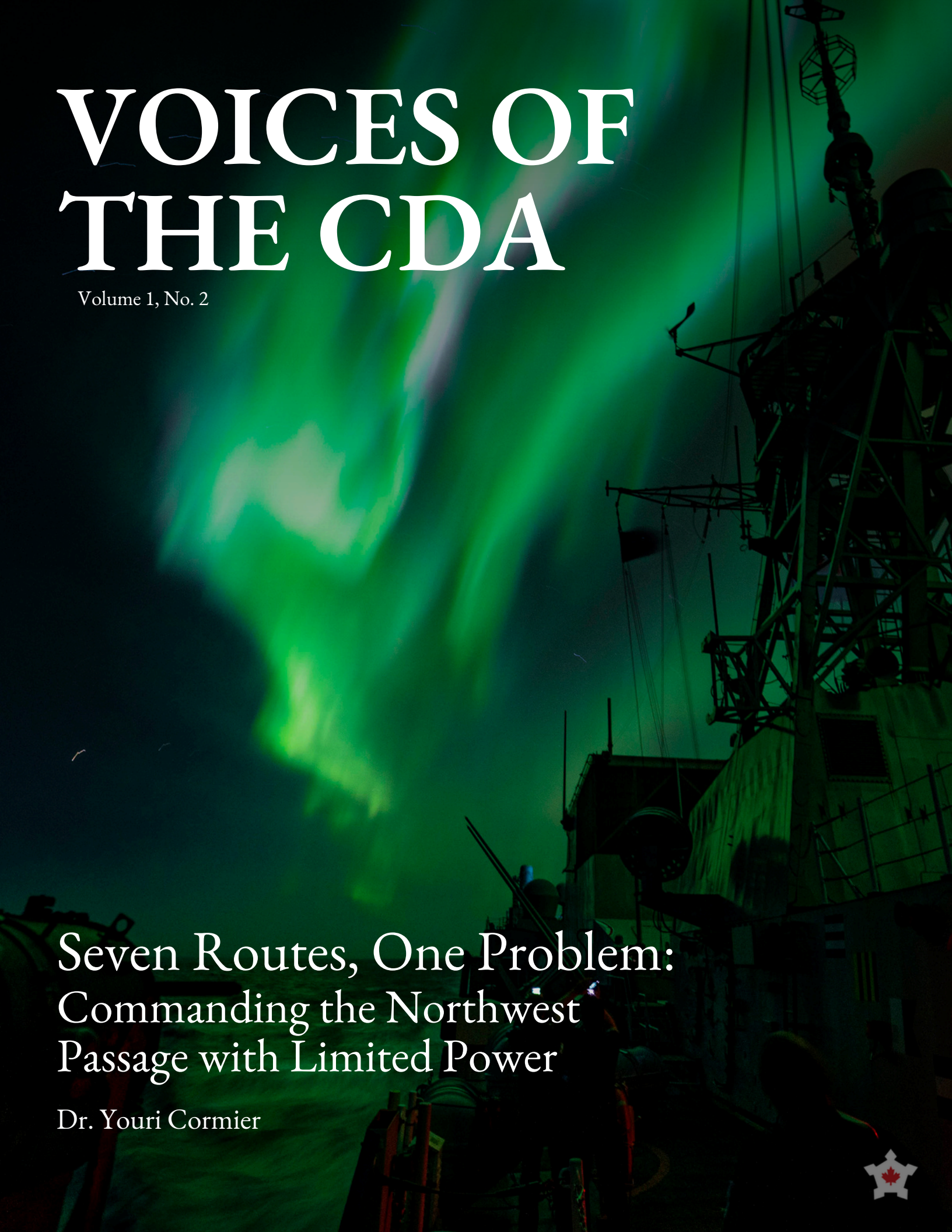

VOICES OF THE CDA

Volume 1, No. 2

Seven Routes, One Problem: Commanding the Northwest Passage with Limited Power

Dr. Youri Cormier

VOICES OF THE CDA

Seven Routes, One Problem: Commanding the Northwest Passage with Limited Power

Dr. Youri Cormier

About the Author

Dr. Youri Cormier Visiting Professor, Graduate School of Public and International Affairs, University of Ottawa

On the Cover

HMCS CHARLOTTETOWN - EX STEADFAST DEFENDER - 2024
The Northern Lights pass overhead as HMCS Charlottetown transits to Iceland across the North Sea, during EX STEADFAST DEFENDER 24, on 03 March 2024

Photo by: Pte Brendan Gamache, Canadian Armed Forces Photo
hhttps://www.flickr.com/photos/cafcombatcameradecombatfac

Conference of Defence Associations Institute

The Conference of Defence Associations Institute is a charitable and non-partisan organisation whose mandate is to provide research support to the CDA and promote informed public debate on security and defence issues and the vital role played by the Canadian Armed Forces.

Conference of Defence Associations Institute 350 Sparks St. #701, Ottawa, ON K1R 7S8 613 236 9903 www.cdainstitute.ca

L'Institut de la Conférence des associations de défense est un organisme caritatif et non partisan dont le mandat est de fournir un soutien à la recherche à la CDA et de promouvoir un débat public éclairé sur les questions de sécurité et de défense et le rôle vital joué par les Forces armées canadiennes.

