



# CANADIAN NAVAL REVIEW

VOLUME 13, NUMBER 4 (2018)

**The Naval Reserve:  
An Alternative  
Perspective**

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**Strategic Canadian  
Amphibious Sealift  
Capability**

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**Strategic Maritime  
Planning and the Role  
of P&I Clubs**



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The bow section of the future HMCS *Harry DeWolf* AOPV-430 is rolled out to meet the rest of the ship on 8 December 2017, at Irving Shipbuilding's Halifax shipyard.

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# Ready Aye Ready for a Changing Sea

In the last three decades we have seen the world progress from the days of the Cold War, when two superpowers and their allies faced off worldwide, through the fall of the Berlin Wall and the collapse of the Soviet Union. The end of the USSR appeared to be the end of the bipolar world.

The unipolar world of *Pax Americana* that seemed to follow the collapse of the Soviet Union did not last very long. Whether aspirational or the ultimate self-serving illusion, *Pax Americana* has been challenged in many ways. It has been challenged by the rise of China, the so-called Arab Spring, the dilution, which began under President Obama, of the American will to engage internationally, and the multi-polar world of a revanchist Russian Federation, an Iranian Shia empire-build, the growth of non-state actors and more complex security challenges, not only for NATO but for essentially peaceful, non-aggressive states and communities worldwide.

Despite serious concerns about North Korea, it is international terrorism, with local but genuine risk, that has replaced the more existential risk of thermonuclear destruction. This more complex, but less civilization-threatening security context is now characterized by new and important conditions that define the challenges we face. These contextual realities include the following:

- New cyber technology and a determined will on the part of the Russians, Chinese, North Koreans, Iranians, not to mention non-state actors, to deploy weaponized versions thereof to destabilize competitors, weaken democracies and advance their tactical and strategic interests are a clear and present danger.
- With apparent encouragement/intervention from Russian covert engagement, Europe, the UK and the United States are consumed with internal controversies – from the shallow to the more

profound. These controversies diminish their focus on the ‘great game’ wherein the free and democratic states of the world compete with the authoritarian cultures of China and Russia, usually through diplomatic and tactical economic measures, to sustain a global balance. Meanwhile China proceeds with its ‘One Belt, One Road’ economic and political expansion, Russia deepens its presence in the Middle East and its hostility and provocations in Eastern Europe, and Iran builds a Shia corridor through Lebanon and Syria to the Israeli border.

- Global trade expansion, so constructively responsible for the lifting of millions out of poverty in India and China over the last few decades, faces a new twin challenge of protectionist nationalism and widening income gaps of the kind that can lead to economic dysfunction and instability worldwide.
- New and constructive technologies embracing deep machine learning, artificial intelligence, automated and unmanned mobility on land, in the air, on and beneath the sea, and enhanced global positioning and surveillance capacities, illustrate a rare mix of challenge and opportunity for middle powers like Canada, with modest but technically advanced defence capacity.
- Enhanced meteorological instability related to global warming will increase in many parts of the world as will the ‘aid to the civil power’ exigency faced by military, police and first responder forces. The impacts of global warming will hurt the poorest countries, and the poorest residents of more well-to-do countries hardest.
- Procurements planned many years ago and notoriously slow in getting to the actual cutting of steel, like the National Shipbuilding Strategy, the slow-moving ship-borne helicopter procurement and the continuing dance around the political maypole regarding fighter aircraft, face the risk of not only being timed out by acute technological and economic change, but by a changing global strategic balance that dilutes the salience of Canada’s present and planned military asset mix.
- The very nature of being an effective member of the Canadian and allied military, air, land, sea and Special Forces at all ranks will change. Deep triangulated strategic intelligence requirements, capacities and protocols to inform either defensive deployments or specific tactical missions have already altered and will keep on shifting. As a result,



Credit: Royal Navy, Ministry of Defence

Type-45 destroyer HMS *Dragon* escorts the Russian aircraft carrier *Admiral Kuznetsov* through the English Channel on 7 May 2014. *Admiral Kuznetsov* had been deployed to the Mediterranean as a show of force following the annexation of Crimea in March.



