

Arctic melting: A new economic frontier and global geopolitics¹

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INTRODUCTION

The Arctic region consists of both the terrestrial landmasses of the eight circumpolar states and the approximately 14 million square kilometer marine area of the Arctic Ocean. The vast landscape of the entire Arctic is the size of the African continent. Much of the region, particularly the marine area, is ice covered throughout most of the year. Ice never melts in the central Arctic Ocean, but during the summer months, many parts of the regional seas around the ocean open up to maritime access. The ice thickness throughout the Arctic Ocean, including the central ocean, however, is shrinking at an accelerating rate. Climate change is suggested to contribute to increasing global temperatures, and in the Arctic, temperatures are rising two to three times more quickly than the global average, resulting in much faster

melting of ice sheets. Ice melting, while creating challenges for the Arctic environment, also presents new opportunities as access to the Arctic Ocean gradually becomes feasible. The Arctic is known to be a resource-rich region with potential reserves of offshore oil and gas and other terrestrial mineral resources. Moreover, navigation through the newly emerging Arctic sea routes is gradually gaining in popularity despite the challenges to develop these routes as alternatives to traditional routes. Against this background, this brief paper emphasizes that despite challenges, particularly environmental and human security threats, emerging global geopolitical interests related to resource potential and maritime transportation of resources make the Arctic a focal point of global attention.

THE ARCTIC: AN EMERGING ECONOMIC FRONTIER

The Arctic region is unique, regarded as the earth's final pristine ecosystem adapted to support its ecological service system. Today, however, dramatic changes threaten the maintenance of the Arctic's prevailing distinct environmental features. Climate change

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is a main point in the discussion on the Arctic, and the region suffers harsh consequences from climate change as increasing temperatures have detrimental effects on its natural environment. Drastic affects are expected on the Arctic's terrestrial and marine biodiversity and the cultural diversity of its population of distinct indigenous communities which rely on nature-based, traditional activities in the Arctic's natural environment. Arctic biodiversity includes numerous iconic, extreme-cold-adaptive and ice-dependent species, but many are expected to become extinct due to the transformations in the region. These changes threaten the balance of the ecosystem services and the stability of the ecological processes, which, in turn, have adverse consequences for the humans inhabiting the region. More than forty groups of indigenous peoples rely heavily on the Arctic's natural environment to perform the nature-based, livelihood activities on which their physical and cultural survival depends. Although these peoples have been highly adaptive to changes, today's transformations are so rapid that these peoples increasingly cannot become resilient or predict the course of changes, unlike in earlier times. These changes in their lives and livelihoods threaten their cultural identity.

The risks to the natural environment are also accelerated by other developments

resulting from increased human activities. However, some see these human activities as bringing new opportunities that make the region a geopolitical focus of both regional and global attention, primarily for its potential oil and gas resources. In May 2008, the United States Geological Survey (USGS) released findings on the potential oil and gas resources in the Arctic. According to USGS, the Arctic has one fourth of the world's undiscovered oil and gas resources, which are estimated to have approximately 90 billion barrels, or 13% of the world's reserves and 30% of recoverable gas reserves. Around 84% of these resources lie within around 500 meters underneath the Arctic Ocean and within the legal continental shelves of coastal states, or within 200 nautical miles of these countries.

Moreover, access to an ice-free Arctic Ocean that remains open longer permits more international navigation. Today, marine transportation through Arctic sea routes, particularly the Northern Sea Route (NSR) and the Northwestern Passage, is gradually being developed based on the following rationale. These sea routes are much shorter compared to traditional sea routes, allowing savings of time, money, and energy. For example, compared to traditional sea routes, the NSR cuts off 12–15 days' travel, and a voyage from China to Murmansk or Kirkenes saves up to

\$650,000 through lower energy consumption. In addition, these sea routes arguably are safer because the Arctic is a relatively conflict-free zone. Increased traffic on both sea routes has been documented recently. For example, the Northwestern Passage saw 7 ships in 2009 but 19 in 2013. Usage of the NSR has increased more remarkably: in 2010, only 4 ships passed through the route, but by 2013, the number increased to more than 70 ships. The number of vessels using the NSR dramatically declined in 2014 and 2015 but rose again in 2016. Cargo volume has steadily increased across recent years, rising by 33% in 2016.

GLOBAL GEOPOLITICAL INTERESTS IN THE ARCTIC

The region's resource potential, along with the increase in marine navigation through the new Arctic routes, has allowed a broad expansion of trade and investment that increasingly connects the Arctic with rest of the world, including the emerging economies of Asian nations. It is claimed that the Arctic is gradually becoming an important region, offering new economic frontiers for global actors and stakeholders. Access to ice-free Arctic Ocean, as discussed, not only leads to intensified extraction of its living and non-living resources but also offers maritime access for international navigation, which global actors see as

beneficial for increasing potential trade and investment in the region. Emerging Asian nations, including China, India, Japan, South Korea, and Singapore—which in 2013 became official observers to the Arctic Council, a high-level intergovernmental forum of the eight Arctic states—are exploring opportunities to build business relationships with the Arctic nations.