Conference of Defence Associations Institute
350, rue Sparks, #701
Ottawa (Ontario) K1R 7S8
613 236 9903
www.cdainstitute.ca

The need to "assert sovereignty in the Arctic" has become a familiar refrain in Canadian defence and security discourse. The phrase appears no less than 17 times in *Our North, Strong and Free*, Canada's latest defence policy, where it serves as both a strategic objective and a political justification for expanded military capabilities. The language is compelling, invoking national identity and attachment to a vast region that few Canadians will ever visit but instinctively feel compelled to defend. Yet slogans, however resonant, often obscure more than they clarify. In the Arctic, sovereignty is not a sentiment to be asserted but a condition to be produced, sustained, and recognized.

This article argues that Canada's ability to assert sovereignty in the Northwest Passage (NWP) depends less on legal claims or political declarations than on its capacity to exercise a sufficient degree of command of the sea. Sovereignty is not self-executing. It becomes meaningful only insofar as a state can monitor activity, enforce regulations, respond to emergencies, and exclude or manage the actions of others. These functions rest on concrete capabilities: ships, infrastructure, surveillance, and the ability to concentrate limited force where it matters. Framing the Arctic challenge in terms of command rather than sovereignty provides a more pragmatic and measurable way to assess whether Canada can effectively shape outcomes in the NWP with the resources it possesses.

Framed this way, the question is not whether Canada is at risk of "losing" the Arctic overnight. It is not. Despite occasional political rhetoric suggesting otherwise, there is no imminent prospect of military seizure or territorial conquest in the High North. Rather, the trend in the High North has been the opposite of conquest of late: as traffic in the area increases and greater opportunities for resource extraction arise, there have been multiple initiatives to end territorial disputes, find compromises to avoid escalation, and to fast-track economic development and seafaring. In 2010, Norway and Russia signed a comprehensive *Treaty on Maritime Delimitation and Cooperation in the Barents Sea and the Arctic Ocean* settling a disputed area of 175,000 km^2 in size, which is larger than New Brunswick, Nova Scotia, and Prince Edward Island combined. Meanwhile, on June 14, 2022, Canada and Denmark's less than fierce "Whiskey Wars" over Hans Island came to a halt when the island was divided *à l'amiable*, giving Canada an unsuspected new land border with the European Union. In the case of the Beaufort Sea, its delineation between Canada and the USA has been a historical sticking point that has never caused much of a stir, but here as well, since 2024, a joint task force has been set up to propose a negotiated arrangement (Government of Canada, Joint Statement 2024), although things seem to have stalled under the current American administration.

Asserting our sovereignty in the Northwest Passage (NWP) therefore will not be about sinking enemy ships, but the exact opposite:

making sure ships do not sink. Herein lies the true measure of sovereignty: are we capable of manifesting what is in our national interest? The consequences for Canada could be catastrophic if ships were sinking: oil spills, chemical spills, or thousands of cruise tourists stranded in sub-zero temperatures needing to be rescued. Enforcing sustainability in fishing and other resource extraction will also be high on Canada's priority list. Our interest in the Arctic is security and the rule of law. This amounts primarily to policing work meant to monitor activity, assess navigational risks and communicate them to ships in the area, control the ins and outs and routes of the NWP, and enforce regulatory frameworks on commercial, research, and military presence in the area. For this to happen requires seamless cooperation between the Navy and the Coast Guard.

The transactional corollary to asserting sovereignty over the sea is the strategic concept of "command". Although sovereignty is an absolute concept, either your laws are in force or they are not, the concept of command exists on a spectrum. It can be complete and unquestionable, as after the Spanish Armada or the Battle of Trafalgar, but it can also uphold sovereignty even when relative and incomplete. With Canada's limited capabilities in a region where the world's superpowers are vying for resources and shipping routes, exploring how Canada can best achieve a relative command of the sea offers a more pragmatic and measurable end than pinning our objectives to the broader and less tangible concept of sovereignty. This article makes the case that while achieving total mastery of the sea is not feasible given great power competition and limited Canadian resources, our ability to address some of the more realistic challenges outlined above will be "good enough" to achieve Canada's national interest in the Arctic, albeit with the important caveat that such relative command requires that other naval powers acquiesce to some degree to Canada's interpretation of sovereignty, rather than find themselves inclined to challenge it. Sovereignty in this context is more akin to a managed peace, perhaps with some give and take along the way, but where Canada frames the conversation.

To explore what "good enough" should look like, this text will consider our claims in the area and what affords them legitimacy, a theoretical overview of what "command of the sea" means and how one achieves it in either absolute or relative terms, followed by the challenges we face because of access, geography and ice cover, strategic adversaries, and ending with the implications for policy.

CANADA'S CLAIM TO THE ARCTIC

Canada's official position is that "the waters of Canada's Arctic Archipelago, including the various channels comprising the Northwest Passage, are internal waters of Canada by virtue of historic title and in accordance with international law" (Global Affairs Canada, 2025). Canada's Arctic Policy makes this case by highlighting the

contiguous geography, in that "these islands are joined, not divided, by the waters between them and are bridged for a large part of the year by ice." It then adds the key notion of continuous occupation, in that "Indigenous Peoples in Canada have used and occupied the ice and waters (…) for thousands of years. Every day, through a wide range of activities, Arctic and northern Indigenous Peoples and governments, as well as territorial and provincial governments and other northerners, share stewardship over the Arctic lands and waters of Canada" (Global Affairs Canada, 2025). In terms of what these claims ultimately mean, as early as 2013, the House of Commons Committee on Foreign Affairs already noted that "Canada has an unfettered right to regulate the Northwest Passage as it would land territory" (House of Commons FAAE, 2013).

