

SUGGESTED READINGS

The United States and the “Icebreaker Gap”

Compiled by P. Whitney Lackenbauer and Troy Bouffard

At a time when many of us find ourselves working from home in social isolation, NAADSN has invited various academic subject matter experts to suggest core readings on topics related to North American and Arctic Defence and Security.

The internet is filled with perspectives and opinions. These lists are intended to help direct policy shapers, practitioners, and academics to credible open access sources, available online free of charge, that reflect leading-edge research and thinking. The compilers of each list have been asked to select readings that are accessibly written (ie. they are not filled with excessive jargon), offer a diversity of viewpoints, and encourage critical thinking and debate.

Melody Schreiber, “[Trump calls for an accelerated expansion of the U.S. icebreaker fleet](#),” *Arctic Today*, 10 June 2020.

President Donald Trump has called for a faster expansion of the U.S. icebreaker fleet than previously planned — including exploring the possibility of arming icebreakers and powering them with nuclear propulsion. In a [memorandum](#) directed to several U.S. agencies, Trump set a 2029 target for an expanded icebreaker fleet, and directed officials to consider leasing vessels, including from foreign entities, to ensure some new icebreakers could be available by 2022. The memo focused on national security and commercial activities. It also tasked officials with identifying at least four domestic and international bases for the new fleet. Sherri Goodman, a senior fellow at the Wilson Center and former U.S. deputy under-secretary of defense, said the document acknowledges “the icebreaker gap” in the U.S. fleet. The memo indicates that expanding the fleet is “a White House priority,” she said. “This is not just the individual agencies working with their congressional sponsors.”

[Senate Hearing on U.S. Coast Guard & Arctic Strategy](#), Commerce Subcommittee, 8 December 2020.

Senate Commerce subcommittee holds a hearing on the U.S. Coast Guard safeguarding national interests in the Arctic. Among the discussion points, a significant amount of time and effort was focused on exploring the need to establish home basing of the USCG PSCs in the U.S. Arctic, (in the proposed deep-water port versus the current station in Seattle and elsewhere). USCG officials were very reluctant to commit to such a recommendation though. Chaired by Sen. Dan Sullivan (AK), here is also a complimentary opinion piece he published in [October 2020](#).

Peter Kikkert, “[Gaps and Bridges: The Case for American Polar Icebreakers](#),” NAADS *Quick Impact*, 12 August 2020.

While America requires new icebreakers, the case for their procurement needs to rest on firmer ground than a gap. History raises serious doubts about whether this tactic will sustain America’s interest in icebreakers for the time it will take to build the full fleet – particularly in the fiscal aftermath of COVID-19. Competition has pushed icebreakers onto the agenda in the past, but it has not kept them there.

Adam Lemon and Brian Slattery, “[Standoff in the Arctic: Closing the Icebreaker Gap](#),” *Newsweek*, 14 August 2016.

The Arctic is shaping up to be one of the most strategically important regions in the 21st century. However, the United States has fallen far behind in building the specialized ships necessary to traverse the region's treacherous waters. This is emblematic of the disparity between Russian and U.S. capabilities in the strategically important Arctic. Russia has launched as many icebreakers in June as the U.S. Coast Guard has launched in the past 40 years.

Marc Lanteigne, “[So What is the ‘Icebreaker Gap’ Anyway?](#)” *Over the Circle*, 3 March 2019.

With the Arctic welcoming increasing commerce, as well as growing concerns about Russia’s expanded strategic interests in the far north, there have been concerns raised about whether the US is preparing to cede the Arctic to other powers. This fear has been connected to what has been called the ‘icebreaker gap’ between Russia and the United States. Icebreaker construction announcements have been a major element of overall plans by the Trump government to improve its visibility in the Arctic due to concerns about great power competition. However, the question remains as to whether and how new American icebreakers will augment US interests in the Arctic as well as influencing a potential balance of power in the region.

Tingstad et al., “[The U.S. Coast Guard is Building an Icebreaker Fleet. What Comes Next? Issues and Challenges](#)” RAND Corporation, December 2020.

