperatures rise in the Arctic, scientists, shippers, and military strategists are peering northward into what was, a few years ago, an inaccessible mass of ice. In the past, the international community associated the Arctic with wildlife conservation and indigenous peoples' rights. But this decade has brought Arctic sea ice to record lows and opened the region to a broader range of interested outsiders. Scientists are focusing on the Arctic to measure the impact of increased greenhouse gas emissions, and businesses are pursuing economic activity once thought impossible in Arctic waters, such as maritime shipping and offshore oil drilling.

The eight countries with territory above the Arctic Circle are best positioned to manage the transformations coming to the region. But the Arctic states are no longer the only stakeholders involved. Changing climate conditions are making the High North an important area for global actors scientifically, economically, and strategically.

Europe is deeply tied to the Arctic. Three members of the European Union (EU) and two members of the European Economic Area are also Arctic states. Europe has made significant investments in scientific research and economic development in the region. From a security perspective, Europeans are becoming concerned about their own Arctic capabilities and are focusing strategic attention northward. Asian states

are gaining observer status in the Arctic Council and investing in mining and extractive industries, prompting further European anxiety. As a result, European countries far south of the Arctic Circle are increasingly involved in the region.

This chapter provides an overview of actors in the Arctic. It describes Europe's engagement in the region and the drivers for the increased interest. These drivers fall into three categories: immaterial interests, material interests, and security concerns.

Arctic actors

The growth of interest in the Arctic has led to a proliferation of actors in the region. Traditional stakeholders – the Arctic states and the Arctic Council – remain the region's primary players. This said, ever more countries, organizations, and private companies are seeking to shape its future. These new actors are geographically diverse and come from a broad spectrum of sectors and industries.

The main political players in the Arctic are the eight states with territory above the Arctic Circle: Canada, Denmark (including Greenland), Iceland, Norway, Sweden, Finland, Russia, and the United States. In 1996, these eight countries founded the Arctic Council, an intergovernmental organization, to address issues related to trade, environment, climate change, indigenous peoples, and natural resources. The Arctic Council often serves the function of an advisory body rather than a governing institution, since it was formed through a declaration (the Ottawa Declaration) rather than by an international treaty. It commonly issues non-binding recommendations instead of binding measures.[1]

The Arctic Council includes permanent representatives from indigenous communities and other residents of the region. Arctic indigenous groups were first invited to join the Arctic Environmental Protection Strategy, the predecessor of the Arctic Council, as observers. These groups, including the Saami, Inuit, and Russian indigenous peoples, gained the right to be consulted on decisions made by the Arctic states. Over the course of the 1990s, the number of indigenous peoples' organizations in the Arctic Council doubled. As indigenous groups have attained broader rights of self-governance, they are playing an increasingly independent role in Arctic affairs.[2]

Although the Arctic Council is the main forum for Arctic questions, different groups of Arctic states also meet in other settings to discuss particular topics. For example, Iceland, Finland, and Sweden do not border the Arctic Ocean, so for issues pertaining to the Arctic Ocean the other five states may meet separately. In 2008, Denmark convened the five Arctic Ocean littoral states under its Ilulissat Initiative to sign a cooperation agreement. The agreement affirmed the validity of existing legal frameworks, expressed concern over the effects of climate change, and prompted efforts for greater cooperation on emergency preparedness, environmental stewardship, and scientific research in the Arctic Ocean.[3]

Non-Arctic states are playing an increasingly active role in the Arctic region. The Arctic Council permits certain countries to serve as observers, allowing these states to participate in working groups, attend Council meetings, and propose projects through Arctic states or permanent participants. As of 2014, seven European and five Asian countries hold observer status: France, Germany, Italy, the Netherlands, Poland, Spain,

[1] Tereza Horejsova and Cody Morris Paris, "Tourism and the challenge of Arctic governance," International Journal of Tourism Policy (IJTP), Vol. 5, No. 1/2 (2013).

[2] For a thorough discussion of self-governance in the Arctic see Jens Dahl, Gail Fondahl, Andrey Petrov, and Rune Sverre Fjellheim, "Fate Control," in *Arctic Social Indicators - a follow-up to the Arctic Human Development Report*, ed. Joan Nymand Larsen, Peter Schweitzer, and Gail Fondahl, 129-146. (Copenhagen: Nordic Council of Ministers, 2010).

[3] The Ilulissat Declaration, Arctic Ocean Conference, Illulisat Greenland, 27-28 May 2008. Available from: http://www.oceanlaw.org/downloads/arctic/Ilulissat_Declaration.pdf.

the United Kingdom, China, Japan, the Republic of Korea, Singapore, and India. The European Union has applied for full observer status but only has ad hoc observer rights. This means that the EU is granted permission to attend meetings on a case-by-case basis.

Intergovernmental, inter-parliamentary, and non-governmental organizations play a significant role in both the Arctic Council and in the region more broadly. They are permitted to join the Arctic Council as observers with the same rights as non-Arctic observer states. In 2014, nine intergovernmental and inter-parliamentary organizations have observer status as do 11 non-governmental organizations. These include the International Federation of Red Cross & Red Crescent Societies, the Nordic Marine Mammal Commission, the United Nations Economic Commission for Europe, the United Nations Development Program, the International Arctic Science Committee, and the World Wide Fund for Nature's Global Arctic Program, among others. Many of the non-governmental and inter-governmental observers focus on the environment, wildlife issues, and scientific pursuits. This interest group has expanded its activities in the Arctic over recent years as the influence of climate change has become especially pronounced.

Although it is not an observer of the Arctic Council, the International Maritime Organization (IMO) is playing a growing role in the region. The IMO, the United Nations agency responsible for maritime safety, is developing a Polar Code for ships traveling through challenging Arctic and Antarctic waters. The Polar Code will set newly binding standards for ship design, construction, operation, training, search and rescue, and environmental protection.[4]

The actions of nongovernmental organizations in the Arctic can catalyze change or heighten disagreements between state actors in the region. In 2013, Russia jailed 30 Greenpeace activists and journalists who were protesting oil and gas drilling in the Arctic and had attempted to climb an oil rig in the southeast part of the Barents Sea. Russian authorities threatened to charge the activists with piracy. The international reaction to the protest increased popular awareness of the presence of oil and gas companies in the Arctic.