While the words come off strong, they are not free of underlying tension. First, there is a fine line between what constitutes territorial waters and international straits; what you measure and where you measure from can lead to difficulties on reaching consensus. The idea that territory is joined rather than divided by waters could make other nations sceptical, especially since we would never use such language to designate the Taiwan Strait, for example.

Meanwhile, the question of indigenous occupation is delicate, because there is always a risk that Canada's attempts to control the High North comes into conflict with Indigenous mobility and governance in their territory. If the presence of Indigenous Peoples in the Arctic is to be leveraged in sovereignty claims, it cannot be legitimately done without very clear nation-to-nation consensus. Otherwise, Canada's approach would merely instrumentalize Indigenous Peoples and perpetuate a colonial mindset. This outcome would provide grounds upon which Canada's claims might be written off as the usurpation of another's legitimate claim. Given the common objectives and treaties that unite Canada and the Indigenous populations in the Arctic, failure to effectively project sovereignty would be in neither's interest, but doing so on a united front is the only way it can be done effectively. What this underscores is the strategic necessity of co-developing and co-owning policy development with Indigenous partners and communities, in the spirit of *"nothing about us, without us"* (Global Affairs Canada, 2025).

It is therefore fundamental that Canada recognizes First Nations, Inuit, Métis, Modern Treaty and Self-Governing Partners and organizations as "domestic rights holders" in the Arctic Foreign Policy, and that document clearly states that it is "guided by all relevant treaties and self-government agreements with Arctic and northern Indigenous partners, including obligations Canada has to Indigenous Peoples under those treaties and agreements, and the rights recognized and affirmed under section 35 of the *Constitution Act, 1982*" (Global Affairs Canada, 2025).

Beyond claiming the territories in the way described above, Canada demonstrates its sovereignty through regulation. A very concrete example of this is through its Northern Canada Vessel Traffic Services Zone (NORDREG), which requires that "to obtain clearance into northern Canadian waters, the master of the ship must report to NORDREG Canada or to the nearest Canadian Coast Guard (CCG) MCTS Centre, as per the Radio Aids to Marine Navigation (RAMN) 2023" (NORDREG, 2026). Each ship that asks for clearance, and every interception of a ship that has not asked for it, are demonstrations of Canada's legislative authority in the region. Furthermore, the Arctic Waters Pollution Prevention Act, which was updated in 2019 (Department of Justice, 2019), remains a key regulatory framework that also demonstrates sovereignty in real time insofar as it is effectively enforced.

These multiple facets to Canada's sovereignty claims build off one another and are not only important to current power projection, but, perhaps more importantly, are the foundational requirements to sustain our future Arctic sovereignty. However, while sovereignty is hard to justify without such legal and historical claims coming together, having them provides no guarantee. Claims alone are a poor deterrent against those who could make alternative claims to the areas in question, and they certainly do not provide much support when a ship ignores the laws or runs ashore. It is in such situations that sovereignty is best tested: if lawless ships are boarded, towed, and docked and if maritime casualties are supported by search and rescue operations and technical support, there can be little doubt about which nation commands the area.

Increased maritime activity in the Arctic has awoken policymakers to the importance of "being present". The Canadian Coast Guard is being given a complex overhaul that includes new orders for future ships, integration into the Department of National Defence, and Bill C-12, which proposes new powers to take on "security, including security patrols and the collection, analysis and disclosure of information or intelligence" (Parliament of Canada, 2025). These tectonic shifts provide clear indications that the CCG of tomorrow may be a far grander enterprise than its current expression. And this is the prerequisite before one can even begin to envision achieving anything approximating "command of the sea".

COMMAND OF THE SEA, THEORETICAL CONSIDERATIONS

While Alfred Thayer Mahan did not coin the term "command of the sea" or other similar naval parlance common at the time such as "dominion" or "sovereignty" over the sea, his seminal 1890 book *The Influence of Sea Power upon History* systematized its study and gave the concept its theoretical foundations. "Command of the sea" was meant to evoke a higher-level, conceptual ideal of absolute and unchallenged naval power, which guaranteed freedom of movement and commerce for the nation

having it, the ability to deny this very freedom of movement and commerce to others, and finally the ability to affect military operations beyond the sea. It was for these three main reasons that Mahan argued that **"**the possession of this power must be a main object of naval warfare" (Mahan, 1890, p. 138). Recognizing how strong navies and naval advantages shaped the history of the world, he noted that "a country whose geographical position (…) gives it control of the great thoroughfares of the world's traffic, possesses a great advantage" (Mahan, 1890/1987, p. 32).

Although Canada possesses such a geographical position on the great northern thoroughfare of the world, the challenging environment there makes it unclear if any advantage can be derived from it, or if on the contrary, Canada will inherit only the headaches of possessing it.

At the time when Mahan was writing, the seas would have been a fairly lawless part of the globe. Without satellites looking down or radars looking around, it was impossible to know exactly who was where and what direction they were going. Given this context, it was assumed that control of the sea could "*be gained only by decisive battle with the enemy's fleets"* (Mahan, 1890, p. 25).

This viewpoint was arguably not only a product of technology, but also culturally embedded in military thinking at the time, when war was idealized in terms of decisive battles in the Jominian tradition. A few years after the publication of Mahan's works, Julian Corbett, whose approach is more Clausewitzian, published *Some Principles of Maritime Strategy,* which reassessed the need for absolute or decisive control, making the point that "in maritime warfare, the stronger power seldom needs to force a decision. It can act indirectly and still attain its ends" (Corbett, 1911/1988, p. 128) and that *"*general command is a rare and exceptional condition; limited command is the normal condition of naval war" (Corbett, 1911/1988, p. 119).

