



ARCTIC SECURITY BRIEFING PAPERS

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Conjuring Chinese Nuclear Weapons Submarines in the Arctic

A single provocative sentence about China deploying nuclear-armed submarines in the Arctic led much of the commentary on the Pentagon's May 2019 report on developments in the Chinese military. The reference was obviously meant to stoke alarm, and as long as competitive nuclear weapons "modernization" proceeds apace – especially in the United States, Russia, and China – there is little doubt that China could one day be capable of conducting submarine patrols in the Arctic, but that doesn't answer the question of why they would want to.

China's Arctic interests and ambitions are not in serious doubt.¹ The development of a reliable trans-Arctic shipping route tops the list, and that in turn shapes an interest in developing a regional maritime infrastructure, echoing its "belt and road" initiatives elsewhere – envisioning the Arctic joining the series of trade corridors being pursued in Africa, Asia, and Eurasia.² Cooperation with Russia in transportation and resource extraction will expand. A Chinese polar research institute has been operating since 2009. Icebreakers are being built. China is investing in Greenland's resource sector, with a particular interest in its rare earth minerals, and is engaged with Iceland, especially in scientific research.

Some see danger in China's infrastructure interests. Civilian facilities like ports are dual-use facilities with obvious military applications. And the scientific research that China conducts in the North could no doubt produce militarily useful information. Among the high-profile worriers is US Secretary of State Mike Pompeo, who sees the region as "an arena of global power and competition" owing to vast reserves of oil, gas, minerals and fish stocks, and so he asks the question (without any sense of irony, given US military deployments in the South China Sea): "Do we want the Arctic Ocean to transform into a new South China Sea, fraught with militarisation and competing territorial claims?"³

The Pentagon's provocative sentence that got all the attention warns that "civilian research could support a strengthened Chinese military presence in the Arctic Ocean, which could include *deploying submarines to the region as a deterrent against nuclear attacks*" (emphasis added).⁴

A submarine "deterrent" weapon means a submarine armed with strategic range ballistic missiles (SSBNs), and that begs the obvious questions: does China have SSBNs capable of Arctic operations, and if it did, what would be the point of operating in the Arctic?

Chinese SSBN capabilities

China, with global interests that certainly include the Arctic, is in fact acquiring a significant fleet of nuclear-powered submarines equipped with long-range and nuclear-tipped ballistic missiles (by now up to six such SSBNs – referred to as Jin-class, type 094 subs). Each of these subs is designed to carry up to 12 sea-launched intercontinental ballistic missiles (SLBMs) with one nuclear warhead each.⁵ The missiles are thought to have a range of 7,000 to 7,400 kms, which means that from patrols in waters near China, they could strike targets in

Alaska and Hawaii, but not in the contiguous United States. To maximize the deterrent impact of those SSBNs, they would have to be reliably capable of deploying outside the regional bastions of the South China Sea, or the East China and Yellow Sea, to the Pacific to put their missiles in reach of the American heartland. Of course, this nascent SSBN force is not China's only nuclear deterrent – it has land-based, mobile, nuclear-armed inter-continental ballistic missiles with ranges to strike anywhere in the US. Their mobility ensures that enough would survive a first strike to provide an assured second or retaliatory strike capable of doing unacceptable damage in the American heartland – the basic role of a nuclear deterrent force being to dissuade an adversary from launching an initial attack. China also has nuclear bomber capabilities, and is developing a new generation nuclear capable aircraft, that are within range of American military facilities in East Asia.⁶

China has obviously decided to mimic the US and Russia to pursue a nuclear triad (that is, the capability to launch nuclear weapons from land, air, and sea). It is not known whether the Chinese have to date sent their SSBNs, the sea-based element of the triad, on patrols with nuclear weapons on board, whether in their home waters or beyond. The current six (four available and two being readied for operations) are said to be “very noisy,” and analysts assume that China will go on to develop a next generation SSBN that is quieter and more difficult to detect.⁷ And, to be sure, at some point, China is bound to acquire the technical capability to patrol in the Arctic, and that would put even its current SSBN-based missiles within range of the American heartland. But, why would they?

Chinese SSBNs in the Arctic?