Lastly, private sector actors also play a significant role in the region. The opening of the Arctic is attractive for a number of companies, especially those in the oil and gas, mining, and shipping businesses. Some of these private sector actors aim to extract natural resources from the Arctic or transport goods through Arctic waters. Others seek to take advantage of the Arctic's unique conditions to pursue research and develop new technologies.

Arctic engagement and affinity in sub-Arctic Europe

Arctic engagement in sub-Arctic European countries varies widely. Some countries are permanent observers in the Arctic Council, while others have barely begun developing policies on the region. What is important, however, is not only engagement in the Arctic but also affinity for the region. In fact, Riga and Tallinn are closer to the permanent seat of the Arctic Council in Tromsø, Norway than they are to Brussels. Strong ties between sub-Arctic states and their northern neighbors can serve as a springboard to increased engagement.

Poland and Germany, two sub-Arctic European states featured in this book, have a formal method for interacting with the Arctic institutions. As permanent observers of the Arctic Council, the two countries can participate in Arctic governance through their attendance of Arctic Council meetings and detailed working group sessions.

For the three Baltic States, there is no institutional method for interacting with the Arctic Council. Instead, the Baltic States primarily act on the international stage through their membership in the European Union and NATO. These relationships are crucial to facilitating involvement in

[4] International Maritime Organization, "Shipping in polar waters Development of an international code of safety for ships operating in polar waters (Polar Code), http://www.imo.org/MediaCentre/HotTopics/polar/Pages/default.aspx (Access date: January 10, 2013).

the Arctic. As members of the European Union, sub-Arctic countries can take part in EU activities in the Arctic, including scientific research and work with indigenous groups.[5] As NATO member states, the Baltic States can express their strategic concerns about the region through NATO discussions on the Arctic.

Institutional ties between the Nordic and Baltic regions create a sense of partnership that does not depend on formal Arctic Council status. Three Arctic states – Denmark, Sweden, and Finland – work with southern Baltic countries through the European Community's Baltic Sea Region Program on issues of water, energy, transport and innovation.[6] Five Arctic states – Russia, Norway, Denmark, Sweden, and Finland – use the forum of the Council of the Baltic Sea States to solve common issues of sustainability, energy, education, culture, trafficking, youth, and economic development alongside the southern Baltic littoral states. Similarly, the Nordic-Baltic Eight brings together Finland, Sweden, Norway, Iceland, Denmark, Estonia, Latvia, and Lithuania to cooperate on common foreign and security policy concerns. This format allows the region to cooperate on the basis of a common "northerliness", rather than on the basis of NATO or EU membership.[7]

The bilateral and multilateral ties that the Baltic States have already cultivated with their Arctic neighbors can help define the extent of their future actions in the region. Strong existing relations can prompt the Baltic States to participate in academic projects in the Arctic or to develop joint business ventures with Nordic companies.

[5] European Commission, "EU's Arctic Policy: Questions and Answers," MEMO/12/517. July 3, 2012, http://europa.eu/rapid/press-release_MEMO-12-517_en.htm.

[6] Baltic Sea Region Programme 2007-2013, *Program Facts,* November 21, 2013, http://eu.baltic.net/index.php.

[7] Estonian Ministry of Foreign Affairs, "Nordic-Baltic Cooperation," Välisministeerium. August 22, 2013, http://www.vm.ee/?q=en/node/4097; and Valdis Birkavs and Søren Gade, *NB8 Wise Men Report,* August 2010, http://www.vm.ee/sites/default/files/NB8WiseMenReport.pdf.

Drivers for increased Arctic engagement by sub-Arctic Europe

The drivers for increased interest in the Arctic fall into three categories: immaterial interests, material interests, and security concerns. As sub-Arctic Europe looks towards greater engagement with the Arctic, their activities are likely to fall into these areas.

Immaterial interests

The Arctic is a region of tremendous ecological resources, rich in marine and terrestrial wildlife and diverse flora. It is also an area where the effects of climate change are being felt acutely. According to the Intergovernmental Panel on Climate Change (IPCC), "...in the Northern Hemisphere, 1983–2012 was likely the warmest 30-year period of the last 1400 years."[8] Not only has the rise in temperatures already profoundly affected the Arctic, more changes are likely to occur. In the future, the IPCC believes, "It is very likely that the Arctic sea ice cover will continue to shrink and thin," and that "a nearly ice-free Arctic Ocean in September before mid-century is likely."[9]

In the Arctic both marine and terrestrial habitats have been significantly impacted by climate change. Ice has retreated dramatically. According to IPCC figures, the annual mean sea ice extent very likely shrank up to 4.1 percent per decade between 1979 to 2012. Summertime sea ice minimums decreased even more quickly, potentially up to 13.6 percent per decade. Conditions on land have also been changing, with permafrost warming up to 3°C in Northern Alaska and up to 2°C in the Russian European North.[10]

Environmental conservation and concern over climate change are

[8] Intergovernmental Panel on Climate Change, *5th Assessment Report, Working Group I, Approved Summary for Policymakers*, 2013, http://www.climate2013.org/images/uploads/WGI_AR5_SPM_brochure.pdf, 3.

[9] Ibid, 22-23.

[10] Ibid, 7.

strong drivers for European countries' interest in the Arctic. The environmental impact of increased economic development in the Arctic is a special focus, with Europe fearing potential environmental destruction from increased hydrocarbon production and also habitat loss due to climate change.