Part of the solution starts by relativizing the problem's scope. As Corbett pithily noted, "command of the sea means nothing but the control of maritime communications (…) It is not the conquest of the sea, which is impossible" (Corbett, 1911/1988, p. 90). Rather, one can hold the geography around the thoroughfare and influence routes and the predictability of actions in the area and achieve the "concentration of force", which Mahan had earlier described as the "governing principle of naval war" (Mahan, 1890/1987, p. 169). Through concentration of force, augmented by favorable geography, one can exert control despite limited resources.

The end goal therefore should be to achieve a deterrent effect, for which the impact is greater than the sum of one's capabilities. Corbett describes this potential as "a fleet-in-being [that] exerts a controlling influence by mere existence, without leaving port" (Corbett, 1911/1988, p. 108). This ideal requires a strong enough fleet to begin with,

for it is only in demonstrating some level of command of the sea that such a deterrent becomes credible. Canada does not need to be everywhere all the time in the Arctic to achieve the effect of a "fleet in being", and this relativization of requirements is the key to achieving command with limited power.

CHALLENGES AHEAD: GEOGRAPHY AND TRAFFIC

Although we tend to project into the future the idea that a greater number of ships will be operating through the Northwest Passage, the trend is by no means hypothetical or even, for that matter, in the future. Sea ice in the Arctic has experienced considerable decline, particularly in the summer months. Between 1968 and 2016, it has retreated by as much as 20 % per decade in some section of the Canadian Arctic (Derksen, 2019). Since 2007, sea ice cover in the northern route of the Northwest Passage has been lower when compared to the longer-term observational record which began in the 1960s, so much so that at the end of September in 2024, there was virtually no sea ice present in the northern route of the Northwest Passage ($4\times10^3\,km^2$) marking the lowest ever observed area since 1960 (Howell et al, 2025).

Less ice attracts more ships. To appreciate the trajectory, one must look not forward in time, but backward, comparing the present to the past. Following Amundsen's famed first expedition in 1903-06, no follow-up attempt took place until the Second World War. During the entire Cold War, only 40 transits took place across the NWP. Thereafter, things started to pick up, with 27 transits in the 1990s, 64 in the 2000s, 182 in the 2010s, and another 80 in the first two years of the 2020s (Headland, 2023), signaling a likelihood that the shipping route will pass the 400 mark by the end of this decade if the trend is flat, but far more if the exponential is sustained. Meanwhile, the number of ships entering the Canadian Arctic (i.e. not transiting, but merely going in and out) was estimated to be 466 in 2024, compared to 319 in 2011, a 46% increase (CBC, 2024). The trouble, however, with less ice and more ships is that the risks involved are neither linear nor proportional.

Melting ice has a paradoxical effect on shipping routes. Although one would expect less ice to be a good thing for ships, this is not the case. Less ice can mean more ice. As it breaks off, floats into currents and accumulates in choke points, the risk to ships increases. So, even though the warmer temperatures driving melt are reducing ice levels, it is insufficient to clear the passage because thicker sea ice is generally transported southward from higher latitudes (Howell et al, 2025). In fact, the shipping season in the NWP over the past 15 years did not lengthen. It shrank as a result of this 'more ice is less ice' conundrum (Cook et al, 2024). The reason is that ships in the NWP "become susceptible to the southward flow of thick multi-year-ice from the Arctic Ocean a process that has increased as a result of climate change. (…) While its character is not as robust as it was historically, this ice is still expected to be present [in the NWP] even

when the rest of the Arctic Ocean is ice free during the summer months" (Cook et al, 2024).

With this in mind, while the number of ships making their way into the NWP is relatively small, what is discomforting is the rate at which incidents happen requiring search and rescue operations, refloating, and towing. In 2024, the Canadian Coast Guard (CCG) took part in 8 search and rescue operations in the region (CCG, 2024), which appears modest until we consider it relative to how few ships were in the area to begin with. The proportion of accidents is high.

The lack of clearly marked routes to travel is also a risk, best demonstrated in September 2025 when the Dutch cargo ship Thamesborg ran ashore, multiple ballasts filling up with water. The 33-day rescue operation involved two CCG vessels and helicopter, as well as two smaller cargo ships on which to offload 5000 tonnes of cargo, and a private rescue ship that successfully refloated the Thamesborg. Luckily this maritime casualty had a positive dénouement, with the 16 sailors on board reported safe and no fuel or chemical leaks from the incident (Martime Executive, 2025). It confirms, however, that uncharted, shallow waters pose a significant risk and that if more than one such incident were ever to happen concurrently, the CCG's capacity would certainly be exhausted fast.