Continued interest in polar icebreaking presents an opportunity to enhance U.S. presence in the Arctic and Antarctic. The United States is moving forward with a plan to build three additional icebreakers and hopes to fund three more. This Perspective outlines three recommendations for doing so:

- Assess further needs for implementing additional icebreaking capacity.
- Ensure that new vessels are built with a changing, multimission operating environment in mind.
- Consider other, related capability investments as part of planning, including additional people and materiel.

United States Coast Guard, [Arctic Strategic Outlook](#), April 2019.

Since the release of the Coast Guard Arctic Strategy in 2013, the resurgence of nation-state competition has coincided with dramatic changes in the physical environment of the Arctic, which has elevated the region's prominence as a strategically competitive space. America's two nearest-peer powers, Russia and China, have both declared the region a national priority and made corresponding investments in capability and capacity to expand their influence in the region. Russia and China's persistent challenges to the rules-based international order around the globe cause concern of similar infringement to the continued peaceful stability of the Arctic region. As the only U.S. Service that combines both military and civil authorities, the Coast Guard is uniquely suited to address the interjurisdictional challenges of today's strategic environment by modeling acceptable behavior, building regional capacity, and strengthening organizations that foster transparency and good governance across the Arctic.

Paul Avey, "[The Icebreaker Gap Doesn't Mean America is Losing in the Arctic](#)," War on the Rocks, 28 November 2019.

Using relative icebreaker fleet sizes as a key metric for the state of strategic competition in the Arctic is flawed. While they are an important platform, icebreakers do little to create or address the most commonly identified defense challenges in the region. Instead, analysts should focus on the nature of the military risks in the Arctic, the role of allies and partners, and economic interests in a broader geopolitical context rather than comparing specific capabilities. Doing so is important to avoid mischaracterizing the scope of the danger or emphasizing the wrong types of solutions.

David Hambling, "[U.S. Seeks Armed Nuclear Icebreakers For Arctic Show Of Force](#)," *Forbes*, 12 June 2020.

President Trump has called for a 'ready, capable, and available fleet of polar security icebreakers' to give America a 'strong presence' in the Arctic and Antarctic regions. The call comes in a [White House memorandum](#) dated June 9 and envisages armed, nuclear-powered icebreakers engaging in operations for both national security and commercial interests. This is hugely ambitious considering that the U.S. currently has a single, ageing, non-nuclear icebreaker, while Russia is rapidly expanding its huge nuclear icebreaker fleet. The memorandum suggests a slant towards military and economic activity and away from science, with the icebreaker fleet able to provide 'a persistent United States presence in the Arctic and Antarctic regions in support of national interests and in furtherance of the National Security Strategy and the National Defense Strategy.'

R O'Rourke, "[Coast Guard Polar Security Cutter Program: Background and Issues for Congress](#)", Congressional Research Service, 2019.

A Department of Homeland Security (DHS) Mission Need Statement (MNS) approved in June 2013 states that "current requirements and future projections ... indicate the Coast Guard will need to expand its icebreaking capacity, potentially requiring a fleet of up to six icebreakers (3 heavy and 3 medium) to adequately meet mission demands in the high latitudes...."

Issues for Congress for the PSC program include, inter alia, whether to approve, reject, or modify the Coast Guard's annual procurement funding requests for the program; whether to use a contract with options or a block buy contract to procure the ships; whether to continue providing at least some of the procurement funding for the PSC program through the Navy's shipbuilding account; technical, schedule, and cost risk in the PSC program; and whether to procure heavy and medium polar icebreakers to a common basic design.

Robert English, "[Why an Arctic arms race would be a mistake](#)," *Arctic Today*, 18 June 2020.

Most of America's historic foreign policy blunders were driven by threat inflation. From fake attacks on ships in Havana Harbor or the Gulf of Tonkin, to falling dominos in Southeast Asia and WMD in Iraq — the response to these "dire threats" is often a costly quagmire. In the Cold War it was phony bomber and missile "gaps" that sparked a precarious and ultimately pointless nuclear confrontation. Today a new "icebreaker gap" could fuel an Arctic arms race. This is another historic mistake, not only because it could lead to costly and dangerous confrontation in an extremely fragile region, but because its entire premise is false.

