



The Protecteur-Class

As a trading nation that conducts much of its international trade by sea, Canada is heavily reliant on the stability of the world's seas and the dominance of the rules-based international maritime order. Increasingly, this stability and order appear to be under siege, as evidenced by Russia's escalating hostility and aggression, as well as China's progressively more domineering and militant approach to the East and South China Seas. Together, these have reinforced the need for deterrence and the importance of Canada and its allies maintaining an international presence in the maritime theatre.

This need to bolster international stability and support the maintenance of the international maritime order has led Canada to develop what its naval operational strategy, *Leadmark 2050*, identifies as a "blue-water navy"¹ and a "globally deployable" force² in its Royal Canadian Navy (RCN). Such global deployments and blue-water operations require considerable support to be effective and broad in their reach. In the RCN, Auxiliary Oiler Replenishment (AOR) ships have traditionally provided this critical support, accompanying warships to supplement and restock their fuel (both aviation and marine), ammunition, food, fresh water, and other essential supplies. Serving as essentially "a floating grocery store, gas station, maintenance and sparing repair shop, and helicopter hangar," the AORs – for most navies – are support vessels rather than combat units. As such, they are typically lightly armed, generally only boasting light automatic cannons, machine guns, small arms, and/or self-defence systems like the Phalanx Close In-Weapon System (CIWS).

HMCS *Protecteur* and HMCS *Preserver* were, until recently, Canada's two AORs. Commissioned in 1969, HMCS *Protecteur* suffered a significant fire in February 2014 and was subsequently paid off the following year. HMCS *Preserver*, commissioned in 1970, was paid off in 2016. With both vessels thus retired, the RCN found itself facing a significant capability gap in its lack of any indigenous ability to support its fleet.

Leasing at-sea support services from Canada's allies in part addressed this capability gap. So, too, did the Government of Canada's leasing arrangement with Quebec's Chantier Davie shipyard to convert a commercial container vessel into an interim replenishment vessel. As a result of this so-called Project Resolve, the Interim Auxiliary Oiler Replenishment (iAOR) ship MV *Asterix* has offered critical support to the Canadian navy and enabled it to maintain a global reach. Plans for a more permanent replacement for the AORs date back to 1999 and the Afloat Logistics Support Capability (ALSC) project, which ultimately failed to progress. The subsequent Joint Support Ship (JSS) project, which advocated for the construction of three new AORs with an added afloat joint command and control ability as well as a limited joint communications system, also failed to advance, due to its cost. However, the creation of the National Shipbuilding Strategy (NSS) rejuvenated the JSS proposal. Under the NSS, the shipyard selected to construct the non-combat vessels under the Strategy would also undertake the construction of the JSSs. The majority of the limited joint capabilities for the prospective JSSs were removed from their operational needs, and

although the NSS includes the option for the procurement of a third JSS vessel, costs make it unlikely that a third JSS will indeed be ordered.

The design for the JSSs thus under construction is premised upon the design of the German *Berlin EGV* class, with certain modifications to account for distinct Canadian and RCN needs. In addition to modifications due to the different electrical standards between North America and Europe, there have also been adjustments to the base design's Main Radio Room, Combat Information Centre, and Machinery Control Room arrangements and structures. Other design changes include magazine changes, the removal of a Forward Refuelling Station, the internal reorganization of the medical complex and accommodation standards, the integration of the Canadian Replenishment-at-Sea equipment and arrangement supplier, improved insulation, and the use of GL D-grade steel to satisfy the Lloyd's Register's specifications for winterization. Other design modifications have focused on reinforcing and bolstering the flight deck, adjusting the hangar, and incorporating Canada's helicopter traversing and recovery systems, all of which will ensure the JSSs' capacity to accommodate Canada's heavier and larger CH-148 Cyclone helicopters.

Originally, the JSSs were earmarked to reach full operationality in 2019. However, construction is significantly behind schedule. Interruptions due to the COVID-19 pandemic caused delays, as did issues with the sequencing and order of the vessels being constructed at Seaspan Shipyards in British Columbia. The NSS had initially anticipated and provided for the construction of the JSSs at Seaspan to occur after the shipyard had completed construction on the Offshore Oceanographic Science Vessel (OOSV) and Offshore Fisheries Science Vessels. An existing production gap at Seaspan and desires to expedite this schedule resulted in the shipyard commencing construction of large parts of the first JSS in June 2018. However, schedule slippage and complications with shuffling the shipyard's capacity led the Canadian government to reorder Seaspan's construction sequence in early 2019. Now, construction will prioritize the completion of the future HMCS *Protecteur* (the first JSS), then the OOSV, and finally the future HMCS *Preserver* (the second JSS). This adjustment has seemingly accelerated progress on the JSSs' construction. January 2020 saw Seaspan laying the keel of HMCS *Protecteur*,³ the shipyard announced in March 2023 that it had crane-hoisted the mast section onto the future vessel, and the hull was reportedly in one piece as of April 2023. Construction of this first JSS is expected to be completed by 2025. Meanwhile, construction commenced on the future HMCS *Preserver* in May 2022, with the vessel anticipated to be complete by 2027.

The construction of these JSSs is in part such a trial and such a feat because of their enormity. Measuring over 24 metres in width and 173 metres in length, the JSSs, once complete, will constitute the largest naval vessels ever constructed in Canada. With a top speed of 20 knots and approximate cruising speed of 15 knots, the vessels' range will be around 10,800 nautical miles. Their capabilities, too, will be significant. They will be able to effect the solid and liquid replenishment of allied and Canadian vessels, in addition to performing the at-sea maintenance of helicopters and vessels. The JSSs will be capable of responding to nuclear, biological, and chemical threats, as well as enhancing humanitarian responses by providing sea-lift capacities, mobile command posts, and medical facilities. Given that Seaspan is constructing the vessels to military standards, and equipping them with advanced self-defence and damage control systems, the JSSs will be able to fulfill these various roles in a range of threat environments. Thus, Canada's future *Protecteur* class, constructed under the Joint Support Ships program, will continue to

provide the RCN with the AOR capabilities required to sustain its crucial blue-water capacity and global deployments.

References

¹ A blue-water navy operates in the open ocean. In contrast, a green-water navy operates nearby the coastline, while a brown-water navy operates close to coastlines or in rivers.

² Royal Canadian Navy, *Leadmark 2050: Canada in a New Maritime World* (Department of National Defence, 2016), vi.

³ “Seaspan Shipyards Hosts Ceremonial Keel Laying for HMCS Protecteur,” *Naval Technology*, January 17, 2020.