



Coast Guard responds to changing seas

By Darryl Anderson
Managing Director, Wave Point Consulting

The Canadian Coast Guard (CCG) is responsible for the safe movement of ships through inland and coastal waters. Vital maritime services provided by the CCG include aids to navigation, waterways management, environmental response, icebreaking, search and rescue, and marine communications and traffic services. This article will explore how the CCG is responding to a changing sea of issues and expectations at an international, national and regional level.

Global initiatives

Coping with increasing cargo, passenger traffic and vessel size, climate change, migration, over-fishing, terrorism, and piracy, as well as improving distress and disaster response are just some of the trends driving the need for robust coast guard capacity.

In the global context, it is important to note that as a civilian body, the CCG cannot provide enforcement of international and national laws and regulations about the sea, the environment, and sovereignty. The CTA Review Panel observed, "Canada is unusual in having a civilian coast guard. In other northern jurisdictions, such as Denmark, Greenland, Norway, Iceland, Finland, Russia, and the United States, the coast guard is a military or security organization."

Regardless of organizational structure, coast guards around the world are responding to several common challenges.

In mid-September 2017, Japan hosted the North Pacific Coast Guard Forum Summit which brought together the coast guards of Canada, China, Japan, Russia, South Korea, and the United States to discuss maritime safety and security in the North Pacific Ocean.

"Our co-ordinated efforts through the North Pacific Coast Guard Forum (NPCGF) will continue to keep the North Pacific Ocean safe and navigable, while supporting economic interests of forum member countries. We recently had an opportunity to feature this important collaboration through the NPCGF live exercise in Seattle in June 2017. This exercise successfully allowed us to share and learn best practices in how to manage response to large-scale incidents and oil spills, and emergency response operations," said Commissioner Jeffery Hutchinson, Canadian Coast Guard.

On the margins of the NPCGF, Japan also hosted leaders from 35 nations, and three international organizations for the world's first global coast guard summit. The event centred on three themes: Maritime safety and marine environment protection, maritime security, and capacity building.

Participating countries included the U.S., Canada, South Korea, China, Vietnam, the Philippines, Malaysia, Indonesia, India, Australia, Turkey, Russia, and France.

"In response to recent global environmental changes, it is now required for coast guards all over the world to establish



PROUDLY BUILDING SHIPS IN CANADA, BY CANADIANS

The Offshore Fisheries Science Vessel, the first ship to be built under the National Shipbuilding Strategy, will be launched on December 8, 2017.



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inter-regional co-operation and collaboration beyond the existing bilateral and regional frameworks," Admiral Satoshi Nakajima, commandant of the Japan Coast Guard, said during his opening remarks.

"The first Coast Guard Global Summit was a unique opportunity to share information and best practices beyond our existing bilateral and regional fora, and I am delighted that the Canadian Coast Guard is able to support Japan's leadership in this initiative — including by presenting our own best practices related to international co-operation in the case of large scale oil spill response. Greater co-operation and co-ordination abroad strengthens our collective marine safety and security, and our ability to ensure Canadians enjoy safe and secure waters at home," said Commissioner Jeffery Hutchinson, Canadian Coast Guard.

Arctic Guardian, the first live exercise of the Arctic Coast Guard Forum in early September 2017, brought together the coast guards of the eight Arctic nations to simulate a large-scale search and rescue incident and a damage control exercise. This exercise allowed participating nations to share best practices, enhance inter-operability, and practice joint operations and response to maritime incidents. As the development of the Arctic accelerates, co-operation with Arctic nations continues to be critical. Building relationships through the Arctic Coast Guard Forum and its live exercises will ensure nations are prepared and capable of responding to incidents in the Arctic environment.

"The Arctic Guardian live exercise was a critical next step in the Arctic Coast Guard Forum's evolution, and Canada was pleased to be represented by the CCGS

Pierre Radisson. Should an environmental incident threaten the Arctic, our nations need to be able to work together to mitigate damage. This live exercise was a launching pad towards achieving this level of co-operation," Commissioner Hutchinson further noted.

National Coast Guard initiatives

It was on November 7, 2016, that the Government of Canada announced the Oceans Protection Plan (OPP) to help Canada achieve a world-leading marine safety system. The importance of safe shipping to support Canada's international trade interests and the need to address the public perception of transportation-related risks were essential factors driving this once-in-a-generation marine policy initiative. The Government tasked the CCG with an expanded role to provide 24/7 patrolling and monitoring of Canada's marine environment and acting as a first responder to maritime incidents.

