

KINGSTON CLASS PATROL SHIPS (MARITIME COASTAL DEFENCE VESSELS)



The Royal Canadian Navy (RCN) has a diverse set of missions at home and around the world and, while it is a combat force equipped with some of the most sophisticated weapons at sea, it is also responsible for a host of day-to-day duties for which high-end combat power is not needed. Canada's naval strategy names several such tasks, including defence of Canadian sovereignty, securing Canada's maritime approaches, contributing to maritime peace and good order abroad, and strengthening partnerships around the world.¹ Within these broad categories fall a myriad of important tasks, such as drug interdiction, fisheries patrol, route surveying and support to civilian agencies. For these tasks the RCN often employs the *Kingston*-class patrol ships, also known as the Maritime Coastal Defence Vessels (MCDVs).

The *Kingston*-class ships are small patrol ships, measuring 55.3 metres and displacing 970 tons. They are crewed by 30-36 regular force and reserve force personnel. Canada currently has 12 MCDVs, deployed evenly between the East and West Coasts. The ships were built and launched from the mid- to late 1990s by Halifax Shipyards Ltd, owned by Saint John Shipbuilding of Canada as a replacement for the RCN's ageing *Anticosti*-class and *Bay*-class vessels. Not required to conduct combat operations, they were intended to be economical additions to the fleet and were built with commercial, off-the-shelf, equipment.

Although the ships were conceived during the Cold War, their construction occurred at the end of, and immediately after, the Cold War ended. The *Kingston*-class was part of the ambitious 1987 White Paper (which also requested a small fleet of nuclear attack submarines) produced by the government of Brian Mulroney. The White Paper summed up the need for new patrol craft by pointing to obvious shortfalls in RCN capacity, stating the "maritime forces have too few operational vessels, very limited capacity to operate in the Arctic and no capability to keep Canadian waterways and harbours clear of mines."²

To meet this need, the *Kingston*-class was designed with general purpose patrol and minesweeping capability. While minesweeping is still listed as a role, that requirement was lessened by the end of the Cold War. The necessary minesweeping equipment is no longer available, and the capability is now largely theoretical.³ As minesweepers, the ships were compromise builds. Their propulsion systems were designed to reduce their acoustic signatures to defend against acoustic mines, however their hulls are made of steel rather than the wood or fiberglass that modern minesweepers often use to avoid magnetic mines.

As warships, the *Kingston*-class was initially equipped with light armament. This included a Bofors 40 mm Model 60 Mk 5C rapid fire gun mounted on the forecastle deck and two 12.7 mm (.50 calibre) machine guns. The Bofors gun was a Second World War design which needed to be manually loaded and lacked any modern targeting capability. In 2014 it was judged obsolete and

removed from the ships, and the vessels currently rely on their machine guns for defence.

Being so lightly armed, the MCDVs are not intended for combat. Instead, they have generally been used by the RCN as training vessels and as general purpose ships which conduct domestic coastal surveillance and patrol, search and rescue, resource protection and fisheries patrols in support of the Department of Fisheries and Oceans, as well as support to law enforcement and other civilian agencies.⁴ Rather than defence against state-based adversaries, these patrol ships focus on security missions, working with the RCMP and other government departments to ensure that Canadian law and regulations are respected in Canada's territorial sea, fishing areas and ocean space over which Canada exercises jurisdiction.

In the 2000s, the MCDVs took on a larger role as the RCN found itself with a reduced fleet capacity as the *Halifax*-class frigates went through their mid-life modernization. This increased reliance on the patrol ships led them to deployments further afield and, as stated in navy strategy “across a wide range of domestic and continental defence and security missions.”⁵

As part of this unconventional security mission, ships of the *Kingston*-class have undertaken several drug-interdiction missions in partnership with the US Navy and Coast Guard. For example, *Operation Caribe* is Canada's participation in the US-led *Operation Martillo*, a multinational campaign against illicit trafficking by transnational organized crime in the Caribbean Sea and the eastern Pacific Ocean. In 2019 HMCS *Whitehorse* and HMCS *Yellowknife* seized 2,657 kilograms of narcotics during 70 days at sea in the Caribbean. Between 2017 and 2019, these RCN ships have seized 102.7 tonnes of cocaine and over 6.7 tonnes of marijuana.⁶

