



## The Kingston-Class Patrol Ships

The Kingston-class Marine Coastal Defence Vessel (MCDV) are Canada's lightly-armed patrol ships. These vessels undertake a variety of domestic and international missions, guarding the maritime approaches to North America, building partnerships with allies, and performing constabulary and patrol duties.

The Kingston-class was designed and built at the end of the Cold War, proposed in the 1987 White Paper on defence. Noting that the RCN then possessed "too few operational vessels, very limited capacity to operate in the Arctic, and no capability to keep Canadian waterways and harbours clear of mines," the White Paper elucidated the urgent need to procure new patrol vessels.<sup>1</sup> The Anticosti- and Bay-class vessels were rapidly ageing out of operationality, and a new vessel was required to fill the Navy's widening capability gap. The Kingston-class was thus born.

Commissioned by Halifax Shipyards Ltd. between 1996 and 1999 under the Maritime Coastal Defence Vessel (MCDV) Project, the vessels were not expected to participate in combat (given the end of the Cold War). Instead, they were possessed a general-purpose patrol capability, in addition to modular minesweeping capacities. Desires to make the vessels' construction and operation as economical as possible led to the use of off-the-shelf, commercial equipment in their construction, as well as their inclusion of several design compromises respecting their minesweeping capabilities. For instance, while the design of the Kingston-class' propulsion systems sought to minimize their acoustic signatures and reduce their risk of activating acoustic mines, their hulls were fashioned out of steel, rather than the fiberglass or wood more common and preferred among minesweepers to avoid activating magnetic mines.<sup>2</sup>

Displacing 970 tons and measuring 11.3 metres in breadth and 55.3 metres in length, 12 of these small, low-cost patrol vessels now operate across Canada, divided equally between the Pacific and Atlantic. Between 30 and 36 sailors from both the Regular Force and Naval Reserve crew each vessel. Given that the vessels were not intended to fulfill a combat role, the Kingston-class was (and remains) only lightly armed. Initially, the vessels had a light armament, namely two .50 calibre/12.7 mm machine guns as well as a Bofors 40 mm Model 60 Mk 5C rapid-fire gun. This latter gun, affixed to the vessels' forecastle decks, required manual loading and was devoid of any targeting ability, given that its design harkened back to World War Two. As such, it was deemed obsolete in 2014 and removed from the vessels, leaving the Kingston-class equipped with only their machine guns.

Due to this minimal combat or even defensive capability, the RCN has predominantly used its Kingston-class as either training vessels or general-purpose patrol vessels, conducting search and rescue, fisheries and resource protection patrols to aid the Department of Fisheries and Oceans, and domestic coastal patrols and surveillance, in addition to supporting other civilian and law enforcement agencies.<sup>3</sup> Though destined primarily for domestic taskings and responsibilities, the Kingston-class nevertheless assumed a broader role in the 2000s as the RCN's Halifax-class

frigates were undergoing modernization. This broadened and expanded role has since continued. In recent years, the vessels have participated in counter-drug operations alongside the US Coast Guard and US Navy, such as Operation *Caribbe*, involving the ships in the confiscation and capture of tonnes of illicit marijuana and cocaine.<sup>4</sup>

In addition to these undertakings in the Western Hemisphere, vessels of the Kingston-class have also deployed across the Atlantic Ocean to West Africa. For instance, HMCS *Moncton* and HMCS *Goose Bay* partook in Operation *Projection West Africa* in January 2022, then repeating the mission the following year. These operations, consisting of regular four-month deployments, are intended to build relationships and uphold maritime security in the region of the Gulf of Guinea, as well as to engage with West African states to develop partner capacity. HMCS *Moncton* and HMCS *Gloucester* similarly deployed in the US Naval Forces Africa-led Exercise *Obangame Express 2023*, which sought to boost cooperation among the participant nations and elevate security and safety in the waters of the Gulf of Guinea.

Though the conclusion of the Cold War inevitably reduced the *Kingston* class' need to participate in minesweeping, international operations have recently called upon their minesweeping capabilities. In August 2022, HMCS *Kingston* and HMCS *Summerside* were involved in a Standing NATO Mine Countermeasures Group 1 operation seeking to detect and demolish ordnance still remaining in the English Channel from World War Two. Thus, while now diminished and predominantly theoretical, the vessels' minesweeping capabilities remain one element of the Kingston-class' broad and multi-functional role.