Andreas Østhagen, [Coast Guards and Ocean Politics in the Arctic](#). Singapore: Palgrave Macmillan, 2020.

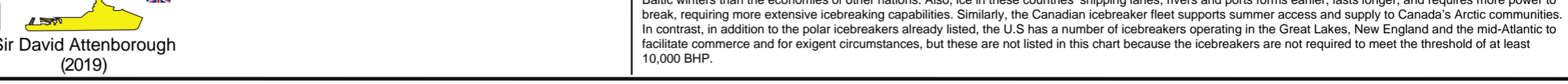
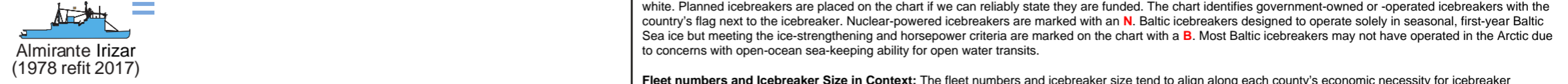
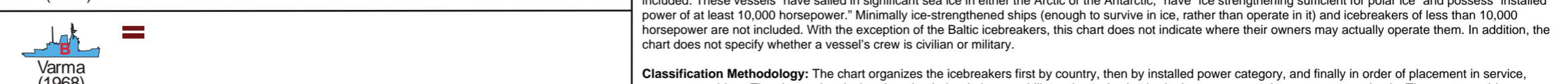
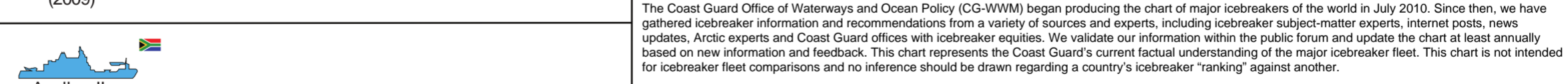
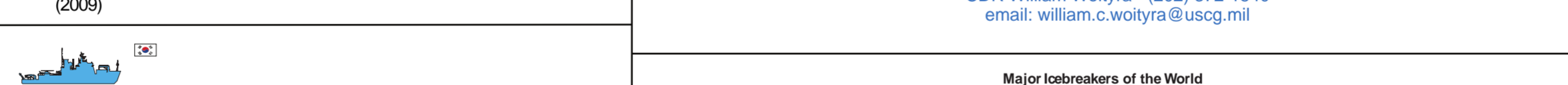
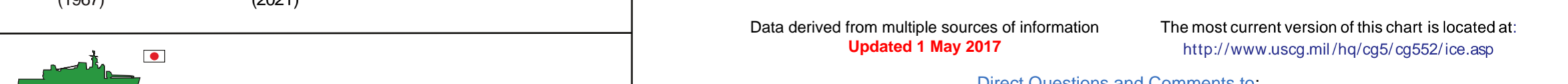