For Germany, the overwhelming effects of climate change in the Arctic motivate greater climate action domestically. Germany's Federal Foreign Office calls the Arctic "an early warning system" for climate change.[11] The EU has invoked conditions in the Arctic as the impetus for more rapid and meaningful environmental action. The EU's 2012 Joint Communication on "Developing an EU Policy towards the Arctic Region" maintains that "the rapidity of change in the Arctic provides a strong rationale for the EU's commitment to environmental protection and the fight against climate change."[12] These policy areas, in turn, are important for European foreign policy because of the EU's role as a champion for international action on climate change.

The Arctic is also a very important region for research and international scientific cooperation. European states and the European Union are active participants and funders of research, with EU contributions alone totaling more than €200 million since 2002.[13] Key EU research projects have included ice2sea, a €10 million project spanning from

[11] Federal Foreign Office, "The Arctic," November 1, 2013, http://www.auswaertiges-amt.de/EN/Aussenpolitik/InternatRecht/Einzelfragen/Arktis/Arktis-Grundlagentext_node.html.

[12] European Commission, *Joint Communication to the European Parliament and the Council. Developing a European Union Policy towards the Arctic Region: Progress since 2008 and Next Steps*, {SWD(2012) 182 final} {SWD(2012) 183 final}. June 26, 2012, http://eeas.europa.eu/arctic_region/docs/join_2012_19.pdf.

[13] European Commission, "EU's Arctic Policy: Questions and Answers," MEMO/12/517. July 3, 2012, http://europa.eu/rapid/press-release_MEMO-12-517_en.htm; and European Commission, "Marine Research in the European Union and the Atlantic," MEMO/13/455. May 24, 2013. http://europa.eu/rapid/press-release_MEMO-13-455_en.htm.

2009 – to 2013 that sought to forecast the impact of melting continental ice, such as Arctic glaciers, on sea-level rise in Europe. The ice2sea project brought together partners from nine EU member states, including Germany, Poland, the Netherlands, and Italy, and supported academic work at universities in these countries.[14] Similarly, the Arctic Tipping Points project, also funded by the EU, studied how climate change would affect Arctic marine ecosystems, and in particular, how warming seas would lead to the migration of Atlantic fish populations. This effort provided funding for research institutions in Poland, Germany, Portugal, Spain, the UK, Denmark, Norway, Greenland, Sweden, and Russia.[15]

On a country level, EU member states have made major research efforts in the Arctic. Since 2003, France and Germany have jointly funded and operated a research base in Spitsbergen, Norway. The two main research bodies, Germany's Alfred Wegener Institute for Polar and Marine Research and France's Polar Institute Paul Emil Victor (IPEV), use the base to study the northern stratosphere.[16] Poland has operated a polar research station in Spitsbergen since 1957. Finland has made international interdisciplinary Arctic research a strategic priority. It also hopes that a national research program would better develop Finnish expertise in winter shipping, sea transportation, shipbuilding, climate change research, mineral and metals technologies.[17]

Scientific research in the Arctic is a major area of cooperation between the United States and Europe and builds further connections

[14] Ice2Sea, "Estimating the future contribution of continental ice to sea-level rise: The Project Participants." August 29, 2013, http://www.ice2sea.eu/programme/partners/.

[15] Arctic Tipping Points, "Participants." November 6, 2009, http://www.eu-atp.org/index.php?option=com_content&view=category&layout=blog&id=34&Itemid=30.

[16] The Alfred Wegener Institute, "AWIPEV Arctic Research Base." http://www.awi.de/en/go/koldewey (accessed December 3, 2013).

[17] Alyson JK Bailes and Lassi Heininen, *Strategy Papers on the Arctic or High North: A comparative study and analysis* (Sigillum Universitatis Islandiae, 2012).

between sub-Arctic European states and the Arctic region. In 2013, the EU, Canada, and the United States started a research alliance in order to study the interplay of the Arctic and Atlantic Oceans. The alliance is paticularly focused on climate change, and it has been given priority status within US-European research collaboration.[18] This endeavor and other collaborative research efforts in the climate, marine, and atmospheric sciences give sub-Arctic European scientists a platform to contribute to innovative studies and access to new colleagues and future funding.

Material interests

A more open Arctic provides a range of economic opportunities for many European countries, which is particularly attractive in the context of economic downturn across the continent. For years the Arctic has proven an attractive tourism destination for Europeans, and new opportunities are emerging. An Arctic shipping route, the Northern Sea Route, reduces time and costs to ship goods to and from Asia, while open seas during summer months allow greater access to natural resources. In the long term, countries with fishing industries may be interested in pursuing increased access to fisheries in the far north.

Arctic tourism is a driver for increased engagement by non-Arctic Europeans in the Far North, and brings risks and opportunities. Local communities can gain a sustainable source of income while working to increase awareness of environmental issues. At the same time, imprudent development puts the Arctic environment and local culture at risk.[19] In the late 1990s, the now discontinued World Wide Fund for Nature (WWF) Arctic Tourism Program supported sustainable tourism as a way to protect the Arctic environment and developed principles and codes of conduct to ensure best practices in the field.[20]

Among the most common tourist expeditions are cruises to see wildlife – walruses, whales, reindeer, birds, polar bears, and Arctic foxes – in Svalbard, Norway. In 2003, nearly 30,000 tourists visited the northern Norwegian islands on these cruises.[21] Russia offers similar expeditions to the ice base Borneo, about 100 kilometers from the North Pole, for more than 200 tourists each year.[22] Although total Arctic tourism is hard to measure, some reports estimate that in the past year, more than one million tourists visited the Arctic.[23]

Arctic tourism drives greater international engagement on Arctic governance issues. Increased ship and air traffic to the Arctic increases the risk of pollution in its natural habitats. Oil leaks from ships, litter, noise pollution from increased traffic, ballast water, and air pollution from boats and snowmobiles all put the local environment at risk.[24] These risks need to be addressed in international forums because of the diverse origin of tourism operators and cruise ships, and because of unique territorial governance issues. European countries with a stake in Arctic tourism will need to work with other Arctic stakeholders in order

---

18 European Commission, "EU, US, Canada Launch Atlantic Ocean Research Alliance," IP/13/459. May 24, 2013, http://europa.eu/rapid/press-release_IP-13-459_en.htm.