Despite their flexibility, versatility, and multi-functional nature, certain design features inherently limit the Kingston-class vessels. As previously mentioned, their dearth of armament restricts them from participating in combat or defence. Given that their design sought to incorporate both patrol and minesweeping functions into a singular vessel, their minesweeping capabilities necessarily came at a cost to their speed, making the Kingston-class remarkably slow for a patrol vessel. Indeed, their maximum speed is a mere 15 knots and their range an unremarkable 5,000 nautical miles. Their short hull – selected to minimize their cost – also reduces their speed and compromises their seakeeping ability. Financial considerations similarly resulted in the use of low-carbon and thus inexpensive steel, as well as the construction of the vessels to commercial rather than military standards. In addition to reducing their utility as minesweepers, this decision, too, restricts the speed of the Kingston-class patrol vessels.<sup>5</sup>

Now, decades of use and age have placed further limitations on the *Kingston*-class' utility and functionality. As the vessels approach three decades of use, chronic engine troubles are common, maintenance is becoming increasingly expensive, and crewing the vessels presents a growing challenge on account of the RCN's enduring personnel shortages. Various conversations regarding the prospective modernization or outright replacement of the vessels have cropped up over the years, including a planned \$100-million mid-life refit, which the Government of Canada cancelled on account of the costs and limitations of the vessels.

In 2024, the RCN is seeking the procurement of a new fleet of coastal patrol vessels. However, a funded capital equipment procurement project has yet to be successfully advanced. While the Standing Committee on National Defence recommended a similar procurement in 2017, the Government of Canada rejected the notion of replacing the Kingston-class on a ship-for-ship basis.

In its place, the government insists that the new Arctic and Offshore Patrol Vessels (AOPVs) being delivered under the National Shipbuilding Strategy will be able to assume several of the Kingston-class' traditional roles and indeed offer a "more complete set of capabilities."<sup>6</sup>

Critics of this plan, however, contend that since the RCN is only set to receive six AOPVs, compared to its 12 Kingston-class vessels, the consequent reduction in the size of its fleet will inevitably curtail the RCN's capacity. Moreover, though the Canadian government announced in July 2023 its awarding of a \$450-million contract to Thales Canada Inc. and Thales Australia Ltd. for the provision of in-service support to Canada's Minor Warships and Auxiliary Vessels (including the Kingston-class),<sup>7</sup> the corresponding solicitation documents noted that the government had yet to reach a decision regarding the Kingston-class' future. Until such a decision is finalized, the Kingston-class will continue to provide the RCN with small patrol vessels that can perform a variety of functions and operational missions, even as several elements of their original design restrict their capabilities.

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## References

<sup>1</sup> Department of National Defence (DND), "Challenge and Commitment: A Defence Policy for Canada," 1987, quoted in Michael Byers and Stewart Webb, "Titanic Blunder: Arctic/Offshore Patrol Ships on Course for Disaster," Canadian Centre for Policy Alternatives, April 2013, 8-9.

<sup>2</sup> Byers and Webb, "Titanic Blunder," 10.

<sup>3</sup> 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.

<sup>4</sup> Operation *Caribee* is the Canadian component of Operation *Martillo*, the multi-national counter-narcotic project that the US leads in the eastern Pacific Ocean and Caribbean Sea.

<sup>5</sup> Byers and Webb, "Titanic Blunder," 10.

<sup>6</sup> Government Response to "The Readiness of Canada's Naval Forces," Report of the Standing Committee on National Defence, October 16, 2017.

<sup>7</sup> Public Services and Procurement Canada, "Government of Canada awards contract for Minor Warships and Auxiliary Vessels in-service support for Canadian Armed Forces," News release, July 12, 2023, <https://www.canada.ca/en/public-services-procurement/news/2023/07/government-of-canada-awards-contract-for-minor-warships-and-auxiliary-vessels-in-service-support-for-canadian-armed-forces.html>.