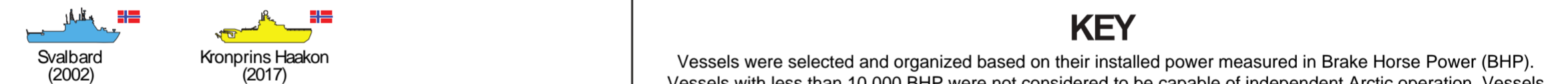
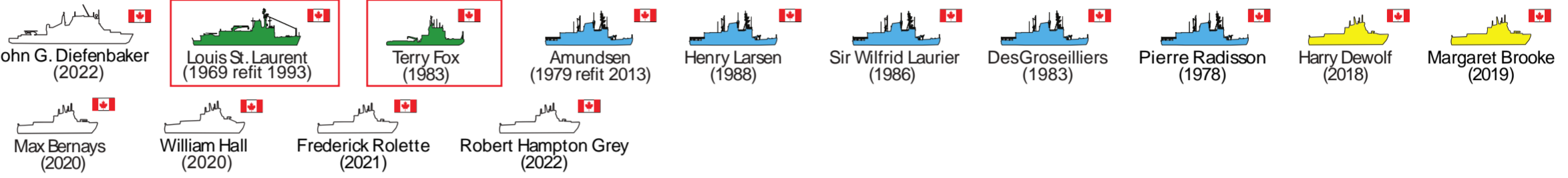
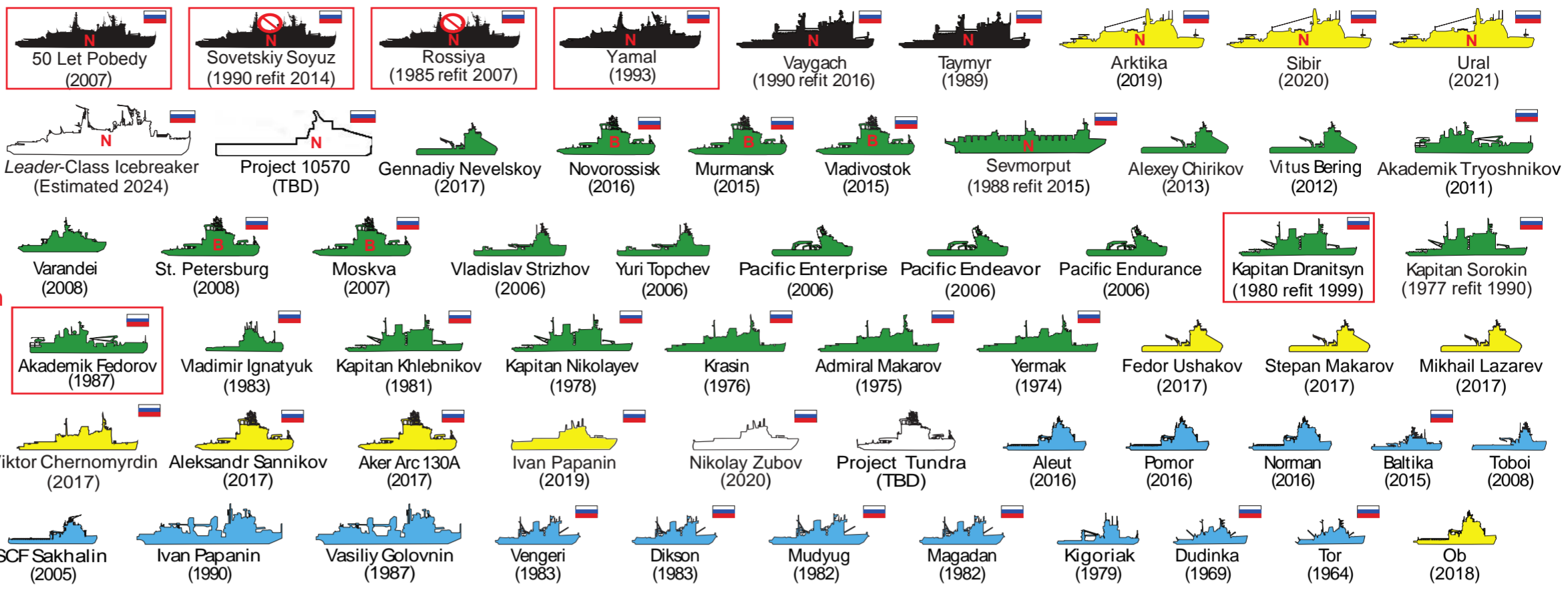
This book is about coast guards, their role in the Arctic, and in ocean politics and resource management more generally, by a leading Norwegian research on Arctic geopolitics. This places United States icebreaker issues in a circumpolar context.