Credit: OS Jason McIsaac, HMCS Charlottetown

Pat Brophy, director of UAV services at ING Engineering, prepares a ScanEagle unmanned aerial vehicle for launch on HMCS **Charlottetown** during *Operation Active Endeavour* in the Mediterranean Sea, 29 February 2012.

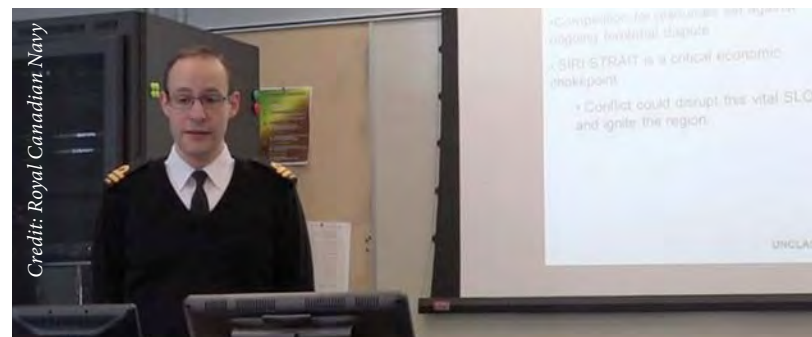
military education in the combat arms and in mid-career development will also have to be open to new approaches and opportunities.

For all Canada's military services, deepened military, cyber, analytics and operational intelligence must become a much higher priority. The 2017 Defence Policy Statement issued by Ottawa does, to its credit, reflect the need for enhanced investment and engagement in the world of large analytics and cyber research. As well, it goes beyond the simply defensive to actual active cyber measures necessary to protect Canadian security and weaken the aggressive capacities of the authoritarian regimes and unlawful non-state actors and proxies poised to advance their own interests by any means. This also will require an approach to the recruitment of cyber-capable younger Canadian Armed Force members and more integrated operational linkages among the Communications Security Establishment (CSE), the Canadian Security Intelligence Service (CSIS), Armed Forces Intelligence, Canadian Border Services Agency and the RCMP.

All of this affords the Royal Canadian Navy (RCN) an immense opportunity to streamline its own recruiting policies, the core educational and combat skills associated with command development and the immense potential of a robust, diverse and inter-generational approach to naval intelligence. The possibility of deploying the Naval Reserve to recruit young women and men with enhanced digital and cyber skills is a huge opportunity. This does not mean that navigational skills, discipline, weapons competence, fire safety, computer science, leadership and other shipboard capacities will no longer be necessary because, *per force*, they will. But, put simply, they will no longer be enough. Nor will the avionics, analytics software and command and control functions of the past necessarily suffice going forward. The ability to be better informed than one's enemies, whether they are tactical or strategic, real or potential, will matter as much as one's kinetic reach and capacity. From the Arctic to the South China Sea, from the Mediterranean to the hurricane-ravaged parts of the Caribbean, Canada's relevance as a naval partner,

combat-ready ally, or humanitarian responder will not only be determined by what platforms and complement it can deploy, but how much Canada/the RCN and allies really understand about the global, regional, economic and local context into which they might deploy.

If the RCN of the future is to be both relevant and nimble, an approach to procurement that is tied only to multi-decade gaps between design, requirement definition and ultimate delivery may not work over the long haul. More flexible procurement decisions, more interim capacity achieved through different kinds of platforms, on, above and beneath the sea may also be required. There will be a role for artificial intelligence and machine learning in enhancing naval operational acuity, systemic adaptability and real-time effectiveness on different kinds of missions. Working with available and more nimble platforms from the private sector, as was the case with *Asterix*, is one of many ways forward. That the Royal Navy and the US Navy have been reduced in size may well also reflect their will to use enhanced technologies to enhance the overall effectiveness of the fleet.



Credit: Royal Canadian Navy

Lieutenant (N) Thomas Pohl delivers a brief during Exercise Sentinel Strait, which provided training for Naval Reserve Intelligence Officers at HMCS **Montcalm** in Quebec City, 15-16 January 2016.

Global uncertainty will require of Canada's navy, and the women and men who serve it, greater flexibility, agility and multi-capable deployments where diverse measures of engagement increase impact while confusing adversaries or competitors. 'Skating where the puck will be' will become at least as important as figuring out who has the puck now.