As noted, the primary requirement of a Chinese sea-based nuclear deterrent force is that it be able to survive a first strike and have the means, in a post-nuclear-attack environment, to launch a retaliatory or second strike. That is most readily accomplished, most analysts agree,⁸ by deploying its SSBNs in regional bastions, where they can be better protected from American attack subs. In their home waters, the Chinese SSBNs can be accompanied by complementary naval forces, and a Reuters special report quotes military and intelligence analysts as observing that when Chinese SSBNs put to sea in the South China Sea they are indeed “flanked by protective screens of surface warships and aircraft on station to track foreign submarines.”⁹

There are really only two reasons why China would want those SSBNs to leave their bastions. The first would be to get their missiles in range of the American heartland, but the urgency of that can be overstated, since China already has survivable land-based systems that can do that. It is also safe to assume that in a world still burdened by nuclear arms racing, China will develop new generations of SLBMs (sea-launched strategic range ballistic missiles) of a sufficient range to reach American heartland targets from within their bastions.¹⁰

The second reason to leave the bastion would be if they became vulnerable there to a concerted offensive by hostile attack submarines – as in a gathering crisis in which America attack submarines and other anti-submarine warfare systems (ASW) were making moves to converge on the Chinese bastions and render the latter's SSBNs vulnerable. That would signal a possible pre-emptive first strike on China (why else would they threaten pre-emptive attacks on second strike weapons?) and would prompt attempts by Chinese SSBNs to reach the open Pacific.

The fact that such a scenario seems unlikely does not mean that China regards it as impossible, especially since the Americans have stated directly that Chinese SSBNs must become the focus of American attack submarines (SSNs). Admiral Harry Harris, while head of US Pacific Command, told a Congressional Committee that China's “SSBN will give [it] an important strategic capability that must be countered,”¹¹ and reports suggest the Americans are in fact pursuing a more aggressive ASW strategy across East Asia.¹²

In other words, the Chinese are being incentivised to develop the capacity for SSBN patrols well beyond the bastions which they fear could be rendered vulnerable and no longer true bastions. Such wider patrols face challenges.¹³ Chief among them is the challenge of getting relatively noisy SSBNs out of their home waters while avoiding the attentive ears of the US and its regional allies at the choke points. If detected while trying to exit the bastion, a sub would then be traceable by America ASW operations and trailed into the vast Pacific. But once through and in the open Pacific without being trailed, the Chinese SSBNs could position themselves well within range to launch retaliatory strikes on the American heartland. To manage all of that, Chinese military commanders would have to be in possession of clear command and control procedures and have confidence in their ability to communicate with subs in a post-nuclear attack environment.

Once in the Pacific, whether hidden or still trailed by American attack submarines, what would be the point of heading for the Arctic? That would set them on a course going through the Bering Strait, which they would definitely not do anonymously. They would enter the Arctic being watched and followed by the Americans. In other words, what possible strategic advantage could there be to entering a hostile region that is difficult to navigate and certain to mean facing intense anti-submarine warfare operations?

Arctic based attacks on the southern contiguous US would confound American Arctic based BMD interceptors, but they could also evade the US system with shorter-range attacks from the Pacific. There is no need to go to the Arctic to avoid US BMD. It would be more effective to launch retaliatory strikes from unanticipated parts of the Pacific with unanticipated trajectories that would overwhelm even a functioning BMD system (keeping in mind that the Americans themselves acknowledge that BMD is designed to intercept only isolated attacks – not a coordinated attack from an arsenal the size of China's).

And, by the way, this all also begs the questions of why the Americans would find advantage in threatening Chinese SSBNs. They pose no first-strike threat; rather, they are quintessentially second strike, deterrent weapons that are consistent with a no-first-use policy.

Chinese nuclear-powered conventional attack submarines in the Arctic?

Attack submarines are designed to attack both surface and submarine naval operations. According to the IISS Military Balance 2019, China currently operates six nuclear-powered attack submarines. They have a role in escorting SSBNs and are capable of operating in the Pacific in an attack mode against other submarines and surface vessels. China also has an inventory of 48 conventionally powered (diesel electric and very quiet) attack submarines for operations within China's home region.¹⁴

Lyle Goldstein, writing for the National Interest,¹⁵ refers at length to a 2017 paper in a Chinese naval research journal, written by research personnel at the Qingdao Submarine Academy.¹⁶ He describes the paper as providing an authoritative account of Beijing's developing undersea ambitions, quoting the paper directly: "[China's] submarine forces must not only go the Asia-Pacific, [but] they must also go to the Indian Ocean, and then they must go to the Atlantic and to the *Arctic* Oceans" (emphasis added). Goldstein offers this as a kind of warning, but the enthusiasms of Chinese military academics don't alter the practical realities of Arctic operations.