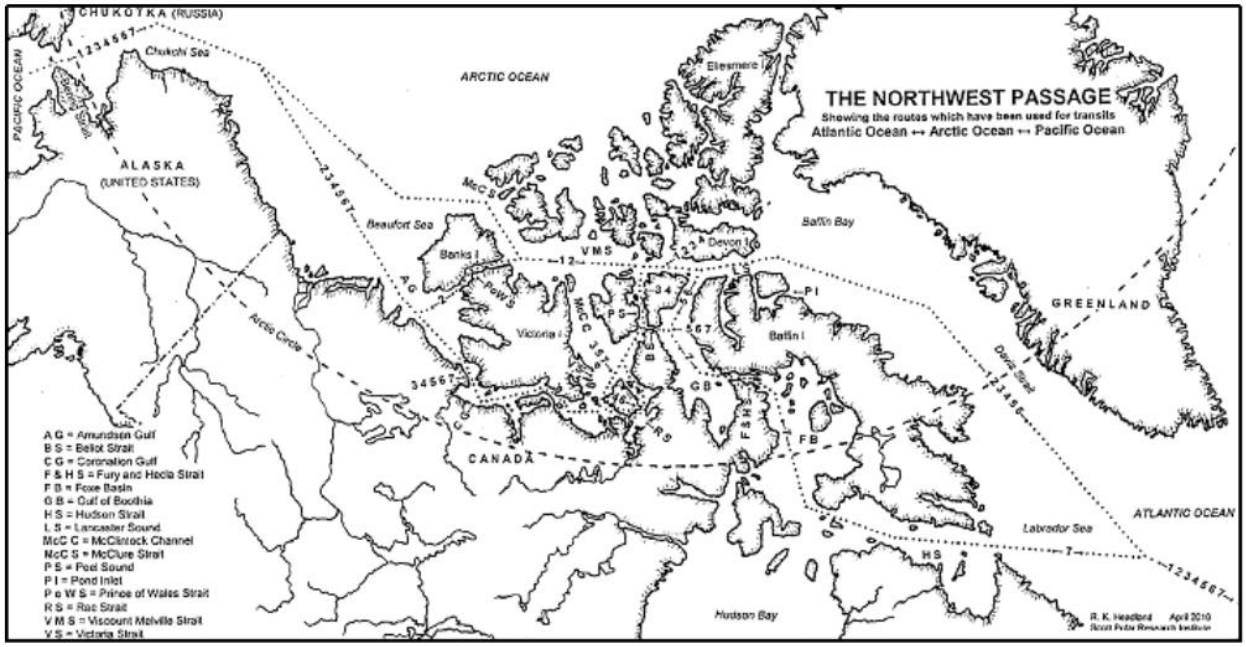

Image: (Headland et al 2023)

It does not help that there is no single NWP to speak of, but rather seven distinct routes that can, or have been, made across, meaning that simultaneous SAR operations could happen in places very far apart. Among these, for example, routes one and two (see image below) are shorter, deeper and most covered by ice, and therefore preferred by submarines. Route three has the greatest traffic among larger ships, whereas routes four and six attract small vessels because of its shallowness – 6.4 meters. Route five has complex currents and route seven is short but difficult. Deciding which way to go therefore depends on the season, the ice cover, the vessel, and time constraints (Headland et al 2023).

The multiple alternate routes pose a challenge to successfully monitoring the area and establishing controls along the way. Although the eastern gateway to the area offers some manageable choke points for Canada to monitor, the Western gateway offers a choke point between Russia and the USA in the Bering Strait, but a wider open area in the Beaufort Sea before entering multiple possible ways into Canadian waters.

As the sea ices recede over time, it is unclear that the NWP would ultimately be an area of preferred passage if more direct lanes around it are accessible, shorter, deeper, and simply less hassle. Fishing and cruise ships might, on the contrary, be those more interested in the NWP for its vibrant ecosystems and sceneries. And ultimately these might be the two more problematic of the three types of visitors. To be sure, there have already been two cases of cruise ships running aground, the Clipper Adventurer in 2010 and the Akademik Ioffe in 2018, and recognizing that this type of traffic has increased dramatically from an average of 2-3 per year in the previous decade to 10-14 this decade (Baudu & Lasserre, 2024), the risks of such incidents are much higher than before.

The fact that we are dealing with an archipelago offers geographic advantages that Canada can exploit. Through investments in infrastructure, charting, and providing monitoring and available icebreakers in the area, Canada will increase its leverage to coax ships to pass in certain designated areas by making them safer alternatives to simply circumventing the area as sea ice recedes further north. Communicating this to ships should be formalized and systematized. Knowing that insurance costs are a great incentive to drive shipping behaviour, the more Canada will be able to make the passage safe, the greater its ability to attract regulated shipping inward as opposed to unregulated shipping around.

This offer of security will depend on our ability to control the sea, which comes down to achieving concentration of force and monitoring. The CCG has 24 icebreakers on order, in part to replace its aging fleet of 9 icebreakers, but also with a view to increase its overall capacity. If on top of this Canada successfully develops port infrastructure, sea cables, and also deploys one or two submarines in the area (not to intercept but rather to provide monitoring in the area), it will be able to cover considerable ground.

However, achieving concentration will also require that the natural choke points afforded by the archipelago be utilized and that access be limited, for example by imposing one or two alternative routes as opposed to seven, and by designating certain areas oceanic conservation areas and denying entry. The simplest path to achieve such denial would be to forgo any icebreaking in protected areas, which would serve as the greatest of dissuasion to traffic wishing to enter. By creating higher risk navigation in some areas and lower risk navigation in others, Canada would maximize the natural conditions of markets to take the safest, less contested route. Although not all ships may be deterred, it is likely that most would comply based on risk assessment, especially in the cruise and shipping industries, where insurers have a lot of sway. However, it will be equally important to engage allies and strategic adversaries so that they do not send icebreakers into those areas we wish to protect or exclude. To avoid any escalation, Canada will need to play its diplomatic cards right, and convince the international community that fewer, safer routes are in everyone's interest, especially knowing that its fleet of icebreakers, although currently the second largest in the world after Russia's, could quickly become dwarfed by the rapid pace of construction happening around the world, including among great powers.

