

China Arctic Cyber Espionage

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ABSTRACT

China is one of the most pervasive actors conducting global cyber espionage, activities that have resulted in two indictments by the U.S. Department of Justice. One thing is clear – if a target or subject area is in China’s strategic interest, it is likely that some level of cyber espionage is being levied against that target, as well as any organization involved in that subject. While reporting by the many countries bordering the Arctic on Chinese cyber-espionage has been limited, given China’s high interest in the Arctic, and its espionage proclivities, China’s activity may well be either undetected or under-reported.

China’s Arctic Aspirations – An Under-Reported Cyber Espionage Hot Spot?

China has vociferously promoted itself as a legitimate “Arctic State”—it included the region in its strategic planning for the 2011 Twelfth Five-Year Plan,^[1] and in a 2018 publication delineating its Arctic Policy.^[2] China further demonstrated its commitment via a series of economic opportunities to attain influence in this area of rising strategic, economic, environmental, and maritime importance. Incorporating the Arctic into its strategic documents underscores China’s elevation of this region to a national-level priority. The Arctic falls squarely within China’s long-term global leadership and economic power goals and presents an opportunity to enhance China’s presence in less-emphasized areas of the world, particularly where neither the US nor Russia have dedicated much time or attention. As it did in Africa, Beijing is resorting to its win-win playbook,^[3] enticing local states via economic engagement and financial investment in return for support for Chinese projects.



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Economic engagement clearly seems to be a primary objective, particularly in the underdeveloped Arctic region, which tracks China's approach in Africa^[4] and Latin America,^[5] with construction and infrastructure projects tied to important trade agreements. The Arctic provides China a polar component to its Belt and Road Initiative, a "transcontinental, long-term policy and investment program" focused on developing infrastructure and economic integration for countries along the historic Silk Road.^[6] Access to natural resources and establishing a maritime trade route factor into China's calculus. Indeed, Chinese investment has focused largely on energy-related efforts under the Silk Road banner. Per a 2008 U.S. Geological Survey, the Arctic retains an estimated thirteen percent of the Earth's undiscovered natural gas, and as much as ninety billion barrels of oil.^[7] China's appetite for natural resource consumption is well known, and, according to a 2019 report, China is increasing imports from resource-rich countries.^[8] Fisheries, mining, and shipping are other unexplored areas of Chinese exploitation.

China's Investment – China's Influence

China has invested heavily in nearly every Arctic country in the form of joint projects that see both partners receiving a benefit. In the case of at least two countries on the Arctic Council, Chinese investments represented a significant percentage of their annual gross domestic product, according to one 2017 report.^[9] China is prospecting for minerals in Greenland, and working with a Finnish company seeking to lay under-sea Internet cables to connect Northern Europe and Asia.^[10] Beijing's collaboration with Moscow includes a joint project to build ice-capable tanker ships to help extract from Arctic-based energy sources.^[11] China and Russia are also trying to establish a Northern Sea Route that would reduce transportation time by 40 percent compared to the Suez Canal.^[12] The magnitude of investment differs among the Arctic countries, for some the dependence on Chinese engagement is significant.

While economics is a driving force, China views the Arctic the key to its emergence as a global power. According to one think tank focusing on Arctic issues, the region offers China a place where it can exert its influence via infrastructure projects, and by extension, feed its wealth into the region.^[13] This is a necessary step for Beijing, which made its first overture in the Arctic in 1999 with expeditions, which resulted in building a research facility on Svalbard Island in 2004.^[14] Nine years later, China officially joined the Arctic Council, an intergovernmental forum promoting cooperation and coordination among Arctic states with a focus on “sustainable development and environmental protection in the Arctic.”^[15] Consisting of eight primary states (Canada, Denmark, Finland, Iceland, Norway, Russia, Sweden, and the US), China attained permanent observer status in 2013. Observer nations lack voting rights and cannot challenge the ownership of the five coastal Arctic states.^[16] Barring charter amendments, Beijing’s role is limited to discussion and recommendation only. Yet, engaging in multilateral approaches has been a favored tactic of China (witness China’s preference in establishing cyber norms of behavior^[17]), particularly when it lacks the capability to dictate a course of action among international groups. Voting countries that rely on Chinese funding help Beijing get what it wants.

Why China’s Forays into the Arctic are a Concern

Unsurprisingly, while China’s playbook has been effective in the past, it is hardly subtle or below the US radar screen and efforts to curb China’s global expansion. Beijing touts itself as a “near-Arctic state” in its 2018 Arctic Policy,^[18] signaling its intentions of being a regional player. China sought a foothold in areas like Greenland, first trying to buy an old military base in 2016,^[19] followed by then withdrawing its bid to build two airport projects on the world’s largest island.^[20] Greenland has long been of strategic military importance for the US, and any Chinese presence threatens US missile defense and space situational awareness capabilities.^[21] However, concerns about China’s attempts to expand its sphere of influence in the Arctic go beyond the US. Another permanent observer nation, Japan, as well as Denmark, Norway, and Sweden, have recognized the potential threat of China’s military presence in the Arctic.^[22]

China is no stranger to such push-back and uses various diplomatic, economic, and cultural tacks to reduce the global perceptions of its hegemonic aspirations. China’s national security objectives obviously include preserving China as a regional and national power,^[23] so ascertaining foreign governments’ positions on relevant issues is key. Cyber espionage has allowed China to bolster its traditional human intelligence-collection platform, conducting multiple remote operations against myriad global targets. Numerous cyber espionage campaigns relate to China with various attribution levels, suggesting that Chinese national state and nonstate actors may be working to meet Beijing’s intelligence needs. Indeed, China’s global cyber-espionage activities have been well documented, including official U.S. Department of Justice (DOJ) indictments of Chinese civilian, military, and government actors.^[24] These indictments implicate these individuals for supporting operations that gained unauthorized access into and stealing sensitive information from organizations in the following areas: automotive, aviation, banking, communications technology, healthcare, and oil and gas, to name a few.