The Americans do not operate their SSBNs in the Arctic, so strategic anti-submarine warfare would not be the point of China sending attack submarines there. China's attack submarines have land attack capabilities, but there simply are not enough close-range high-value targets in the Arctic to warrant such operations in a physically treacherous and militarily hostile region. It is hard to construct credible scenarios in which Chinese subs would want to attack conventional military forces or civilian shipping in the Arctic. China would have no incentive to disrupt Arctic shipping – their interest is the opposite, to have secure shipping routes through the

Arctic. And China would definitely not have the capacity to forcefully protect civilian shipping in the Arctic in the unlikely event that the Russians or Americans or any Arctic states were bent on preventing it.

Arctic Security and China's Presence

The Report of the Canadian House of Commons Standing Committee on Foreign Affairs and International Development (FAAE) addresses Chinese ambitions for the Arctic and offers only one recommendation on the matter regarding China – and it's eminently sensible: "The Government of Canada should engage with the Government of China to understand their growing interest in the Arctic." The Parliamentarians show an obvious interest in Canada developing a nuanced understanding of China's interests and actions in the Arctic.¹⁷

The report, in addition to hearing from multiple witnesses, reviews the January 2018 Chinese white paper on the Arctic.¹⁸ The Chinese white paper sees the Arctic in a global, rather than regional, context, and inasmuch as the Arctic affects interests of states outside the region, it has global importance. The FAAE reports that China has pledged to adhere to "rules and mechanisms" and "the existing framework of international law," including the law of the sea and the relevant rules of the IMO – commitments that echo the 2008 Ilulissat Declaration (reaffirmed in 2018). The FAAE report points to the Chinese assertion that it is committed "to maintaining a peaceful, secure and stable Arctic order." The basic principles of China's participation in the Arctic are described as "'respect, cooperation, win-win result and sustainability'."

The FAAE notes that the Chinese white paper calls for respect to be reciprocal: "respect the sovereignty, sovereign rights, and jurisdiction enjoyed by the Arctic States," while also respecting "the rights and freedom of non-Arctic States to carry out activities in this region in accordance with the law...." It's the kind of reciprocity that was not part of Mr. Pompeo's vocabulary in his May speech to Arctic Council members in Finland:

"Beijing claims to be a "Near-Arctic State," yet the shortest distance between China and the Arctic is 900 miles. There are only Arctic States and Non-Arctic States. No third category exists, and claiming otherwise entitles China to exactly nothing."¹⁹

The FAAE heard from Jessica M. Shadian, Chief Executive Officer and founder of Arctic 360, and distinguished senior fellow at the Bill Graham Centre for Contemporary International History, who told Parliamentarians that China's vision is "based on what it expects the Arctic will look like in the next 20, 30, and even 50 years." While to date, China has been primarily interested in Russia's Northern Sea Route, Ms. Shadian reminded the Committee of media reports indicating that China has published a 365-page shipping guidebook on the Northwest Passage. The guide "includes charts and detailed information on sea ice and weather as a means to aid Chinese vessels travelling between Asia and the Atlantic through the North American Arctic."²⁰ China has also traversed the central Arctic Trans Polar Route.

None of that leads Major-General William Seymour, Deputy Commander of Canadian Joint Operations Command, to focus on China as threat. He told the Committee that China's approach remains "one of participation and co-operation." Rather than seeing a threat, he said, the Canadian Armed Forces see China "as an aspirant in terms of securing access to global lines of communication and sea trade, which they're fundamentally interested in." Since China is seeking "access to resources around the world," including in the Canadian Arctic, security concerns should focus on "monitoring inward investment trends with respect to Canadian companies and infrastructure, as well as cyber security."²¹

Canadian Academic and Arctic historian and expert, Professor Whitney Lackenbauer told the FAAE that "alleged Chinese threats to Canadian Arctic sovereignty are a red herring that should not deflect attention or resources from more important issues." He suggested that China does not present a sovereignty threat or challenge and

that the Chinese challenge should be seen in broader terms and “are best considered in the broader context of Canada's relationship with China as an emerging global actor.”²²

The most balanced, credible response to the Pentagon’s warning that presents itself is that, now and in the foreseeable future, notions of Chinese nuclear weapons submarines operating in the Arctic belong in the red herring category.