STRATEGIC COMPETITION: THE GLOBAL RACE FOR ICEBREAKING CAPABILITY

Given the economic forces driving seafaring activity northward, including extracting protein from the last healthy ocean on Earth (should attempts to ban unrestricted commercial fishing beyond 2037 fail) (Arctic Council, Central Arctic Ocean Fisheries Agreement, 2021), and the reduced lengths of shipping routes, it is unsurprising that great powers are coveting the area and building capacity to explore, understand, and exert power there.

During the 2024 iteration of the Halifax International Security Forum, Canada's Minister of National Defence Bill Blair spoke of a "huge increase" in China's presence in the region, adding that what China calls "scientific research" is actually mapping the sea floor to search for strategic minerals (Erwin, 2025). This viewpoint should be taken with a grain of salt, but not necessarily a handful. The extent of Chinese presence in the region is primarily on the Russian side of the Arctic Ocean and while a buoy found in 2022 raised some concerns, it remains minor in comparison. Having said that, the trajectory of Chinese capacity-building and future ambitions in the region should be followed with close attention.

For now, Chinese vessels alongside Russian counterparts are almost exclusively operating on the Northern Sea Route (NSR) along the coast of Russia, where infrastructure and monitoring capacity are far more developed

than in the NWP. Traffic in the NWP in the low hundreds is a mere trickle compared to the NSR, where by 2019, 2,694 voyages had taken place (Centre for High North Logistics, 2020).

While shipping companies' interest in Arctic transit traffic remains limited due to operational and commercial risk (Lassere, 2019, p 97), it is nonetheless growing. In September 2025, a first Chinese container ship with 4890 containers completed the route in 20 days, or half the time it takes via the Suez Canal (Zhang, W. 2025). The operator of the *Istanbul Bridge*, the ship in question, showed great ambitions for future travel, noting their intention to, "initially realize fixed route arrangement (weekly or biweekly) in the summer navigable areas, and improve the specifications and design of new ice-reinforced ships based on the practice of navigation, strengthen the construction of the container fleet through ice areas, and strive to realize the plan of year-round navigation of the China-Europe Arctic route" (Zhang, 2025).

As China increases trade through Nordic routes, there will be growing pressure on it to build capacity to facilitate these commercial ventures and engage in the region. Although it currently operates only five icebreakers, China has shown an incredible capacity to develop and build a high-tech icebreaking fleet for a fraction of the cost and time it takes Canadians and western allies to do so.

Until recently, China had only one polar-region capable icebreaker built in Ukraine, the Xue Long (PC-6). In 2019, it added the domestically built Xue Long 2 (PC-3). By the end of 2024, between the two of them, these ships had undertaken 41 Antarctic and 13 Arctic expeditions. Now equipped with its home-grown capacity to produce icebreakers, a third PC-4 was added to the mix in 2021, and a further two were added in 2024 alone (PC-6 and PC-4) (Khanna, 2025). What is extraordinary, beyond the speed at which Chinese shipyards are able to push out so much capability, is the price tag. The Xue Long 2 was built at a cost of approximately $199 million CAD in 2016 (High North News, 2016) and the most recent addition, the Tan Suo San Hao, which translates to Explorer #3, is unofficially estimated to have cost $162 million CAD, which, although not official, appears reasonable given that the shipyard is now operating with the experience of its first output.

Meanwhile, Canada remains very late to the game in terms of relevant capability sets. Already in the mid-1980s, our largest icebreaker – the Louis-St-Laurent, a PC-2 class built in the 1960s – was deemed due for decommissioning, and plans had begun to replace it. Today, it still sails and remains the largest icebreaker in our fleet (The Guardian, 2025).

New icebreakers are on their way. As part of the ICE PACT initiative, Canada has ordered two new ships with more to come. Meanwhile President Trump has hinted at the possibility that the US might be in the market to order forty of their own through this initiative (Guardian, 2025), although only eight or nine are actually on order currently

(Reuters, 2025). But all this will be slow and expensive. One of the Canadian ships will see its hull built in Helsinki and be completed thereafter at the Davie Shipyard in Quebec with an expected delivery in 2030 (AP News, 2025). The other, built at Seaspan Shipyards in British Columbia, is scheduled to be delivered in 2032. The total price tag for these two ships will be approximately $7.5 billion CAD (Government of Canada, Polar Icebreaker Projects, 2025), assuming no overruns surprise us along the way. The challenge of comparing production costs in Canada and China is that the comparison is not equivalent: our estimate reflects a life-cycle price tag, whereas China's reflects construction costs alone. If we assume that life-cycle budgets should allow for roughly 30% construction costs and 70% maintenance costs, it would still mean that our shipbuilding costs are likely near ten times more expensive to produce than the Chinese ships, while their speed of production completely dwarfs our own.

Although the ICE PACT is a step in the right direction to enhance capability and interoperability with our allies, it will be important to leverage it in a way in which US and Canadian interest in the region align, because if the US does indeed wind up with forty icebreakers, they will certainly outnumber ours and may in fact threaten our interest if they were to test our resolve or challenge attempts to close off or centralize routes to further concentrate our fleet. Meanwhile, China will remain an uncertainty, given the incredible speed and cost advantage they hold over the west. Should they wish to be a peer contender in the Arctic, they will clearly have the means to do so. The test will be their intent and what they make of this new capacity. In all scenarios, Canada should be prepared to work collaboratively with all nations that have an interest in good governance and peace in the Arctic.

IMPLICATIONS FOR POLICY

Sovereignty cannot be achieved merely as an act of maritime security. The most fundamental way we will enhance sovereignty in the Arctic will be through human activity in the region – which means development, presence, infrastructure and so forth. We must build sovereignty, not merely enforce it.