Heavily influenced by B.C.'s interests and public expectations, the OPP

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COAST GUARD



Photo credit: Kerriake McLeod

Jesse Lawson, Superintendent of Maritime and Civil Infrastructure, atop the 990-metre-high Maitland Island mountain-top construction site. In the background, the Chinook heavy-lift helicopter can be seen approaching with a 15,000-lb sling load of new equipment.

incorporated several features including:

- Strengthening CCG's Marine Communications and Traffic Services Centres (Canada's ears and eyes on the water) to ensure uninterrupted communications with mariners;
- Increasing towing capacity by leasing two large vessels capable of towing commercial vessels and large container ships;
- Installing towing kits on CCG major vessels to improve capacity to take swift action to avoid disasters;
- Launching a comprehensive plan to reduce the abandonment of ships and clean up existing derelict and wrecked vessels to minimize the associated risks of these vessels harming the environment; and
- Conducting regular response exercises with communities, stakeholders and Indigenous communities to ensure response readiness.

CCG in B.C.

While the operation of the CCG fleet and the OPP policy announcements were highly visible, Canadian maritime commerce in B.C. also relies on often-hidden infrastructure. As the CCG's Regional Director of Integrated Technical Services (ITS) Cliff Hunt remarked, "the work of this highly dedicated and innovative team stands at the forefront of safe shipping and incident prevention." The group is responsible for the lifecycle management of all CCG assets in support of incident management, navigational programs and fleet operations.

The ITS work unit is comprised of marine engineering, electronics and informatics, maritime and civil infrastructure, and Integrated Logistics specialists. The lack of road, electrical and other infrastructure along large portions of B.C.'s coastline presents several challenges requiring a proactive CCG approach to managing cost and the adoption of new technology, even in a period of enhanced resources. For this reason, the ITS staff are comprised of over 200 engineers, technicians, technologists, trades people and support staff.

In the western region alone, the CCG completed construction on 251 aids to navigation sites in the 2017/18 fiscal year.

North-west Vancouver Island, Barkley Sound/Alberni Inlet, Skidigate Narrows and Kitimat are just some of the priority locations completed this year. For perspective, the CCG Western Region has a total of 3,816 short-range aids to navigations, of which, 1,786 are in the B.C. and the Yukon. Increased funding has resulted in a tenfold increase in the number of navigation aid projects the CCG is able to complete each year, according to Hunt.

The CCG is also modernizing and investing in its infrastructure to take advantage of today's latest technological innovations to deliver Marine Communications and Traffic Services. While the physical locations of the two upgraded marine communications and traffic services centres generated some public awareness, a large and widely dispersed network of remote monitoring sites is needed to make the system effective and expand the range of coverage. To this end, the OPP provided a \$20-million funding commitment for six new radar sites in B.C., including, for example, the introduction a new mountain-top radar project that will enhance marine vessel communications coverage in the Central Coast / Vancouver Island Inside Passage Region. Each mountain-top site construction costs in the range of \$2 million, according to Hunt.

To address both operational and cost pressures, the CCG is utilizing an integrated project logistics approach. The buildings were fabricated in Sooke, transported to the Victoria CCG base, fitted out and then barged up the coast and installed atop a mountain using a heavy lift helicopter where final equipment testing and site commissioning testing took place. This approach resulted in cost savings over the traditional method of mobilizing equipment, crew, and materials to access remote locations with short construction seasons.

In reflecting on many other priorities of the OPP, Hunt commented that the CCG was actively in the "ramping-up" phase where staffing and preliminary engineering for many of the initiatives is taking place along with consultation with local communities and First Nations.

Conclusion

The Canada Transport Act Review in 2015 recommended that the Government of Canada reform and strengthen the CCG delivery model to ensure it has the mandate, equipment, operations, and sustainable funding to support marine commerce and enforce safety, security, and sovereignty.

While the Canadian government has not yet opted to change the organizational structure or role of the CCG, they nevertheless are placing considerable effort to address issues related to maritime commerce and environmental response. In fact, this article demonstrates that in British Columbia, there has been a significant amount of technology and infrastructure investment that remains largely invisible to the public. This massive level of effort around implementing these improvements will not go unnoticed or unappreciated by the maritime community and Canadian firms that rely on international trade.

Darryl Anderson is a strategy, trade development, logistics and transportation consultant. His blog [Shipper matters](http://wavepointconsulting.ca/shipping-matters) focuses exclusively on maritime transportation and policy issues. <http://wavepointconsulting.ca/shipping-matters>.