Ready, Aye, Ready will always matter deeply. But what 'ready' means may have to change substantively to reflect the requirements of the very different world in which the RCN serves now and in the future. It is the sort of challenge the professionals of the RCN have met superbly in the past, when rapidly changing circumstances required rapid fleet expansion, focused refit and weapon adjustment, and innovation. It is certainly a challenge the RCN can meet now. 🇨🇦

The Honourable Hugh Segal, OC, OOnt



# The Naval Reserve: An Alternative Perspective

Commander Dennis Witzke and Commander Luc Tremblay\*



Credit: Pte Alexandre Dutil, DND

*Naval Reservists from HMCS York exercise their Freedom of the City in Toronto on 3 September 2010, as part of the Royal Canadian Navy's centenary activities.*

In 2015, the Commander of the Royal Canadian Navy ordered a review of the tasks assigned to the Naval Reserve and the organization, establishment and occupation structure of the Naval Reserve. The genesis of the review was the Chief of Defence Staff's desire to privilege the part-time reserve over the full-time reserve and align the workforce to Canadian Armed Forces (CAF) priorities, while preserving the vital link to Canadian communities. The Commander of the RCN defined the challenge as "establish[ing] realistic and measurable outputs, which will then inform a mission-derived organization, establishment, and occupation structure."<sup>1</sup> The challenge was further bound with several assumptions, constraints and restraints, including:

- the Naval Reserve exists to generate sailors and officers, who can be employed at sea and ashore;
- reservists will provide predominantly part-time service;
- permanent full-time employment of naval reservists will be minimized;
- reservists will not normally be assigned unique tasks distinct from the regular component;
- there will be no growth in funding or full-time positions; and
- the Naval Reserve will not train to be an augmentation force for domestic operations.

Almost three years of study, review, briefings and decisions have resulted in an evolution of the Naval Reserve. It was positive evolution, to be sure, but not transformation. Canada's defence policy lays out several Primary Reserve Initiatives, such as a modest increase in the number of Primary Reserves, new roles that provide full-time capability through part-time service, the enlargement of existing roles, expeditionary capability in capacity building, and the creation of a service model, employment model and remuneration policies that attract and retain Canadians. Is there an option that meets these goals while also offering the RCN strategic capacity, a presence in Canadian communities, and improved recruiting and retention?

**The Naval Reserve offers the RCN, through the Naval Reserve divisions, a footprint in cities across Canada that would not otherwise have a naval or, perhaps, even a military presence.**

The Naval Reserve offers the RCN, through the Naval Reserve divisions, a footprint in cities across Canada that would not otherwise have a naval or, perhaps, even a military presence. It also offers the RCN trained sailors and officers, who are able to serve Canada in a part-time employment model, and thus offers cost-effective capacity. The current model, though, is firmly rooted in the Regular Force structure. Although this structure works well in the

full-time context, several weaknesses are exposed in the part-time context. First, it is difficult to generate sailors and officers in some occupations in a part-time model because the training and experience requirements take too long to complete and are not easily modularized. Second, there is a large training, management and infrastructure overhead, and third, the structure is too limiting for the 'new' workplace and workforce, which makes it challenging to retain sailors and officers long term.

The weaknesses in the existing model, though, also offer a significant opportunity – an opportunity for transformational change that creates a Naval Reserve that embraces and enables the 'new' workforce of the 'millennial' generation,<sup>2</sup> invigorates the RCN, strengthens strategic capacity, and bolsters recruiting and retention.

Much has been written about the millennial generation and its interaction with work.<sup>3</sup> Undoubtedly this specific generation has a different understanding of 'work' and the 'workplace' than proceeding generations did but that understanding is more likely a logical evolution than a radical leap. Today's workforce wants the same things from an organization that yesterday's workforce did. They want to be proud of the organization they work for: they want to work for an organization that embodies – not just professes – profound ideals like 'courage,' 'duty,' 'integrity' and 'loyalty.' They want to do meaningful work and they

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**There is an opportunity for transformational change that creates a Naval Reserve that embraces the new workforce of the 'millennial' generation, invigorates the RCN, strengthens strategic capacity, and bolsters recruiting and retention.**

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want to have an impact. They expect to have the opportunity to collaborate with others on challenging issues that matter to them and to the organization. And, finally, they want to learn and they embrace both continuous learning and learning through doing – they want to work with experts and assimilate knowledge across a broad range of disciplines.