This essay focused more on the enforcement part of the equation, with a framework that recognizes the utility of drawing a separation between the larger objective of sovereignty and more strategic underlying condition of "commanding the sea." The advantage of this shift in perspective is that it provides more actionable and measurable implications for policy. This should encourage politicians and senior public servants to do a bit less grandstanding, instead recognizing that even a fraction of command required will need to come fast, and at a heavy cost, which they might be unwilling to take on.

We are unlikely to win any capacity building race against our strategic adversaries given

their opaque, centralized and financially insouciant industrial planning, and mobilization. But we do have quite a few tricks up our sleeve to offset this disadvantage. Our cooperation with Indigenous Peoples and the language being used in legal claims to the areas are sound and robust. Our ability to work in lockstep with like-minded nations in NATO and the Arctic Council, not only on policymaking but also on shipbuilding and industrial cooperation, will provide excellent leverage. And finally, our knack for multilateralism and interest in safety and lawful use of the area can be the source of many cooperative agreements, confidence-building measures, and not only with allies, but equally with strategic adversaries. The selling point for this is the realization that all nations have a vested interest in good governance in the Arctic, and Canada's central interest resides exactly there.

Although Canada is well-positioned geographically to play a key role in this good governance, it will be important to let realistic expectations, rather than lofty ideals, guide us. Increasing the size of the Coast Guard and Navy, while also enhancing their legal and technical ability to work cooperatively and share intelligence will certainly be a step in the right direction. However, the competition for influence and the projection of power in the North will only grow. The silver lining is that the international community has become more apt at controlling the sea collaboratively through international law, space monitoring, sharing intelligence, and collective enforcement.

Achieving a relative command of the sea will require a three-pronged strategy. First, a broader rethink about the timelines and scale of Canada's Arctic deployments and build-up. With the ships we have and the ships we build, it will be necessary to enhance our surveillance capabilities in the region by concentrating force in the area and extending the duration we can sustain this presence. This means naval bases, as well as land-based and aerial capabilities. Second, Canada must not wait for other nations to build up their Arctic capability and start dictating the terms. We must start shaping the dialogue immediately so that cooperative frameworks and norms that are broadly shared precede the build-up of worldwide icebreaking capacity. Conflict will be more probable if might is confronted with a vacuum of policy.

A multilateral approach that focuses on the rule of law, control and oversight on traffic, and the protection of the environment, can be sold to all partners as being valuable to all, while also allowing for Canada to achieve its national interest and objectives. The incentive here is to share the burden, not within Canadian waters per se, but at least on the periphery so that Canada can focus its resources along entry points and inside the archipelago. From traditional concepts of command of the sea, we need to update our theoretical frame of mind away from ideals of decisive victories, and perhaps even those of relative victories, and find that the ultimate objective in competitive seafaring has

nothing to do with either. Achieving command in the Northwest Passage will depend less on mass than on credibility – the careful projection of limited power that makes conflict unnecessary.

BIBLIOGRAPHY

Arctic Council. (2021, June 25). *An introduction to: The International Agreement to Prevent Unregulated Fishing in the High Seas of the Central Arctic Ocean*. https://arctic-council.org/news/introduction-to-international-agreement-to-prevent-unregulated-fishing-in-the-high-seas-of-the-central-arctic-ocean/ (consulted Jan 15, 2026)

AP News. (2025, August 20). Work begins in Finland on a new Canadian icebreaker for Arctic defense. *AP News*. https://apnews.com/article/0dcb09a7938465011880740f8c4c8a58 AP News (consulted Dec 16, 2025)

Baudu, H., & Lasserre, F. (2024). Navigation in the Arctic in M. Delaunay & M. Vullierme (Eds.), *The Arctic Review* (pp. 35–50). Observatoire de la politique et la sécurité de l'Arctique (OPSA). https://static1.squarespace.com/static/6554d9d0675b18544979e93f/t/678fc172a7d08034d4e918d8/1737474425315/THE+ARCTIC+REVIEW+2024+v2.pdf (consulted Dec 16, 2025)

Baertlein, L. (2025, July 3). Eyeing Arctic dominance, Trump bill earmarks $8.6 billion for US Coast Guard icebreakers. *Reuters*. https://www.reuters.com/world/us/eyeing-arctic-dominance-trump-bill-earmarks-86-billion-us-coast-guard-2025-07-03/ (consulted Dec 16, 2025)

Canadian Coast Guard. (2024, December 10). The Canadian Coast Guard completes 2024 Arctic operational season. https://www.canada.ca/en/canadian-coast-guard/news/2024/12/the-canadian-coast-guard-completes-2024-arctic-operational-season.html (consulted Dec 1 2025)

CBC News. (2024, November 24). Ship traffic steadily increasing in Canadian Arctic waters, researchers say. *CBC News*. https://www.cbc.ca/news/canada/north/ship-traffic-increased-in-the-canadian-arctic-in-2024-1.7412732 (consulted Dec 1, 2025)

Centre for High North Logistics. (2020). Report Grotsund (CHNL Report, 05.05.20). *CHNL*, Nord University. https://chnl.no/research/research-articles/recent-ship-traffic-and-developing-shipping-trends-on-the-northern-sea-route-policy-implications-for-future-arctic-shipping/ (consulted Dec 16, 2025)

Cook A.J., Dawson, J., Howell, S.E.L., Holloway J.E., Brady, M. (2024). Sea ice choke points reduce the length of the shipping season in the Northwest Passage. *Communications Earth & Environment*, 5:362. https://doi.org/10.1038/s43247-024-01477-6 (Consulted Dec 15, 2025)

Corbett, J. S. (1988). *Some principles of maritime strategy*. Naval Institute Press. (Original work published 1911)

Department of Justice, Government of Canada (2019-08-07), *Arctic Waters Pollution Prevention Act*, https://laws-lois.justice.gc.ca/eng/acts/a-12/ (consulted on January 15, 2026)

Derksen, C. et al. (2019) Changes in snow, ice, and permafrost across Canada. In: Bush E., and Lemmen D. S., eds. Canada's Changing Climate Report. Government of Canada, Ottawa, Ontario, pp.194–260.

