CANADA'S UNDERSEA WARFARE CAPABILITIES AND THE VICTORIA-*CLASS REPLACEMENT*

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With the decommissioning of the *Victoria*-class submarines scheduled to start in 2031 and conclude by 2042, Canada has launched the Canadian Patrol Submarine Project to identify and acquire its next undersea warfare platform. A successful acquisition will start with the end in mind: namely, what undersea warfare capabilities does Canada require through the end of the century? This article, one in a series (see *6 Questions to Consider When Planning for Canada's Next Submarine*, March 2022), provides a perspective on Canada's future undersea warfare capability needs.

The *Victoria*-class provides Canada with unique capabilities

The *Victoria*-class provides Canada unique capabilities to respond to external threats – be they from state or non-state actors – in times of peace and conflict.

In conflicts with state actors, the *Victoria*-class provides Canada with a covert force projection capability, able to influence adversary actions by their presence – or possible presence. From anti-access/area denial (A2/AD) to offensive action, Canada's "silent service" can operate in contested environments, insert special operations units, and perform anti-submarine warfare (ASW) missions.

Against non-state actors, the *Victoria*-class can covertly gather intelligence and insert special operations units, performing a constabulary function that can limit, for example, narcotics and human trafficking (Operation *Caribbe* is an example of the Canadian government's multilateral activities in this area) and weapons smuggling.

While other systems could perform similar tasks, submarines can do so covertly – and that makes their capabilities of unique value to Canada.

In addition, Canada's surface fleet benefits from Canada's submarine fleet, as the latter can help the former with ASW training (and can do the same for allied navies). Canada also benefits from participation in "water-space management," which provides intelligence on the location of allied submarines – and which is rarely shared with allies who do not have a submarine fleet.

Geopolitical threats are increasing, as is the likelihood of conflict

Russia's invasion of Ukraine is a tragic reminder that we are in a period of great power conflict and that the "rules-based international order" may not be an effective deterrent when belligerents serve on the United Nations Security Council. It is also a reminder that participation in other world bodies, such as the World Trade Organization, G20, or Arctic Council, or proximity to the United States is no guarantee of peace or stability. In addition to instability on land, as ice cover melts and becomes

seasonal, the Arctic – Canada's backyard – could become increasingly contested (both by Arctic states, such as Russia, and China, which refers to itself as a "near Arctic state").

Amid these risks, alliances are shouldering more of the global security burden and increasing their investments in defense capabilities – to deter and respond to future threats, and for each country to demonstrate their commitment to collective security to their fellow allies.

Arctic sea ice decline could increase use of the Northwest Passage

As ice cover recedes in the Arctic, sea routes in the Arctic Ocean become more attractive to commercial shipping, including the Northwest Passage. With Canada's claim that the Northwest Passage is "internal waters", it may want to exert additional control over the waterways as commercial traffic increases.

Canada may want to perform missions in the future that the *Victoria*-class cannot perform today

The *Victoria*-class performs a wide range of missions for Canada, with bluewater capabilities across cold and warm climates (we acknowledge that the *Victoria*-class's limited operational availability has reduced Canada's ability to perform these missions – and we note that Canada would continue to benefit from being able to perform this wide range of missions). Yet, with a displacement of ~2,500 tons and standard diesel propulsion (no air-independent propulsion), the submarines are not able to operate under polar ice, nor are they able to operate under seasonal or first-year ice.

Additionally, weapons and sensor technologies have expanded their capabilities since the *Victoria* class's last upgrade and could further expand the missions that could be performed, while also providing an opportunity for international collaboration with allied nations.

With Canada's extensive Arctic territory, operating near-ice and under-ice would let Canada patrol the full extent of her territorial waters and deter adversaries from infringing Canada's sovereignty. This would expand the mission space for Canada's submarine fleet and provide both a covert capability in the Arctic and a capability that is less restricted by sea ice than surface ships are.

Additionally, with "Five Eyes" allies Australia, the U.K., and the U.S. operating nuclear submarines, Canada might find the increased capabilities (mission set and duration) of a nuclear fleet (which could be maintained at allied bases) appealing.

Conclusion

As a 3-ocean country, Canada's maritime interests – and potential conflicts – are only increasing. Canada's ability to influence adversary (and allied) actions with an active submarine fleet strengthens Canada's ability to defend its interests and to support allies in an era of great power competition.

Replacing the *Victoria* class provides Canada capabilities – and outcomes – that it could not otherwise obtain.

Photo credit: The Canadian Press

Sources: Ryan deForest, "Does the RCN need Submarines?" Naval Association of Canada, Niobe Papers No. 17; Michael Byers, "Does Canada need Submarines?" Canadian Military Journal *14:3, 7-14,*

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Prior to his last position, Hughes served as vice president for In-Service Aircraft Carriers and was responsible for planning and executing aircraft carrier refueling and overhaul programs at Newport News as well as carrier fleet support work around the globe. He began his career at Newport News Shipbuilding as a Combat Systems engineer in Aircraft Carrier and Nuclear Cruiser Engineering.

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