Born after 1984, millennials are generally seen as hard to manage and as having a sense of entitlement, which is confounding leadership at all levels within the private and public spheres. While it may seem that millennials represent a 'new' workforce, as noted earlier, they aspire to the same things as the previous generation: purposeful employment and the ability to make a positive impact while maintaining strong relationships both at work and at home. Millennials, though, have different methodologies and time expectations than preceding generations. Millennials are technologically inclined and many expect the instant gratification that technology can readily provide through platforms such as Facebook and Instagram. In general, they expect job satisfaction and professional fulfillment as part of employment and not as a distant



Naval reservists from Calgary's HMCS *Tecumseh* introduce members of the public to the division's rigid-hull inflatable boat at the 2011 Calgary Stampede.



remuneration for time served. Simon Sinek, a British/American author and motivational speaker, well-known for his views on millennials, argues that corporate leadership must help employees learn the necessary skills to be successful in today's work environment.<sup>4</sup> Senior leadership must play a critical role and ensure the employee finds personal and professional fulfilment. A nurturing work environment, where the leadership is engaged and responsible for the employees' professional development, will help form trust and deep connections with the organization. To recruit and retain this 'new' workforce, an organization must be willing to change and adapt its policies and strategies.

The Naval Reserve is the ideal organization to recruit this new workforce. The primarily part-time employment and access to varied CAF and RCN-managed occupations, ranging from support to operational trades, provide many opportunities for personal and professional growth and nurture the desire of many millennials to work to enhance social good. The flexible employment model provides university students the ability to earn money while enrolled in post-secondary education, and the ethnic, gender and language diversity of Naval Reserve divisions provides an environment that is rich in opportunity for personal growth. These opportunities are well recognized and contribute to the success of Naval Reserve recruiting. Historically, the Naval Reserve has always been able to increase intake in response to increased demand.

The Naval Reserve could also be the ideal organization to develop and retain the new workforce – either as long-term reservists or as an intermediate step to enrollment in the Regular Force – but right now it isn't. Historically, a large portion of naval reservists leaves within five years of enrollment. Many factors contribute to this, including: professional and academic commitments; irreconcilable

conflicts with personal life; lack of support from full-time employer or academic institution; timing, notice and type of employment opportunities; and lack of opportunities.<sup>5</sup> To become the ideal organization to develop and retain young Canadians, then, the RCN must adopt innovative practices that engage and sustain interest. It must adopt practices that lead to a realization of continuous learning and personal and professional growth, employment that provides meaningful work with positive outcomes, and the ability to influence decisions and make a difference. Let us briefly consider these factors.

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**To become the ideal organization to develop and retain young Canadians, the RCN must adopt innovative practices that engage and sustain interest.**

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Let's start with continuous learning. Currently the Naval Reserve occupation structures mirror the Regular Force structures. Although the model works well for full-time sailors, it doesn't, despite an evolution toward modularized training, work as well in the part-time construct. The challenges are, predominantly, the training requirements in relation to the naval reservists' availability and the skill-fade that occurs when the reservists return to their civilian life. In the current model, a reservist enrolls into an occupation and completes environmental and occupation-specific training until reaching the Operational Functional Point (OFP). This is, ideally, by the end of the second summer of training but, in certain occupations, can take much longer. In fact, there are instances of people who remain unqualified after five years. Furthermore, after reaching the OFP, the sailor is expected to develop and progress within the chosen occupation. This creates two additional challenges:



*PCT-62 Moose at sea on 6 October 2014, during introductory activities for that year's Maritime Security Challenges conference in Victoria, BC. The Orca-class Patrol Craft, Training (PCT) vessels were completed 2004-2008 to help train RCN regular force and reserve members in at-sea competencies.*





Rear-Admiral Tyrone Pile, Command of Joint Task Force Games during the Vancouver 2010 Olympics, looks through the laser sight on a .50 calibre machine gun mounted on an Orca-class PCT. The Orca-class ships are not usually armed, but doing so on a regular basis would provide unique training opportunities that may help attract and retain part-time reservists.