Erwin, S. (2025, January 10). NATO allies Canada, U.S. look north as Arctic's security challenges grow. National Defense Magazine. https://www.nationaldefensemagazine.org/articles/2025/1/10/nato-allies-canada-us-look-north-as-arctics-security-challenges-grow (consulted Dec 16, 2025)

Global Affairs Canada. (2025). Canada's Arctic foreign policy (Arctic Policy / Politique arctique). Government of Canada. https://www.international.gc.ca/gac-amc/publications/transparency-transparence/arctic-arctique/arctic-policy-politique-arctique.aspx?lang=eng (consulted Dec 16, 2025)

Global Affairs Canada. (n.d.). The law of the sea: Canada's Arctic waters. Government of Canada. https://www.canada.ca/en/global-affairs/services/law-of-the-sea.html (consulted Dec 16, 2025)

Government of Canada. (2025). Polar Icebreaker Projects, https://www.canada.ca/en/public-services-procurement/services/acquisitions/defence-marine/national-shipbuilding-strategy/projects/large-vessels/polar-icebreakers.html (consulted Nov 25, 2025)

The Guardian. (2025, July 4). Canada races to build icebreakers amid melting ice and geopolitical tensions. https://www.theguardian.com/environment/2025/jul/04/canada-icebreakers-arctic (consulted Nov 10, 2025)

Headland, R. K., with colleagues, friends, and associates. (2023, October 11). Transits of the Northwest Passage to end of the 2023 navigation season: Atlantic Ocean ↔ Arctic Ocean ↔ Pacific Ocean (Revision). Scott Polar Research Institute, University of Cambridge. https://www.spri.cam.ac.uk/resources/np-transits-2023 (consulted 26/11/2025)

House of Commons Canada, Standing Committee on Foreign Affairs and International Development. (2013). Canada's sovereignty in the Arctic (41st Parliament, 1st Session). Government of Canada.https://www.ourcommons.ca/Content/Committee/411/FAAE/Reports/RP6152661/faaerp09/faaerp09-e.pdf (consulted Dec 16, 2025)

Howell, S. E. L., Cabaj, A., Babb, D. G., Landy, J. C., Dawson, J., Mahmud, M., & Brady, M. (2025). Near sea ice-free conditions in the northern route of the Northwest Passage at the end of the 2024 melt season. The Cryosphere, 19, pp. 6711–6725. https://tc.copernicus.org/articles/19/6711/2025/ (consulted Dec 15, 2025)

Johnson, B. T. (2021). Sensing the Arctic: Situational awareness and the future of northern security. International Journal. https://pubmed.ncbi.nlm.nih.gov/34803182/ (consulted Dec 15, 2025)

Khanna, M. (2025, March 19). China and the Arctic: An overview. Observer Research Foundation. https://www.orfonline.org/research/china-and-the-arctic-an-overview#:~:text=In%202018%2C%20the%20subsidiary%20solicited,Arctic%20soon%20after%20their%20induction. (Consulted Dec 15, 2025)

Kingdom of Norway & the Russian Federation. (2010). Treaty on Maritime Delimitation and Cooperation in the Barents Sea and the Arctic Ocean (United Nations Treaty Series, Vol. 2791, I-49095). Retrieved from https://treaties.un.org/doc/Publication/UNTS/Volume%202791/Part/volume-2791-I-49095.pdf (consulted 26/11/2025)

Lasserre, Finger, M., & Heininen, L. (Eds.). (2019). The Global Arctic Handbook. Springer International Publishing.

Mahan, A. T. (1987). The influence of sea power upon history, 1660–1783. Dover Publications. (Original work published 1890)

The Maritime Executive. (2025, October 9). Cargo ship Thamesborg refloated after 33 days in remote Canadian Arctic. Maritime Executive. https://www.maritime-executive.com/article/cargo-ship-thamesborg-refloated-after-33-days-in-remote-canadian-arctic (consulted Dec 1 2025)

NORDREG, Government of Canada, https://e-navigation.canada.ca/topics/traffic/cvms/nordreg-en (consulted Jan 15, 2026)

Østhagen, A. (2021). The Arctic security region: Misconceptions and contradictions. Polar Geography, 44(3), pp. 150–170.

Parliament of Canada. (2025, December 11). Bill C-12: An Act respecting certain measures relating to the security of Canada's borders and the integrity of the Canadian immigration system and respecting other related security measures: Third reading [Government bill]. https://www.parl.ca/documentviewer/en/45-1/bill/C-12/third-reading (consulted 26/11/2025)

Uljua, Ryan. (2016) China to start construction on new icebreaker, High North News. https://www.highnorthnews.com/nb/china-start-construction-new-icebreaker (consulted Nov 26, 2025)

Zhang W. (2025) China-Europe Arctic route to enter regular summer operation in 2026. Global Times. https://www.globaltimes.cn/page/202510/1346110.shtml (consulted 26/11/2025)