China—often labeled an energy-hungry nation—is on the frontlines of these developments. As its economy grows rapidly, China seeks to diversify its energy imports and sees Arctic resources, particularly Russian oil and gas resources, as potential targets to meet its growing energy demands. As bilateral relations with Russia improve, China is expected to double its oil imports from Russia by 2020 and has agreed to cooperate in building gas pipelines starting in 2018. China also meets its needs by investing in the energy sector elsewhere in the Arctic. For example, in 2013, China bought Nexen, a Canadian oil and gas company, for \$15 billion. Chinese investment in the Arctic countries extend to the development of other mineral and mining resources, particularly rare-earth elements, in which China has a 95% ownership share today. Five Chinese mining companies hold licenses to explore and develop rare earth elements in Greenland. It should be noted that China is considered to be the world

leader in refining rare earth elements. Moreover, China has established a free trade deal with Iceland, its first European partner in such an agreement. After the United States closed its Cold War era military base in Iceland in 2006, China expanded its presence in the region, making China the gateway to potential business investments in the Arctic.

China also increasingly uses the Arctic shipping routes and considers the implication of the use of the routes in its Belt and Road Initiative policy. It should be noted that China is among the most important nations in international maritime trade. Chinese ownership of vessels ranks fourth in the world, and the country carries 90% of its exports and imports through maritime transport. Moreover, Chinese ship owners control 8.91% of total world tonnage, making the country both the world's leading export nation and an important importer of goods and raw materials. The first Chinese cargo ship reached Europe via the NSR in the summer of 2013, and China tested its icebreaker *Xue Long* on the NSR in 2012. It is expected that by 2020, 5%-15% of China's trade with Europe will travel by the NSR.

In addition to China, other influential Asian nations, such as Japan, South Korea, and Singapore, are also considering the future potential of the Arctic. For example, Japan—the world's

largest importer of liquefied natural gas (LNG), second largest importer of coal, and third largest importer of oil—views the Arctic as an alternative source to meet its increasing energy demand. Japan has planned LNG shipments from Norway and Russia in 2018, explored the potential of the NSR to transport these resources, and invested in maritime capacity building by developing (or transferring) new technology. South Korea has a similar interest in energy resources and has invested in building ice-strength cargo ships capable of operating on the Arctic routes. Singapore has a great interest in offshore activities in the Arctic and is exploring the potential to use its lengthy maritime experiences to contribute knowledge and develop the shipping industry.

While these developments suggest increasing interest in the Arctic among global actors, the region's importance is also, to some extent, shaped by its role in the politics of the great powers, particularly China. The Arctic's rise as an influential global actor in economics and politics gives it a say in global politics. The US perceives a threat from China's development of closer relations between China and Russia, including transporting energy resources from the latter.

CONCLUSION

Despite growing geopolitical and economic interest in the Arctic, development likely will be rather slow. The Arctic clearly is becoming an interesting geopolitical space, but the enthusiasm for the region arguably is overestimated. Take the example of hydrocarbon. Extraction of Arctic hydrocarbon resources, especially those offshore, does not seem feasible, creating no real need to rush for the resources. The unfavorable, harsh climatic conditions make extraction practically complicated and highly costly, and with the relatively stable market price of oil, extraction is not cost effective enough to compete with the existing market prices. Moreover, the companies that would be involved in extraction process are reluctant to invest due to the uncertainty and risks involved. Insurance companies are also often unwilling to provide coverage for businesses operating in uncertain conditions as exist in the Arctic.

Like resource extraction, Arctic shipping is not smooth, and fully developing the shipping potential of these new sea routes requires time. The reasons for the slow development include the harsh, unpredictable climatic conditions, poor infrastructure, few to nonexistent port facilities, floating ice even when the routes are accessible, concerns about maritime safety and security, a shorter

navigation season, a lack of search-and-rescue facilities, insufficient navigation charts, and inadequate services for surveillance, pilotage and salvage. In addition, Arctic shipping requires ice-breaker services, making the journey expensive. The higher expenses for polar-class vessels to operate in Arctic waters and the reluctance of insurance companies to cover ships operating in this area hinder progress in developing these routes.

Given these real challenges, immediate and dramatic growth in resource extraction and shipping operations in the Arctic seems unlikely. Gradual development of services and new technologies is expected. For example, despite protests from environmentalists, Russia started extracting oil from the Prirazlomnoye field in the Pechora Sea in 2014, and it produced 10 million barrels of Russian North Arctic Oil by March 2016. Also, despite heavy criticism from environmentalists, Norway recently announced preliminary plans to open a record number of blocks in the Barents Sea for oil and gas exploration. More than half of the proposed blocks are in Norway's northernmost discovered oil field. Regarding maritime navigation, traffic is gradually increasing despite obstacles in the natural environment and the physical infrastructure. Russia established the NSR Administrative Office some years ago to administer the

route and offer relevant information to facilitate ship operations. Despite the overall weakness of the infrastructure, Russia built 10 emergency rescue centers along the NSR by 2015, offering port facilities and other services. Most centers, though, are positioned on the western leg of the sea route, leaving almost the entire eastern leg with few, if any, rescue facilities. Nevertheless, as suggested, this gradual development is slowly increasing the region's future importance as a frontier economy.

Any such developments taking place in the Arctic are not without costs, and the actors involved must be aware of the consequences. These developments, therefore, need to be assessed through legal and institutional tools implemented by actors from both the Arctic itself and across the globe. The existing regulatory tools applicable to the Arctic and its heavily institutionalized regional structure offer platforms for actors and stakeholders to balance satisfying geopolitical interests and safeguarding the Arctic's fragile environment. While the efforts undertaken primarily through the framework of the Arctic Council are laudable, how the nations and actors involved in Arctic geopolitics will behave and balance their economic interests with environmental protection obligations remains to be seen.