Increasingly, as DOJ indictments of Chinese officials graphically reveal, the dynamic nature of the geopolitical landscape requires timely, accurate, and actionable information. Recent targeting of U.S. Presidential campaigns^[25] is but one example of probing the positions of the two presidential candidates on issues of Chinese concern. Chinese cyberspies also often hack governments in Asia on region-related issues.^[26] Also reported is the fact that China's trading partners are a victim of cyber theft by China.^[27] It is logical to presume that even where China has not yet acquired dominating influence, it could well be engaged in cyber espionage activities to gain an advantage ahead of any decisions.

Potential Targets for China's Cyber Espionage

Given the importance China places on the Arctic region, they could well be targeting the permanent membership, as well as other states with observer status. Several Council working groups set Arctic policy that could seriously affect China's long-term plans. Working groups—such as Protection of the Arctic Marine Environment (focusing on Arctic shipping, marine protected areas, and resource exploration), Arctic Monitoring and Assessment Programme (focusing on documenting maritime pollution trends, sources and pathways of pollution, and climate change trends), and Sustainable Development (which works to protect and enhance the environment, economy, social conditions and health of indigenous communities and Arctic inhabitants), all address issues largely ignored by China. China's reputation as a notorious polluter^[28] and a colonizer in Africa^[29] could well align Arctic Council members against China's initiatives, which Beijing would do well to understand sooner rather than later, so cyber espionage against key country participants, their offices, and relevant organizations would benefit China.

Cyber espionage goes on during peacetime, tension, or conflict, and its long reach in the lead up to major events such as bilateral meetings, economic fora, and the congregation of international organizations. Knowing this, stakeholders should increase their security defenses and seek to reduce the risk of data breaches. Socializing the tactics, techniques, and procedures (TTP) of Chinese cyber threat actors can also further bolster security postures. While TTPs evolve, China's cyber espionage campaigns often execute tried-and-true methods such as spear phishing, watering hole attacks, and use of “zero-day” exploits.

Open-source reporting focused on cyber threats to the countries in the Arctic region is quite limited. A 2015 report by a computer security vendor highlighted the targeting of several Nordic country industries by suspected Chinese and Russian attackers,^[30] China's denials notwithstanding.^[31] Whether these operations were motivated by China's Arctic interests is unclear, but the report does suggest that China's interest in the region and certain Arctic Council monitored industries. Russia has long been the primary threat to Nordic countries, but in 2019 the president of the Nordic Council, the formal cooperation among the Nordic

countries, cited both Russia (militarily) and China (economically) as major threats to the region.^[32] It is no secret that China's economic interests are likely catalysts for Beijing's suspected cyber espionage activities.

Russia's perception of China in the Arctic is worth noting. An Arctic Council member, Russia has some joint projects underway with China, but this alliance likely is more economic in nature, given Moscow's likely concerns with China's military presence in the region.^[33] This could put the two collaborators at odds, and invite Beijing's cyber attention, despite a 2015 China-Russia agreement not to hack each other or use technology as a destabilizing medium (among other provisions).^[34] Given that governments inevitably operate so as to preserve all vital national security objectives, the promises exchanged in this pact at best are of dubious substance, to say nothing of enforceability. Cyber espionage will persist so long as such spying does not damage information integrity or destroy system operations of targeted networks.

CONCLUSION

China's vast and pervasive cyber espionage apparatus has a proven ability to conduct large-scale operations. However, it has also executed more stealthy campaigns, using sophisticated TTPs and front companies to obfuscate their identities.^[35] Beijing's publication of an Arctic policy underscores that the Arctic is of high national interest. As it seeks to implement the Polar Silk Road and other natural resource endeavors as part of its economic plan, understanding Nordic countries' positions on issues that could adversely impact Chinese aspirations will be important for Beijing. Knowing this beforehand will help China develop strategies to counter oppositionist viewpoints and political/economic tactics designed to persuade detractors to change, or at least soften, their positions.

What is clear is that China's "peaceful rise" has been tarnished via a series of Chinese missteps that range from its hand in authoritarian rule, its questionable track record on humanitarian issues, its rampant global intellectual property theft, to its suspicious attempt to be an instrumental developer of global 5G network. Now, as the world grapples with COVID-19, China's reputation has further been sullied, as it has been accused of being less than forthcoming and transparent regarding the virus. China combats such bad press via a public-facing propaganda and information campaign while leveraging cyber espionage in the background to obtain the information it needs.

Tactics used in the past, especially in underdeveloped regions like Africa, may not work in the Arctic. As such, China will have to develop a different approach that will require better understanding of regional leaders, what they want, and what they hope to accomplish. And that may require getting inside their heads, the type of information that cyber espionage is adept at collecting.♥

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