Drewniak et al. "[Geopolitics of Arctic Shipping: The State of Icebreakers and Future Needs](#)", *Polar Geography*, March 2018.

Considering that ice and ice-pacts will remain a concern in the future, the support of icebreakers will still be needed to facilitate the safe passage of ships. Describing the state of these types of vessels currently available is the main aim, with a particular focus on key state players: the Russian Federation (RF), the United States of America (USA) and Canada. Additionally, a critical evaluation of future plans in relation to the introduction of icebreakers into service is taking place.



MAJOR ICEBREAKERS OF THE WORLD



KEY

Vessels were selected and organized based on their installed power measured in Brake Horse Power (BHP). Vessels with less than 10,000 BHP were not considered to be capable of independent Arctic operation. Vessels are ordered by age, youngest first, within power groupings. Vessel outlines reflect relative sizes.

COLOR GUIDE	NOTES
> 45,000 BHP	<ul style="list-style-type: none"> Government owned or operated Unavailable Nuclear Power Designed for Baltic use Been to the North Pole
≥ 20,000 BHP < 45,000 BHP	
≥ 10,000 BHP < 20,000 BHP	
Under Construction	
Planned	

Data derived from multiple sources of information
Updated 1 May 2017

The most current version of this chart is located at:
<http://www.uscg.mil/hq/cg5/cg552/ice.asp>

Direct Questions and Comments to:
CDR William Woityra - (202) 372-1540
email: william.c.woityra@uscg.mil

Major Icebreakers of the World Explanatory Piece

The Coast Guard Office of Waterways and Ocean Policy (CG-WWM) began producing the chart of major icebreakers of the world in July 2010. Since then, we have gathered icebreaker information and recommendations from a variety of sources and experts, including icebreaker subject-matter experts, internet posts, news updates, Arctic experts and Coast Guard offices with icebreaker equities. We validate our information within the public forum and update the chart at least annually based on new information and feedback. This chart represents the Coast Guard's current factual understanding of the major icebreaker fleet. This chart is not intended for icebreaker fleet comparisons and no inference should be drawn regarding a country's icebreaker "ranking" against another.

Scope: Vessels meeting the general definition of a polar icebreaker per the 2007 National Research Council report on Polar Icebreakers in a Changing World are included. These vessels "have sailed in significant sea ice in either the Arctic or the Antarctic," have "ice strengthening sufficient for polar ice" and possess "installed power of at least 10,000 horsepower." Minimally ice-strengthened ships (enough to survive in ice, rather than operate in it) and icebreakers of less than 10,000 horsepower are not included. With the exception of the Baltic icebreakers, this chart does not indicate where their owners may actually operate them. In addition, the chart does not specify whether a vessel's crew is civilian or military.

Classification Methodology: The chart organizes the icebreakers first by country, then by installed power category, and finally in order of placement in service, youngest to oldest. The chart colors icebreakers by their relative capability estimated using brake horsepower as the most common basis. The most capable icebreakers are black, the next level sea-green and the lightest icebreakers are blue. Icebreakers in construction are colored yellow, and planned icebreakers are white. Planned icebreakers are placed on the chart if we can reliably state they are funded. The chart identifies government-owned or -operated icebreakers with the country's flag next to the icebreaker. Nuclear-powered icebreakers are marked with an **N**. Baltic icebreakers designed to operate solely in seasonal, first-year Baltic Sea ice but meeting the ice-strengthening and horsepower criteria are marked on the chart with a **B**. Most Baltic icebreakers may not have operated in the Arctic due to concerns with open-ocean sea-keeping ability for open water transits.

Fleet numbers and icebreaker size in context: The fleet numbers and icebreaker size tend to align along each country's economic necessity for icebreaker resources. For example, the economies of Finland, Russia and Sweden have greater dependence on major icebreakers to pursue economic goals in the Arctic and Baltic winters than the economies of other nations. Also, ice in these countries' shipping lanes, rivers and ports forms earlier, lasts longer, and requires more power to break, requiring more extensive icebreaking capabilities. Similarly, the Canadian icebreaker fleet supports summer access and supply to Canada's Arctic communities. In contrast, in addition to the polar icebreakers already listed, the U.S. has a number of icebreakers operating in the Great Lakes, New England and the mid-Atlantic to facilitate commerce and for exigent circumstances, but these are not listed in this chart because the icebreakers are not required to meet the threshold of at least 10,000 BHP.