19 Tereza Horejsova and Cody Morris Paris, "Tourism and the challenge of Arctic governance." *International Journal of Tourism Policy* 5, 1/2 (2013).

20 WWF, Linking Tourism and Conservation in the Arctic, 1997, http://awsassets.panda.org/downloads/wwf_tourism_conservation.pdf.

21 WWF International Arctic Programme, *Cruise tourism on Svalbard - a risky business?,* 2004, http://awsassets.panda.org/downloads/wwfcruisetourismonsvalbard2004_v5p3.pdf.

22 Arctic-info, *Tourism,* http://www.arctic-info.com/Encyclopedia/Rubric/Tourism (accessed December 3, 2013).

23 James Stavridis, "High North or High Tension? How to head off war in the last frontier on Earth," *Foreign Policy,* October 21, 2013, http://www.foreignpolicy.com/articles/2013/10/21/high_north_or_high_tension_arctic_competition#sthash.B9OIqI9E.dpuf.

24 WWF International Arctic Programme, *Cruise tourism on Svalbard - a risky business?,* 2004, http://awsassets.panda.org/downloads/wwfcruisetourismonsvalbard2004_v5p3.pdf.

to determine who is responsible for rescue operations and environmental monitoring.[25]

European companies across many sectors are taking advantage of better access to the High North, and shipping routes are attracting particular attention. Maritime shipping is crucial for trade in the European Union. Nearly 90 percent of freight into and out of the EU comes through maritime transport, and nearly 40 percent of intra-EU trade is also shipped by sea.[26] Germany has the third-largest merchant fleet in the world, and the EU is home to three of the top 10 global merchant fleets.[27] Germany has two major commercial ports, Hamburg and Bremerhaven, while Rotterdam, in the Netherlands, is the largest port in Europe.

With the melting of Arctic sea ice, European ships are able to transport goods through the Northern Sea Route, which leads from the Atlantic to the Pacific Ocean through the Arctic, faster than ever before. The journey from Rotterdam to South Korea through the Northern Sea Route saves 10 days, shaving about a third off the traditional route taken through the Suez Canal.[28] The popularity of this Arctic route has grown extremely quickly. In 2010 only four ships traveled between Asia and Europe through the northern route; by 2012 more than ten times the

[25] Horejsova and Morris Paris, "Tourism and the Challenge of Arctic Governance."

[26] European Commission, "Mobility and Transport: Maritime," May 21, 2013, http://ec.europa.eu/transport/modes/maritime/.

[27] Maritime Knowledge Center, "International Shipping Facts and Figures – Information Resources on Trade, Safety, Security, Environment." International Maritime Organization, March 6, 2012, http://www.imo.org/KnowledgeCentre/ShipsAndShippingFactsAndFigures/TheRoleandImportanceofInternationalShipping/Documents/International%20Shipping%20-%20Facts%20and%20Figures.pdf.

[28] Steve LeVine and David Yanofsky, "Shipping has already quadrupled this year through the melting Arctic," *Quartz*, July 22, 2013, http://qz.com/106630/shipping-has-already-quadrupled-this-year-through-the-melting-arctic/.

number of ships made the same trip.[29] In 2013 approximately 50 ships traveled through the Northern Sea Route carrying vast loads of goods between the Baltic Sea and the Far East.

The route is unlikely to bring about a shipping revolution. At best, ships can only use the Northern Sea Route for half the year and conditions can be unpredictable. But the new path is a significant development for European shipping companies seeking supplementary routes to the Far East and for those servicing oil, gas, and mining operations in the Arctic.

The Northern Sea Route bypasses potentially risky areas. Existing shipping routes from Europe to the Far East pass through the Suez Canal and the Strait of Malacca. These routes can put ships at risk of pirate activity in the Gulf of Aden and throughout the Indian Ocean. In addition, traffic on the established routes is becoming ever denser as the Asia Pacific region develops.[30] A more accessible Northern Sea Route gives ships an alternative passage during warmer months, providing greater security for shipping companies.

If shipping is one major economic focus in the Arctic, the promise of riches buried beneath the sea and in melting permafrost is just as alluring. Changes in ice cover have allowed greater investments in oil, gas, and mineral extraction in the region. Already, the Arctic produces more than 10 percent of the world's oil and over a quarter of the world's natural gas. This will likely grow in the future. Twenty-two percent of the undiscovered reserves of both oil and gas are thought to lie north of the Arctic Circle. The Eurasian Arctic is rich in natural gas

[29] Steven Lee Myers, "Arctic Council Adds 6 Nations as Observer States, Including China." *The New York Times*. May 15, 2013, ttp://www.nytimes.com/2013/05/16/world/europe/arctic-council-adds-six-members-including-china.html.

[30] According to Fatih Birol, the Chief Economist at the International Energy Agency, the amount of oil going through the Malacca Strait will go up by 50 percent in the next 20 years. Fatih Birol, "Q&A Session," Interview at the 2013 World Energy Outlook Press Launch, London, 12 November, 2013, http://www.youtube.com/watch?v=EwKE8YTpUVs.

resources, while the North American Arctic is endowed with greater oil resources.[31]

Onshore oil and gas production in the Arctic began in Russia in 1962 and in the United States in 1967. Since then, 61 major oil and gas fields have been discovered in the Arctic on US, Canadian, Russian, and Norwegian territory. The majority of these fields are in Russia.[32] The retreat of sea ice is increasing the feasibility of offshore oil and gas development in the Arctic. Norway has been producing natural gas in the offshore Snøhvit field since 2007, transporting the gas by pipeline to land to be liquefied and sold on global markets. Norway intends to start producing oil in the Goliat field in the Barents Sea in 2014. Rosneft, the Russian oil company, is seeking to develop offshore oil fields in the Barents and Pechora Seas. Russian companies plan to build two of their own Arctic natural gas liquefaction terminals, Yamal and Shtokman, to imitate Norway's success in developing Arctic natural gas fields. Russia is especially interested in selling LNG from the Arctic to higher-paying markets in Asia and diversifying its customer base away from Europe.[33]