- the sailor spends a long time in training before being qualified in an occupation and, even then, is not likely to have the experience required to back-fill or augment a Regular Force sailor of the same qualification; and
- career progression is difficult – or difficult to rationalize – because it is intuitive, in an occupation-driven structure, that occupation proficiency is key to advancement. It will be difficult for reservists to progress beyond the entry level because of the training and experience requirements.

A workable alternative would be to recruit sailors and officers into the Naval Reserve without assigning an occupation. A person who met the enrollment prerequisites could be enrolled and entered into basic military training and naval-environmental training so he or she could be employed in a ship and exposed to a variety of experiences. After one summer of training, the RCN would have a pool of trained sailors and officers ready to surge and support domestic operations. Furthermore, sailors and officers could select further occupation training informed by their experience at sea, which is likely to result in a better person-job fit and, consequently, enhance retention. On selection of an occupation, a naval reservist would proceed on occupation training during the second summer and, in most cases, achieve the OFP.<sup>6</sup> After achieving the OFP, these sailors would be fully qualified to work in the RCN within their chosen occupation. Further to the changes in the occupation qualification process discussed above, this proposal would eliminate the requirement for additional occupation-specific training (beyond the OFP) for promotion and progression. More importantly, since advancement would no longer be tied to occupation-specific

training, sailors and officers could develop personally and professionally through training and experiences not currently available to them. Hypothetically, any sailor, post-OFP, could forego the next occupational training in favour of another opportunity based on personal desire and availability. For example, a post-OFP marine technician could also be qualified as a small boat coxswain. Sailors would be encouraged, and provided opportunities, to develop as sailors and officers in the capacity that best suits personal interests and schedules.

This alternative model could also provide a significant upside for support occupations. In the current structure, it is difficult for sailors and officers in support occupations to spend time at sea. The preponderance of employment and experience opportunities exists ashore and, therefore, the requirement for environmental training and other at-sea opportunities is less than for the operational occupations. Although it would most likely be in a limited fashion, early exposure to sea-going opportunities could have a tremendous impact on the Naval Reserve and foster a sense of belonging in the RCN. Naval Reserve divisions would greatly benefit from this by having a greater number of sailors within the support occupations with at-sea experience to mentor and develop new recruits.

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**Although it would likely be in a limited fashion, early exposure to sea-going opportunities could have a tremendous impact on the Naval Reserve and foster a sense of belonging in the RCN.**

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The second element to consider is the question of meaningful work. The existing process requires a sailor attain the OFP before he or she is able to be gainfully employed. In some occupations, such as naval warfare officer, attainment of the OFP can take several years of part-time training. As noted earlier, many millennials want meaningful work that contributes positively to the organization's strategy and they want to engage now, not later. In the proposal here, the sailor or officer is available for experiential opportunities by the end of the first summer and, by the end of the second summer, is fully qualified in a chosen occupation. The ability to experience life at sea, and then select a bespoke development path will enable a reservist to define 'meaningful' work and then pursue fulfillment over time, even as personal definitions of success mature. Intrinsic rewards, such as believing your work has meaning, the ability to make choices in your work-life

and feel ownership for accomplishments, developing a sense of competence, and the ability to see progress, have been shown to have a more significant influence on retention and engagement than extrinsic rewards. A structure that is agile, flexible and responsive will promote and support these intrinsic rewards and encourage naval reservists to volunteer and engage beyond the minimum requirements. Finally, on-the-job learning and the unique experiences associated with being in the RCN (such as travel, firing a weapon or being a ship's team diver) that civilians would be unlikely to experience should be capitalized upon.

What about a role in decision making? The Regular Force model, on which the current Naval Reserve model is based, is rigidly hierarchical and restrains decision making to the formal chain of command. The proposal here breaks out of the occupation hierarchy after the OFP and allows sailors and officers opportunity to seek training and experience opportunities that afford personal and professional growth. A merit-based advancement system that recognizes and promotes the key characteristics of leadership, courage, duty, integrity and loyalty will reward those sailors and officers who seek out opportunities

and grow through experience. Although allowing choices on personal and professional development and facilitating the build-up of rich experiences will foster engagement, we should also provide opportunities for sailors and officers to engage in the decision-making process – in other words, to take ownership of 'their' Naval Reserve early and often in a career.