Notes

¹ There is plenty of media commentary counselling wariness regarding Chinese aims in the Arctic, for example, this report by Somini Sengupta and Steve Lee Myers, “Latest Arena for China’s Growing Global Ambition: the Arctic,” *New York Times*, 24 May 2019. <https://www.nytimes.com/2019/05/24/climate/china-arctic.html>

² Chinese officials laud the China/Russia “Ice Silk Road” initiative in the Arctic, as well as the cooperative indications from Finland and Iceland. The Chinese English language newspaper, the *Global Times* (a branch of the Peoples Daily), notes in a laudatory report that “in 2018, China and Russia achieved important progress in their cooperation in the Arctic gas field, and many cooperation agreements were reached on the construction of Arctic waterway infrastructure.” Zhang Yao, “Ice Silk Road sets new direction for Arctic cooperation,” *Global Times*, 6 April 2019. <http://www.globaltimes.cn/content/1144755.shtml>

³ “Looking North: Sharpening America’s Arctic Focus,” Remarks by Michael R. Pompeo, US Secretary of State, 06 May 2019, Rovaniemi, Finland. <https://www.state.gov/looking-north-sharpening-americas-arctic-focus/>

⁴ Office of the Secretary of Defense, “Annual Report to Congress: Military and Security Developments Involving the People’s Republic of China 2019,” May 2019. <https://www.defense.gov/Newsroom/> (click on “publications”).

⁵ Hans M. Kristensen and Robert S. Norris, “Chinese nuclear forces, 2018,” Nuclear Notebook, *Bulletin of the Atomic Scientists*. <https://thebulletin.org/>

⁶ Hans M. Kristensen and Robert S. Norris, “Chinese nuclear forces, 2018,” Nuclear Notebook, *Bulletin of the Atomic Scientists*. <https://thebulletin.org/>

⁷ Hans M. Kristensen and Robert S. Norris, “Chinese nuclear forces, 2018,” Nuclear Notebook, *Bulletin of the Atomic Scientists*. <https://thebulletin.org/>

⁸ Tong Zhao, “Tides of Change: China’s Nuclear Ballistic Missile Submarines and Strategic Stability,” Carnegie-Tsinghua Center for Global Policy, 24 October 2018. <https://carnegietsinghua.org/2018/10/24/tides-of-change-china-s-nuclear-ballistic-missile-submarines-and-strategic-stability-pub-77490>

⁹ Greg Torode and David Lague, “Special Report: China’s furtive underwater nukes test the Pentagon,” *Reuters*, 02 May 2019. <https://www.reuters.com>

¹⁰ China will likely begin building these next generation SSBNs in the early 2020s, according to the Pentagon report: Office of the Secretary of Defense, “Annual Report to Congress: Military and Security Developments Involving the People’s Republic of China 2019,” May 2019. <https://www.defense.gov/Newsroom/>

¹¹ Greg Torode and David Lague, “Special Report: China’s furtive underwater nukes test the Pentagon,” *Reuters*, 02 May 2019. <https://www.reuters.com>

¹² Greg Torode and David Lague, “Special Report: China’s furtive underwater nukes test the Pentagon,” *Reuters*, 02 May 2019. <https://www.reuters.com>

¹³ Tong Zhao, “Tides of Change: China’s Nuclear Ballistic Missile Submarines and Strategic Stability,” Carnegie-Tsinghua Center for Global Policy, 24 October 2018. <https://carnegietsinghua.org/2018/10/24/tides-of-change-china-s-nuclear-ballistic-missile-submarines-and-strategic-stability-pub-77490>

¹⁴ *The Military Balance 2019*. International Institute for Strategic Studies, pp. 256-265.

¹⁵ The National Interest is a US think tank with Henry Kissinger as its Honorary Chairman.

¹⁶ Lyle J. Goldstein, “Why the U.S. Navy Should Fear China's Submarine Fleet,” *The National Interest*, 26 April 2019. <https://nationalinterest.org/blog/buzz/why-us-navy-should-fear-chinas-submarine-fleet-54402>

¹⁷ House of Commons, “Nation-building at Home, Vigilance Beyond: Preparing for the Coming Decades in the Arctic,” Report of the Standing Committee on Foreign Affairs and International Development, April 2019, 42nd Parliament, 1st Session, pp. 36-39. <https://www.ourcommons.ca/Content/Committee/421/FAAE/Reports/.../faaerp24-e.pdf>

¹⁸ “China’s Arctic Policy,” The State Council Information Office of the People’s Republic of China, January 2018. http://english.gov.cn/archive/white_paper/2018/01/26/content_281476026660336.htm

¹⁹ “Looking North: Sharpening America’s Arctic Focus,” Remarks by Michael R. Pompeo, US Secretary of State, 06 May 2019, Rovaniemi, Finland. <https://www.state.gov/looking-north-sharpening-americas-arctic-focus/>

²⁰ “Nation-building at Home, Vigilance Beyond: Preparing for the Coming Decades in the Arctic,” April 2019.

²¹ “Nation-building at Home, Vigilance Beyond: Preparing for the Coming Decades in the Arctic,” April 2019.

²² “Nation-building at Home, Vigilance Beyond: Preparing for the Coming Decades in the Arctic,” April 2019.