Increased access to natural resources in the Arctic can benefit sub-Arctic European companies. Italy's Eni and Anglo-Dutch Shell have already partnered with Russian companies to develop resources in northern Russia.[34] German companies are working with Norwegian and Russian partners to develop northern reserves, using these partnerships as a way to develop German technical expertise in difficult conditions.[35]

[31] Scott Borgerson, "The Coming Arctic Boom: As the Ice Melts, the Region Heats Up," *Foreign Affairs*, July/August 2013; and U.S. Energy Information Administration, *Arctic Oil and Natural Gas Potential*, October 19, 2009, http://www.eia.gov/oiaf/analysispaper/arctic/.

[32] U.S. Energy Information Administration, *Arctic Oil and Natural Gas Potential*.

[33] E.U. Arctic Impact Assessment, "Developing Oil and Gas Resources in Arctic Waters: The Final Frontier?" September 2013, http://www.arcticinfo.eu/images/Facksheet/Factsheets_Final/oil_and_gas_factsheet.pdf.

[34] Borgerson, "The Coming Arctic Boom: As the Ice Melts, the Region Heats Up."

[35] Federal Foreign Office, "The Arctic."

For example, Germany's RWE and France's GDF Suez and Total are partners in developing Norway's Snøhvit offshore natural gas field.

But there are challenges for those who seek to explore and produce oil and gas in the Arctic. First, there is the issue of expense. The cost of building infrastructure is very high, making the development of certain large oil and gas fields economically prohibitive. In Alaska, for example, nearly one billion cubic meters of natural gas in the North Slope play are not being exploited because of a lack of infrastructure for moving the gas.[36] Studies in the US have found that developing oil and gas in Alaska's North Slope is 1.5 to 2.0 times more expensive than developing similar projects in Texas.[37] At the same time, although there is a large potential for further hydrocarbon development in the Russian Arctic, Ekaterina Klimenko of SIPRI argues that global trends are slowing production: "The emergence of technologies to exploit unconventional hydrocarbon resources has significantly undermined the potential profitability of untapped Arctic shelf resources and diminished their investment attractiveness."[38]

The high cost of transportation will be a problem for the development of natural gas reserves in particular. The Arctic is rich in natural gas, accounting for 30 percent of undiscovered reserves. Natural gas requires extensive pipeline infrastructure or liquefaction to transport it to customers, and it is more expensive to transport than oil.[39]

The second category of challenges to oil and gas exploitation in the Arctic are environmental. The environmental impacts and risks of exploration and production in the Arctic are significantly greater than in other areas. Weather conditions in the Arctic are extreme for onshore and off-

[36] U.S. Energy Information Administration, *Arctic Oil and Natural Gas Potential*.

[37] Ibid.

[38] Ekaterina Klimenko, "Interdependence, Not Sovereignty, is the Key to the Development of Russia's Arctic Region." Stockholm International Peace Research Institute, October 13, 2013, http://www.sipri.org/media/newsletter/essay/klimenko_oct13.

[39] U.S. Energy Information Administration, *Arctic Oil and Natural Gas Potential*.

shore exploitation of natural gas and oil reserves. Oil and gas rigs need to withstand plunging winter temperatures and storms, poor soil conditions for onshore production and transportation infrastructure, marshy tundra in the summer months, and difficulty accessing supply lines and emergency services. [40] The World Wide Fund for Nature argues that in case of oil spills, cleanup in icy conditions would be impossible. On land, the tundra would take much longer to recover than do warmer ecosystems. Even if it were possible to avoid accidents, the environmental group insists that the noise and traffic caused by oil and gas production would be very harmful for Arctic marine mammals.[41]

The third obstacle is climate change. Evidence suggests that Arctic oil and gas development drives climate change locally. A recent study in *Atmospheric Chemistry and Physics* found that 40 percent of black carbon in the Arctic atmosphere comes from flaring natural gas in the region. When oil is drilled, natural gas is also produced. In the Arctic, where there is limited infrastructure for capturing oil and gas, natural gas is often burned off, or flared, at the drilling site. The study suggests that flaring and venting of natural gas during the drilling process is directly contributing to ice melt locally. The issue of black carbon production from flaring is especially relevant for the extractive industries in Russia.[42]

Regardless of the level of development, Arctic oil and gas will influence energy availability for sub-Arctic European countries. If Arctic oil and gas reserves are plentiful and commercially recoverable, especially in areas where European oil and gas companies have purchased stakes, sub-Arctic European states will have greater energy security.

[40] Ibid.

[41] WWF Global, "Arctic Oil and Gas," http://wwf.panda.org/what_we_do/where_we_work/arctic/what_we_do/oil_gas/.

[42] A. Stohl, Z. Klimont, S. Eckhardt, K. Kupiainen, V. P. Shevchenko, V. M. Kopeikin, and A. N. Novigatsky. "Black carbon in the Arctic: the underestimated role of gas flaring and residential combustion emissions," *Atmospheric Chemistry Physics*, 13, 8833–8855 (2013), http://www.atmos-chem-phys.net/13/8833/2013/acp-13-8833-2013.pdf.

