Policy Briefing Transportation

Canadian icebreaking capabilities not up to snuff, experts say

Experts say the Canadian icebreaking fleet isn’t sufficient for current or future needs. As climate change breaks Arctic ice, the ships will become more important for the security of communities and marine shipping routes.

BY AIDAN CHAMANDY

The town of L’Anse-au-Loup, N.L., sits on north shore of the Strait of Belle Isle, just over 20 km east of the lower north shore of Quebec. The 600-person community relies on a ferry service to provide them with everything from groceries to propane.

“All our grocery stores rely on it for their produce and product, all our restaurants. I heat my business with propane, that has to come across on the ferry,” said L’Anse-au-Loup Mayor Trent O’Brien. “During the winter months, we have ice conditions. Usually by mid-February they’re very troublesome for transportation. It prevents our ferry from crossing for days on end.”

As of Thursday, Feb. 21, the ferry has only been able to cross once in the past two weeks due to heavy ice conditions. “There’s very little produce here now. Unless you buy it canned or frozen, you’re not getting it.” Mr. O’Brien said. When the ferry can’t cross, the province provides a passenger plane, but that only happens after five consecutive days of missed crossings and it doesn’t carry any freight.

“If stores want to have their produce flown, they have to do so at their own expense,” Mr. O’Brien said. “A box that only weighs a couple of pounds from St. John’s can cost $100 or more.”

Normally, the town would look to the Canadian Coast Guard’s fleet of icebreakers to clear the water so the ferry can cross. The number of ships, however, is in short supply and often can’t manage the thick ice. Currently, four medium and heavy icebreakers are tasked with handling the Atlantic region. Two are heavy icebreakers, the Louis S. St. Laurent and Terry Fox, and two are medium icebreakers, the Captain Molly Kool and Henry Larsen. Given the thickness of the ice in the area, only medium and heavy class icebreakers can adequately clear the transit route.

“A lot of the time when we could make a crossing the icebreakers aren’t available or are tasked somewhere else,” Mr. O’Brien said. “Or instead of sending a medium or heavy icebreaker, they send a high-endurance multitask vessel, which is not capable of handling the ice conditions in this area.”

Of the four icebreakers delegated to the Atlantic region, only the Molly Kool was built in the 21st century. The ship was initially launched in 2001, then purchased by the federal government from Norway as part of the National Shipbuilding Strategy. It was one of three ships purchased from Norway for a total cost of $610-million. The ship was retrofitted with icebreaking capabilities by the Davie shipyard, and first deployed on Dec. 14, 2018. It is the first new icebreaker deployed since the Terry Fox first floated in 1993. The Louis S. St. Laurent is the oldest of the four Atlantic ships, first deployed in 1969.

According to Stewart Webb, editor of DefenceReport, “The icebreakers are old. Canada’s icebreaking capacities are okay for now, we are adding a few new ships, but essentially it’s just a band-aid.” Mr. Webb said icebreakers generally have a lifespan of 40 years.

The current shortage of icebreakers is already causing problems for communities like L’Anse-au-Loup, but as climate change continues to melt sea-ice in the coldest regions of the country, marine shipping will increase. Marine activities in the Arctic and similar regions are already increasingly annual, especially since 2007, according to a joint study by the University of Ottawa and Environment Canada. Multi-year ice, the thickest form of ice, “is breaking off and flowing down into the Canadian Arctic Archipelago and making it much more hazardous for ships than it’s ever been in the past,” said Prof. Jackie Dawson, one of the authors of the study. The ships that normally inhabit these waters are unable to deal with the thickest ice, and it presents a serious danger for the ship and crew.

As these vessels traverse ice-laden waters and encounter the thickest ice, should anything ever happen to them, they’ll require rescue by the Canadian Coast Guard’s icebreakers. According to Mr. Webb, Canada’s icebreaking capabilities are not entirely sufficient for dealing with the current risks, let alone those future risks posed by a changing climate. Mr. Webb said that the six Arctic Offshore Patrol vessels included in the National Shipbuilding Strategy are not equipped to serve as icebreakers—their “ice-strengthened” hulls can “barely deal with first year ice,” he said—and the single heavy icebreaker the government will purchase isn’t enough.

In addition to ensuring the safety of remote Canadian communities and frigid marine transit-ways, the Coast Guard’s icebreaking fleet helps protect Canada’s claim to Arctic sovereignty, Mr. Webb said. He cited China and the European Union’s efforts to secure permanent member status on the Arctic Council and gain fishing rights in the Arctic Ocean, the Chinese research vessel Xue Long’s navigation through the Northwest Passage in late summer 2017, and Russian efforts to create an Arctic transit route as examples of the need to do so.

Prof. Dawson agrees. “Other nations are building icebreakers, investing in science programs. It may not be coming next year, but we will see a significant increase in traffic,” she said. “We should position ourselves as leaders of the situation in our own country, instead of letting other countries dictate the way forward.”

The government currently has an outstanding request for information regarding the procurement of an existing icebreaker for the St. Lawrence Seaway. Davie still has two icebreakers to deliver, Irving is building six Arctic patrol vessels, and Seaspan has been asked to build four ships, one of them a heavy icebreaker. The shipbuilding industry has until Apr. 19 to respond to the government’s request.

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