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**A structure that is agile, flexible and responsive will promote intrinsic rewards and encourage naval reservists to volunteer and engage beyond the minimum requirements.**

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This alternative model is not perfect – it would be challenging to implement and sustain for a number of reasons. First, both military components of the RCN, Regular and Reserve, are solidly rooted in tradition and their cultures will resist changes as significant as those proposed here. Sailors identify with cap-talls and occupations, and any changes to these would have to be very carefully managed. Culture change is always difficult and especially in an organization as large as the RCN. Second, there would be a greater requirement for accurate records to manage the number and variety of qualifications an individual could hold and to optimize employment. The RCN Strategic Plan 2017-2022 highlights the need to develop business processes that will deliver a better Recognized Personnel Picture.<sup>7</sup> However, despite the major strides that have recently been made in data management and reporting, substantial hurdles remain especially with regard to data integrity. Finally, the training establishments would need to be more flexible, more agile and more capable of delivering training. To do just that, the RCN is in the midst of a complete overhaul of its training systems as it implements the Future Naval Training System Strategy. Similar to the data management challenges, this new model would further stress scant resources as the training system is prepared to leverage the capabilities of the future fleet.

### Conclusion

The RCN is a sea-going institution and service at sea must remain foundational to the development of sailors and officers. Key to this is ensuring recruits are introduced to ships early and exposed to the demanding and harsh environment of the sea. This shared experience will create a sense of identity and belonging on which to base further development. From this foundation, sailors and officers can follow personal and professional interests through training and experience opportunities that will develop deep connections and relationships with their peers and more importantly with the organization writ large.

Although implementation of the model proposed here

Credit: Royal Canadian Navy



*The Royal Canadian Navy Strategic Plan 2017-2022 outlines the key activities and goals that the RCN seeks to accomplish within the next five years.*





Credit: Cpl Neil Clarkson, 14 Wing Imaging

The **Kingston**-class Maritime Coastal Defence Vessels HMCS **Shawinigan** MM-704 and HMCS **Moncton** MM-708 are anchored in Rankin Inlet, Nunavut, during **Operation Nanook** on 25 August 2016. Initially meant to be crewed entirely by reservists, the **Kingston**-class ships have since adopted a mixed crew of regular forces and reservists.

would be challenging, several advantages would be realized. First, it would provide flexibility and choice to new recruits. They would not be forced to choose an occupation early on and before fully understanding the implications of the decision. Furthermore, they would be exposed to sea-going life early, which is foundational to a naval career. This should result in better person-job fit and increase both performance and retention.

Second, new sailors and officers would be given access to training opportunities within and outside of their chosen occupations, which would give them freedom of choice and the ability to develop personally and professionally according to their definitions of meaningful work and success. This would also facilitate meeting different people and the opportunity to cross-train in many fields, such as cyber and intelligence, developing the broad skill sets and experience required to be a successful reservist. Finally, it would provide those in mainly shore or support occupations the opportunity to experience life at sea and feel like they are part of the naval institution.

**With the right occupation structure supported by the right enablers, the RCN can maximize naval output by its reservists whether on part-time or full-time service.**

Third, this model directly supports many of the Primary Reserve Initiatives introduced in *Strong, Secure, Engaged*. The ability to qualify quickly in a traditional military occupation and then gain training, skills and experience in burgeoning capabilities such as 'light urban' search and rescue or cyber will enable reservists to engage constructively and profoundly in the national interest.