If the oil and gas produced from Arctic projects is very expensive, or if Asian companies finance new natural gas projects, future Russian natural gas supplies may be sent to Asian markets where prices are 50 percent higher than in Europe. This could impact the security of European energy supplies. Two Russian oil companies have already signed agreements with the China National Petroleum Corporation (CNPC) to recoup the high costs of developing Arctic oil and gas infrastructure. Rosneft is partnering with CNPC to explore for oil in the Barents and Pechora Seas, and Novatek is working with CNPC on the Yamal LNG terminal.[43]

Oil and gas are not the only extractive industries in the Arctic. The warming of the Arctic is also spurring economic opportunities in the mining sector. There are more than 40 active metallic mineral mines in Northern Russia, Finland, Sweden, and Norway, and a quarter of these have opened or reopened in the last decade. Increasingly, Greenland is opening itself up to mining as well. Greenland has one active gold mine, with two additional mines planned, as well as the second largest deposits of rare earth metals in the world. [44] Furthermore, Greenland recently voted to remove a ban on uranium extraction.[45] A warmer Arctic would benefit extractive industries throughout the region. Mineral mines producing zinc, nickel, diamonds, platinum and cobalt in Russia and Alaska will likely benefit from access to ports for exports.[46]

Mining is an economic driver for greater involvement in the Arctic.

[43] Klimenko, "Interdependence, Not Sovereignty, is the Key to the Development of Russia's Arctic Region."

[44] EU Arctic Impact Assessment, *Mining in the European Arctic*, September 2013, http://www.arcticinfo.eu/images/Facksheet/Factsheets_Final/mining_factsheets_final.pdf.

[45] Katya Vahl, "Greenland votes to allow uranium, rare earths mining," *Reuters*, October 25, 2013, http://www.reuters.com/article/2013/10/25/us-greenland-uranium-idUSBRE99O05A20131025.

[46] Borgeson, "The Coming Arctic Boom: As the Ice Melts, the Region Heats Up."

Rare earth minerals are currently largely sourced in China, which has the world's largest deposits. Rare earths are crucial for new technologies, including smart phones and wind turbines.[47] Having access to an additional source of rare earth minerals would help Europeans further secure access to materials required for innovative technologies. But at the moment, the biggest investors in Greenland come from China and Australia. China's Sichuan Xinye Mining Investment Company has already partnered in a joint venture with a British company to mine iron ore in Greenland. China's leaders have also visited Denmark, which is responsible for Greenland's foreign and security policy, in the past year.[48] For European mining companies, greater engagement in the Arctic could lead to increased profits and could also support European jobs. But as in the case of oil and gas drilling, mining comes with significant environmental risks.

Direct exports of Arctic resources may extend to the fishery industry as well. Commercial fishing may extend further into Arctic waters as seas warm and migratory patterns of fish change.[49] The Arctic currently provides approximately four percent of all EU catches.[50] Because of a collapse in fisheries due to past overfishing in the North Atlantic, Arctic fish populations could become a target of the European fishing industry. Populations of sockeye salmon, pollock, and Arctic cod could be particularly attractive for commercial fishing.[51]

47 Vahl, "Greenland votes to allow uranium, rare earths mining."

48 Anna-Katarina Graavgard, "Greenland's Rare Earths Gold Rush," *Foreign Affairs,* October 28, 2013, http://www.foreignaffairs.com/features/letters-from/greenlands-rare-earths-gold-rush.

49 Hannah Heimbuch, "As Globe Warms, is an Arctic Fisheries Boom on the Way?" *Alaska Dispatch*, April 7, 2013, http://www.alaskadispatch.com/article/20130407/globe-warms-arctic-fisheries-boom-way.

50 Bailes and Heininen, *Strategy Papers on the Arctic or High North: A comparative study and analysis,* 87.

51 Michael Byers, "A Fishy Situation at the Top of the World," *Al Jazeera,* September 3, 2013, http://www.aljazeera.com/indepth/opinion/2013/08/201382510502246651 3.html.

The expansion of Arctic fisheries is relevant for sub-Arctic European states. The fishery industry is a major employer in northern European countries and draws professionals from southern neighbors. Changing migratory patterns may also draw the international community into new negotiations on how to manage fisheries in the Arctic. But the biggest influence of sub-Arctic European states in Arctic fishery policy comes from the EU's role as the primary market for fish exported from Arctic states. In 2008, 80 percent of Icelandic and 60 percent of Norwegian fish exports went to the European Union. This buying power illustrates the potential sway European countries can have on their northern neighbors in terms of fishery policy. This opens the door for Arctic fisheries to be subjected to European fisheries regulations and sustainable fishing standards.[52]

Strategic concerns

The opening of the Arctic is geopolitically and strategically important not only for the Arctic States but for all of Europe. Greater access to the Arctic is driving foreign and security policies in two directions, forcing countries to cooperate in new ways but also creating fresh rivalries. Sub-Arctic European states, as members of international defense alliances, will need to respond to both trends.

Institutional and legal arrangements in the Arctic provide a model for addressing territorial disputes and sharing resources among potentially unfriendly neighbors. The eight Arctic states cooperate through the Arctic Council on issues of contaminants, monitoring and assessment, conservation, emergency prevention, marine environment protection, and sustainable development. All members of the Council have agreed to resolve conflicts through the UN Convention on the Law of the Sea (UNCLOS), although the United States has yet to ratify the convention. Norway and Russia recently used the existing framework of the UN convention and the Arctic Council in order to pass a treaty on Mari-

52 Bailes and Heininen, *Strategy Papers on the Arctic or High North: A comparative study and analysis,* 87.

time Delimitation and Cooperation in the Barents Sea and the Arctic Ocean.[53]

The UNCLOS does not eliminate all disagreement. Russia planted a flag on the Arctic seabed in 2007, and territorial disputes about Arctic maritime boundaries will continue in coming years. The signatories of the UNCLOS must claim territory on the continental shelf outside their exclusive economic zones (in areas beyond 200 nautical miles from land) within 10 years of signing the UNCLOS. Canada and Denmark are in the process of submitting claims to the continental shelf in the Arctic Ocean.[54] It will take the UN Commission on the Limits of the Continental Shelf years to process the submissions, and even then, any dispute will have to be resolved bilaterally between the states. Disagreements are also likely, as Canada, Russia, and Denmark are all expected to claim territory in the Lomonosov Ridge.[55]

Still, many scholars argue that even in the event of territorial disputes, the UNCLOS and diplomatic arrangements between Arctic States will provide adequate dispute resolution mechanisms. Russia may have put a flag on the seabed, but the following year it signed the Ilulissat Declaration, defining many legal and territorial questions in the Arctic Ocean, in order to preempt a scramble for territory.[56] The Ilulissat Declaration and the Arctic Council's commitment to the UNCLOS can provide a model for sub-Arctic European countries to address their own disputes. Latvia

[53] European Commission, "EU's Arctic Policy: Questions and Answers."

