



Declaration of Candidacy to Council of the International Organization for Marine Aids to Navigation (2025)

The Canadian Coast Guard (CCG) is Canada's competent national authority at the International Organization for Marine Aids to Navigation (IALA) and is pleased to stand for election at first General Assembly in Singapore, in February 2025. The CCG is honoured for the opportunity to return to Council and continue Canada's support for IALA's mission '*to harmonise aids to navigation worldwide and to ensure that the movements of vessels are safe, expeditious and cost effective while protecting the environment*'.

Who we are

The CCG is a Special Operating Agency within the federal Department of Fisheries and Oceans Canada, and is responsible for providing services for the safe, efficient and economical movement of ships in Canadian waters. Under Canadian law, the CCG is responsible for providing aids to navigation and marine communications and traffic management services. We maintain over 17,000 fixed and floating aids to navigation, manage 13 vessel traffic zones and in 2023, managed 1,200,000 vessel movements (Annex A).

The CCG's services and capabilities are supported by world-class training at the CCG College, which develops and provides training for domestic needs and for international clients since 1965.

The CCG delivers an array of other services, such as icebreaking, environmental response, search and rescue, and waterways management and provides a service platform to support the regulatory, science, environmental, security and other mandates of the Government of Canada.

The CCG is guided by the values of Teamwork; Professionalism; Integrity; Quality service; and, Innovation. These values inform our service delivery models and how we engage our service users, partners, stakeholders and the Canadian public. The CCG strives to embody these values when working with our IALA member colleagues, the IALA Secretariat and the IALA World-Wide Academy.

Where our expertise and experience comes from

The CCG's expertise and experience is derived from delivering services in a vast and complex geographical, economic and governance sphere of operations. Consider the following factors:

- Canada has one of the longest coastline in the world at 243,000 kilometres and is connected to three oceans and a vast network of inland waterways. Canada has navigable waterways on the Atlantic and the Pacific coasts and inland waters such as the Great Lakes and the St. Lawrence River, and in the Arctic. Ships carry about half of Canada's international trade to globally and is the only economic and efficient means to supply remote communities.
- Canada has over 550 major ports which largely contribute to the North American economy (Annex A).



- Climate challenges also influence marine navigation and associated services in Canadian waters. Seasonal navigation conditions can vary greatly, affecting water levels, available draft, and navigability in ice. Canada's navigable waters require cost-effective aids to navigation that are resilient, sustainable and efficient.
- New challenges and opportunities motivate us to find solutions. In recent years, the CCG has developed and deployed four-season, navigation buoys and is testing modern navigation technologies that could support voluntary and regulatory measures to protect endangered marine mammals.

This varied and complex environment positions the CCG, if re-elected to Council, to continue offering insight and advice on the adoption and implementation of technical, operational and training solutions for aids to navigation. The CCG would also continue to bring strategic planning from working collaboratively with our service users, neighboring countries, and federal government partners.

Finally, the CCG has benefited from long-term, constructive collaboration with IALA and its peers, on strategies, guidance, and technologies that support aids to navigation, vessel traffic services, and e-Navigation. CCG's experts have benefited from these relationships and, in return, have shared knowledge and expertise to benefit our counterparts at the committee level. The CCG is the national lead to implement e-Navigation in Canada.

Past contributions to IALA

On behalf of Canada, the CCG has supported IALA in achieving its intergovernmental organization (IGO) status. Canada's support at IALA Council and tables have helped to form the new IGO Convention.

In addition to having previous experience on IALA Council, the CCG has had representatives as Chair and Vice-Chairs of technical committees and has shared information, analysis, tools and expertise to advance IALA work plans.

CCG was pleased that the first version of the Inland Waterway Risk Assessment Program (IWRAP) modeling tool for maritime risk assessment was adopted by several IALA member states and that newer versions have been developed via collaboration at IALA. The tool enables users to estimate the frequency of collisions and groundings in a given waterway based on traffic volume, composition and route geometry.

As a contributing member, the CCG has demonstrated substantial value through key involvements, including:

- significant contributions at the ENAV Committee with input, data and examples of best practices, such as technical papers; test beds on Automatic Identification System (AIS) AtoN);
- participating in the development of IALA's Vessel Traffic Services model courses and has been accredited to deliver this training since 2001;
- hosting an IALA Conference and providing an IALA president (1994-1998);
- developing several aspects of the guidelines on resilient positioning, navigation and timing (PNT), 'IALA ENG WG2 Resilient PNT guideline for maritime navigation';
- testing Wide Area Augmentation System (WAAS) use for safe navigation and sharing results with IALA ENG committee members, which contributed to the development of the acceptable use of



satellite-based augmentation system (SBAS) as a positioning information system for mariners at the international level;

- designing Aids to Navigation design methodology which is included in IALA Recommendation and Guidelines and being used as an example for other national members;
- highlighting Canada's whole-of-government approach to S-100 implementation through the intradepartmental collaboration, is a model followed by several nations;
- lending our experts to test beds and intersessional working groups to advance S-100 implementation worldwide;
- contributing to the development of guidelines, recommendations, standards, manuals and model courses over the years;
- accepting the role of Host Member of the Maritime Connectivity Platform (MCP) and actively participating in the Digital Incubator testing and demonstrations under the Digital Technologies (DTEC) Committee;
- instrumental in the completion of the Maritime Buoyage System (MBS) 2023 edition, publication;
- significant participation to Conference Brazil 2023 with 4 presentations and various moderation and facilitation support roles; and,
- worked with France to translate the suite of IALA standards and recommendation in French.