In addition to operations in the Western Hemisphere, MCDVs have been deployed across the Atlantic to West Africa. For example, in January 2019, HMCS *Kingston* and *Shawinigan* crossed the Atlantic to conduct *Operation Projection West Africa*. Their mission was to engage with states in West Africa to build partner capacity, promote maritime security and foster relationships in the Gulf of Guinea region. HMCS *Kingston* and *Shawinigan* also participated in Obangame Express 2019, which was led by US Naval Forces Africa (NAVAF) and designed to improve cooperation among participating states to increase maritime safety and security in the Gulf of Guinea.

While they are versatile platforms, the MCDVs suffer from some serious shortcomings – i.e., they are limited by certain design choices. For patrol ships they are fairly slow, capable of only 15 knots (28 km/h) maximum continuous speed, and a range of 9,000 km. As noted, when building the ships the RCN chose to combine minesweeping and patrol functions in a single class of vessel, thus compromising the speed of a patrol ship for the function of a minesweeper. It also reduced the ships' costs by using inexpensive low carbon steel and building to commercial rather than military standards. Lastly, to reduce costs they were built with a shorter hull, which has had an impact on both sea-keeping and speed.⁷

Age and use have taken their toll on the ships. They are now over 20 years old and suffer from chronic engine trouble and must be continually rotated in and out of service.⁸ Consideration has been given to modernizing the ships or replacing them entirely. A planned \$100 million mid-life

refit was cancelled after the ships were “deemed unworthy” of a mid-life refit,⁹ largely owing to the limitations of the platforms. Instead, the RCN has considered retiring them in the early 2020s. *Leadmark 2050* called for a fleet of 12 new coastal patrol vessels.¹⁰ In 2017 the Standing Committee on National Defence made the same recommendation – assuming that these ships could be fit into the ongoing National Shipbuilding Strategy (see Briefing Note #6 about the NSS).

A ship-for-ship replacement of the *Kingston*-class MCDVs was rejected by the government in its response to the Standing Committee. Instead, it was assumed that the new Arctic Offshore and Patrol Ships (AOPS) would fill many of the roles which traditionally fell to the *Kingston*-class. The government’s position was that the new AOPS would provide a “more complete set of capabilities.”¹¹ However, only six AOPS are planned for the navy (with an additional two for the Canadian Coast Guard). The reduction in ship numbers if the older patrol craft are retired will lead to reduced capacity across many areas.

Notes

1. Royal Canadian Navy (RCN), *Leadmark: The Navy’s Strategy for 2020* (Ottawa: Directorate of Maritime Strategy, 2001), p. iv.
2. Department of National Defence (DND), “Challenge and Commitment: A Defence Policy for Canada,” 1987. Quoted in Michael Byers and Stewart Webb, “Titanic Blunder,” Canadian Centre for Policy Alternatives, April, 2013, pp. 8-9.
3. *Ibid.*, p. 8.
4. Canada, Report of the Standing Senate Committee on National Security and Defence, “Reinvesting in the Canadian Armed Forces: A Plan for the Future,” May 2017.
5. RCN, *Leadmark*, 45
6. Department of National Defence, “Operation Caribbe,” www.canada.ca/en/department-national-defence/services/operations/military-operations/current-operations/operation-caribbe.html.
7. Byers and Webb, “Titanic Blunder,” p. 10.
8. Scott Gilmore, “The Sinking of the Canadian Navy,” *Maclean’s*, 4 August 2015.
9. Evidence provided by Michael Byers to the House of Commons Standing Committee on National Defence, Evidence, 1st Session, 42nd Parliament, 7 February 2017.
10. RCN, *Leadmark*, p. 58.
11. Government response to “The Readiness of Canada’s Naval Forces,” Report of the Standing Committee on National Defence, 16 October 2017.