[54] Canada submitted its claims to the continental shelf in the Atlantic Ocean in December 2013 but only fielded a preliminary claim to the Arctic Ocean. Canada intends to submit further information on the limits of its continental shelf in the Arctic Ocean at a later date.

[55] Elizabeth Riddell-Dixon, "Neither Conflict nor 'Use It or Lose It': Delineating extended Continental Shelves in the Arctic," *Canada International Council*, September 19, 2013, http://opencanada.org/features/the-think-tank/essays/neither-conflict-nor-use-it-or-lose-it/.

[56] Klaus Dodds, "The Ilulissat Declaration (2008): The Arctic States, 'Law of the Sea,' and Arctic Ocean,"*SAIS Review,* 33, 2 (Summer-Fall 2013).

and Lithuania, for example, have not been able to finalize a sea border treaty between the countries because of concerns over dividing potential off-shore extractable resources. The Arctic Council's model for problem solving and cooperation may provide insights for disputes like these.

Arctic foreign and security policy is also characterized by military build-up and concerns over aggression in the newly accessible territories. Russia and Canada are the two Arctic states most actively discussing the region in strategic terms. In Russia, state policy on the Arctic describes the region as "a zone for peace and cooperation" as well as "the sphere of military security" that requires "a necessary fighting potential."[57] Canada similarly stresses "exercising [...] Arctic sovereignty" in maritime shipping in the Northwest Passage as a priority in its Northern Strategy.[58]

Military involvement in the region is nothing new. The Arctic was a highly militarized region during the Cold War. Denmark and Iceland in particular are familiar with the Arctic as a realm for international security and power politics. The United States and Denmark signed an agreement on the "Defense of Greenland" in 1951 and updated that agreement in 2004. The US military's northernmost base – the Thule Air Force Base and radar station – has operated in Greenland since 1941. The US military base in Iceland closed in 2006.[59]

Today, the Arctic is not a focus of military posturing in the way that it was during the Cold War, but it is nonetheless a growing area of interest for the international defense community. NATO held a conference about the Arctic in 2009 and a seminar for the NATO Parliamentary Assembly on "Changes in the High North: Implications for NATO and Beyond" in 2011.[60] These meetings did not lead to a defined role for NATO in

[57] Bailes and Heininen, *Strategy Papers on the Arctic or High North: A comparative study and analysis,* 51.

[58] Ibid, 59-60.

[59] Ibid, 40.

[60] Irina Zhilina, "The Security Aspects in the Arctic: the Potential Role of NATO," *Nordicum-Mediterraneum* 8, 1 (2013), http://nome.unak.is/nm-marzo-2012/vol-8-n-

the High North because of Canadian objections to the alliance's involvement, but NATO is still concerned about the region. In an October 2013 op-ed in *Foreign Policy,* the former NATO Commander Admiral James Stavridis argued, "The likelihood of a conventional offensive military operation in the Arctic is very low, despite some commentators' overheated rhetoric. [...] But there are issues that must be addressed as competition rises in the High North if we are to avoid high tension."[61] One of these issues is having adequate military capacity for Arctic conditions.

The Arctic littoral states are updating and strengthening military capabilities to be more effective in the High North. Norway has moved its Armed Forces and Army headquarters to north of the Arctic Circle. Canada is modernizing its military aircraft, including anti-submarine warfare aircraft, combat aircraft, and Joint Strike Fighters, to respond to Russia's decision to start using long-range reconnaissance and bomber aircraft over the Arctic in 2007. Canada is also investing in search-and-rescue aircraft and improved Arctic surveillance systems. By 2014, Denmark will put in place an Arctic Military Command to oversee an Arctic Response Force prepared for operations in Greenland and other northern areas. And in 2009, Russia announced the development of a special military force for the Arctic, the first brigade of which became operational in 2011.[62]

Still, it is unclear to what extent this militarization is an expression of strategic interest and aggression, and to what extent it is a natural outgrowth of increased activity in the High North. The Arctic states want to protect against piracy and illegal activity within the newly accessible region, and they also need to be able to conduct search-and-rescue operations. Siemon T. Wezeman of SIPRI argues that these military changes "have little or nothing to do with power projection

1-2013/48-article/393-the-security-aspects-in-the-arctic-the-potential-role-of-nato.

61 Stavridis, "High North or High Tension? How to head off war in the last frontier on Earth."

62 Siemon T. Wezeman, "Military Capabilities in the Arctic," SIPRI Background Paper, March 2012, http://books.sipri.org/files/misc/SIPRIBP1203.pdf.

into the areas of the Arctic with unclear ownership; rather they are for the patrolling and protecting of recognized national territories that are becoming more accessible, including for illegal activities" while increased investments in icebreakers support civilian research efforts.[63] The growing number of joint military exercises in the Arctic supports this view. Norway and Russia have cooperated on joint military exercises, and Russia and Finland recently agreed on stronger military cooperation in the Arctic.[64]

Regardless of strategic intention, increased military capabilities in the Arctic are relevant for sub-Arctic European states. For now, military exercises in the High North are conducted between Arctic States. But as military activities in the north develop, sub-Arctic partners may become involved in joint military exercises with Arctic states, either bilaterally or through NATO. In the past year, Norway's Defense Minister Anne-Grete Strøm-Erichsen has called for more NATO joint exercises in northern Norway.[65] Scholars Bernardo Pires de Lima and Erik Brattberg argue that NATO's withdrawal from Afghanistan will signal a strategic reorientation with a greater focus on the Atlantic Basin rather than far-flung conflicts. In particular, NATO could focus on the Arctic to help secure increased commercial shipping.[66] These kinds of activities, if opened for sub-Arctic partners, could help expand the military capabilities of those

63 Wezeman, "Military Capabilities in the Arctic," 13-14.

64 Stavridis, "High North or High Tension? How to head off war in the last frontier on Earth," and Atle Staalesen, "Arctic on Russian-Finnish Military Agenda," *Barents Observer*, May 29, 2013, http://barentsobserver.com/en/security/2013/05/arctic-russian-finnish-military-agenda-29-05.