Current work at IALA

The CCG is an active participant in all of IALA's technical committees and collaborates on projects with national members. The CCG has been particularly engaged in, but not limited to:

- Updating the NAVGUIDE;
- Advancing implementation of the e-Navigation concept;
- Advancing work on consistent approaches for the uses of AIS AtoN;
- Contributing to the success of the Maritime Connectivity Platform;
- Standardizing tools for measuring shore authorities' AIS coverage;
- Improving specifications and guidance for the use of plastic buoys;
- Standardizing specifications for chains for reliability and economies of scale;
- Working on the use of AtoN in marine protected environments;
- Providing quality management experience to analyze the efficiency of vessel traffic services;
- Identifying a resilient Position, Navigation and Timing solution;
- Identifying sustainable energy technologies for fixed and floating AtoN;
- Contributing to the development of Maritime Service Portfolios, including those related to Vessel Traffic Services; and
- Revising the Guidelines for Vessel Traffic Services (IMO Resolution A.857(20));
- Holding the Vice-Chair role in the AtoN Requirements and Management (ARM) Committee and participating to Policy Advisory Panel (PAP).

In addition, Canada, via the CCG and other federal departments, works closely with IALA's sister organizations in the advancement of aids to navigation, notably:



- the International Maritime Organization, as an active participant at the World-Wide Navigational Warning Service (WWNWS) in the Hydrographic Services and Standards Committee (HSSC) and the S-100 Working Group and as Chair of the Nautical Information Provision Working Group (NIPWG) and the S-124 Project Team),
- the International Hydrographic Organization, as an active participant in the Convention on Facilitation of International Maritime Traffic, and as part of the Canadian multidepartment joint collaboration at the Sub-Committee on Navigation, Communications and Search and Rescue (NCSR), and,
- participating at working groups of the International Telecommunication Union.

Through these working relationships, we are positioned to develop and provide informed views on prospective policy submissions by IALA to these organizations.

Future Canadian Coast Guard contributions at Council

The CCG, as a member of IALA Council, would continue to apply our expertise, experience and relationships to help oversee implementation of IALA's 2024-27 work plan, and help steer the medium- to long-term planning of the organization.

The CCG would strive to be a fair, objective and reliable Council member and would continue to strengthen relationships with IALA members at large.

Looking to the future, the CCG is interested in:

- sharing maritime domain awareness outside of the Canadian Coast Guard;
- continuing to modernize and implement Vessel Traffic Services and e-Navigation;
- developing standards for Autonomous Maritime Radio Devices (AMRD);
- exploring how marine navigation services will adapt to new technologies, such as autonomous vessels;
- looking at innovations in the delivery of cost-effective, reliable and harmonized AtoN services; and
- expanding the delivery and availability of IALA model courses that the CCG College provides in English and French.

We ask for your support and your vote

The CCG feels it is a suitable candidate for membership to Council to continue contributing to the workplan of the new IGO. This submission demonstrates the CCG's credentials and our commitment to IALA's objectives and the membership.

We seek the support of all national members of the first IALA General Assembly, and hope that you, as CCG's peer, will elect the CCG to Council at the special session in Singapore in February, 2025.

Thank you.



Safety First, Service Always



ANNEX A: The Canadian Coast Guard's Marine Navigation Services Context

In Canadian waters there are:

- Over 17,000 fixed and floating aids to navigation provided and maintained by, or on behalf of, the Canadian Coast Guard;
- 13 Vessel Traffic Zones managed by the Canadian Coast Guard;
- Over 550 ports—all destinations that require some measure of support by the Canadian Coast Guard;
- More than 1,200,000 vessel movements annually which are handled by the Marine Communications and Traffic Services (in 2022);
- 184 communications remote sites providing VHF, MF and HF radio services;
- 13 Differential GPS stations; and
- 116 terrestrial Automatic Identification System (AIS) units provided by the Canadian Coast Guard.

In 2022, Canada was key to the North American supply chain:

- As of 2022, Canada maintains 17 major ports independently managed by Canada Port Authorities and 34 owned and operated by Transport Canada for a total of over 550 ports, 840 fishing harbours and 100 recreational harbours¹.
- Our ports handled over 340 million tonnes of cargo in 2022, traded with more than 170 nations.

Additionally, statistics for 2023 demonstrate that:

- Canada's National Ports System directly produces more than \$17 billion in economic output annually and \$8 billion in GDP.
- Canada receives annually over 100 cruise ships and welcomes over 2.5 million passengers through its cruise terminals.
- Canada also receives and dispatches over 80 000 commercial ship visits annually.
- In 2023 CCG managed almost 107,000 vessel transits.

¹ [transportation-canada-2022.pdf](#)