65 Thomas Nilsen, "Wants More Northern NATO Exercises," *Barents Observer,* February 28, 2013, http://barentsobserver.com/en/security/2013/02/wants-more-northern-nato-exercises-28-02.

66 Bernardo Pires de Lima and Erik Brattberg, "NATO Must Focus on South Atlantic, Arctic to Remain Relevant," *World Politics Reviews*, October 28, 2013, http://www.worldpoliticsreview.com/articles/13333/nato-must-focus-on-south-atlantic-arctic-to-remain-relevant.

states, especially those who will need a strategic reorientation following their exit from NATO activities in Afghanistan.

Lastly, the increased role of Asian states in the Arctic provides sub-Arctic Europe with a new stimulus for greater engagement with the north. With five Asian countries, including India and China, already official observers in the Arctic Council, sub-Arctic European states are becoming ever more aware of the importance of the Arctic and their own insufficient involvement in the region. For some, Asia's economic influence in the extractive and shipping industries in the Arctic is a worrying threat to their allies' sovereignty. For others, China's investments in Iceland have a strategic resonance. The United States closed its military base in Iceland in 2006. Chinese officials arrived soon after. They were interested in buying up territory on the small island state as a base for Arctic exploration.[67]

But sub-Arctic European states may also see the chance to work alongside Asian countries on Arctic issues as an opportunity to strengthen global ties. A recent study of China's role in the Arctic suggests that the country is interested in gaining influence in the Arctic through the use of diplomacy, scientific research, and joint business ventures.[68] Sub-Arctic Europe could benefit diplomatically and economically by taking part. At the very least, sub-Arctic European states will need to be aware of Asian states' strategic interest in the region.

Conclusion

The Arctic is a fast-changing region of growing importance to sub-Arctic Europe in terms of geography, political ties, values, economics, and security. For now, few sub-Arctic European states have strategies directly addressing the Arctic, but Arctic awareness is growing alongside the region's fast-opening waters. Seven sub-Arctic European states including Germany and Poland are observers in the Arctic Council, and the EU is seeking permanent observer status.

For countries that are concerned about climate change, the Arctic is a necessary focus of research and conservation activity. Funding for climate change research will benefit all of Europe, including sub-Arctic research institutions. There will be new opportunities for these institutions to contribute to major studies in the High North.

The melting of the polar ice cap is increasing access to the Arctic and will bring more economic activity to the region, which may benefit sub-Arctic Europe if it is ready to take advantage of the opportunities. More open seas enable quicker shipping between Europe and Asia, and maritime shipping will expand in the Arctic if current climate trends continue. On land and in the sea, the Arctic holds tremendous resources. The Arctic is home to vast oil and gas reserves, and warmer seas are permitting offshore drilling. Other parts of the Arctic support large mining industries. Greenland in particular is rich in rare earths and uranium, which are important for technological advancement and defense. Furthermore, as Arctic waters warm, fish populations may expand further north and create new opportunities for commercial fishing. The development of these industries in the Arctic needs to be balanced with other interests, especially environmental protection. Still, based on current momentum, economic development will grow in coming years. European countries south of the Arctic could benefit economically from new business ventures in the High North.

The Arctic's economic promise drives much of the global interest in the region, and the area's geopolitical significance will grow in step with economic developments. Arctic Ocean littoral states are increasing their military capacities in the region, with new icebreakers and aircraft patrolling seas and skies. Sub-Arctic Europe may become more involved in Arctic military exercises in the post-Afghanistan era if NATO takes its focus closer to home.

---

[67] Bailes and Heininen, *Strategy Papers on the Arctic or High North: A comparative study and analysis*, 78.

[68] Linda Jacobson and Jingchao Peng, "China's Arctic Aspirations," SIPRI Policy Paper No, 34, November, 2012, http://books.sipri.org/files/PP/SIPRIPP34.pdf.

With the Arctic quickly heating up as a focus of global economic, military, and environmental efforts, sub-Arctic Europe is already devoting resources to the region and will do so even more in coming years. Sub-Arctic European countries are proving that they need not have an Arctic border in order to have a stake in the region's future.

THE DEVELOPMENT OF AN EU ARCTIC POLICY: INTERESTS, OBJECTIVES, AND INITIATIVES

Steffen Weber

Acknowledgements: The author would like to thank Prof. C. Pelaudeix and I. Romanyshyn for their very valuable cooperation and contributions to this and other articles; C. Roever for committed work on the first draft and preparations for this article; S. Perry and R. Deroo for continued support and assistance; N. Beckmann, country representative of the Konrad Adenauer Foundation, and his team, for energizing commitment and support to the theme of the Arctic, and the Geopolitics in the High North program for their support with research on which this article is also partially based.

Introduction

When and how did the Arctic become attractive for the European Union's policy makers? The placing of the Arctic on the Union's policy agenda was an incremental development, and the evolution of an Arctic policy is anything but a linear process. On the contrary, the shaping of an EU Arctic Policy (EUAP) can be best understood as the result and subject of a constant dialogue between a multitude of actors in and outside the EU institutional framework. Apart from some individual discus-