The release of *Strong, Secure, Engaged* offers a renewal opportunity for the Naval Reserve. With the right occupation

structure supported by the right enablers, the RCN can maximize naval output by its reservists whether on part-time or full-time service. Although more in-depth study is required before this model can be implemented, the lessons learned could inform changes to the management of all RCN occupations. The small size of the Naval Reserve coupled with the change of mission away from the *Kingston*-class ships presents a unique opportunity to challenge the status quo and look at innovative ways to attract, recruit, retain and employ sailors in the service of the RCN and Canada. 🇨🇦

#### Notes

- \* This article is the opinion of the authors, and does not represent the opinion of the Department of National Defence or the government of Canada.
- 1. Department of National Defence, "Strategic Initiating Directive for Naval Reserve Task Definitions and Organization/Establishment/Occupation Structure Review," 26 January 2015.
- 2. Bruce N. Pfau, "What Do Millennials Really Want at Work? The Same Things the Rest of Us Do," *Harvard Business Review*, 7 April 2016, available at <https://hbr.org/2016/04/what-do-millennials-really-want-at-work>.
- 3. Shelly Kramer, "Why Millennials Quit: Understanding a New Workforce," *Talent Culture*, 9 June 2017, available at <https://talentculture.com/millennials-quit-understanding-new-workforce-report/>.
- 4. Simon Sinek, "Simon Sinek on the Millennial Question," Tom Bilyeu, 10 January 2017, available at [www.success.com/podcast/simon-sinek-on-the-millennial-question](http://www.success.com/podcast/simon-sinek-on-the-millennial-question).
- 5. Naval Reserve Recruiting and Retention Project, "Phase Two. Sponsor Research Report 2005-15," Although 12-years old, many of the barriers to retention remain valid for the millennial generation.
- 6. This statement is based solely on training time and not on the individual's ability to complete or succeed in the training.
- 7. Department of National Defence, "Royal Canadian Navy Strategic Plan 2017-2022," 2017.

*Commander Dennis Witzke is the officer accountable to the Director of Naval Personnel and Training for RCN Organization and Establishment. He was a member of the sub-working group that looked at the Naval Reserve structure during the Naval Reserve Review discussed at the beginning of this article.*

*Commander Luc Tremblay is the officer accountable to the Director of Naval Personnel and Training for RCN-managed occupations.*

# Strategic Canadian Amphibious Sealift Capability

David Dunlop

Canada has the longest coastline on the planet and a proud maritime heritage. However, it is the only G8 country without an amphibious sealift capability. It has been said that a self-contained sea-based amphibious force is the best kind of fire extinguisher because of its flexibility, reliability, logistics simplicity and relative economy. Amphibious capability is the ability to transport and launch troops and vehicles via ships and aircraft, as well as launching of ground-targeted weapons from the sea.

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**Having an amphibious sealift capability would reduce the CAF's dependency upon its allies to move forces and supplies into an area of operations.**

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An amphibious sealift capability is not something that Canada envisions, but it is something that Canada needs. In today's chaotic and uncertain security environment, there will be situations which arise in regions of the world that will not be conducive to flying in conventional forces, and Canada will need a strategic amphibious sealift capability. While the adoption of this capability would certainly enhance the joint interoperability among the CAF's air, land and sea elements, the greater payoff would be the interoperability Canada will gain with its amphibious allies.

In order to project its military power across the seas and

provide adequate coastal defence for Canada, the Canadian Armed Forces (CAF) are dependent upon Canada's many allies for assistance. Beyond Canada's shores, the capability to undertake peace operations, including effectively rendering humanitarian assistance and disaster relief (HA/DR), will be a critical requirement for the Royal Canadian Navy (RCN) in the future. With a true amphibious capability Canada's naval forces would be well positioned to contribute meaningfully to joint action ashore and support the sustainment of joint operations from sea, while preserving the ability to defend Canada's freedom of action through naval combat operations. The multi-purpose nature and versatility of a fleet with such a capability, both independently and as part of an allied or coalition task force, would allow Canada to deploy credible naval forces worldwide, on short notice.

Canada currently relies upon its allies to assist with ship-to-shore movement in regions where functional infrastructure is unavailable. Having an amphibious sealift capability would reduce the CAF's dependency upon its allies to move forces and supplies into an area of operations. An amphibious sealift capability would make the CAF a more robust and reliable contributor to international operations. Another advantage is the capacity to move and deliver bulk supplies and heavy equipment into areas of operations; an extremely costly and limited option when conducted by air, and impossible without functioning airports.



Credit: Sergeant Bernie Kuhn, Task Force Latvia

A Canadian Army M777 howitzer is disembarked from a chartered vessel at Riga, Latvia, on 12 August 2017 as part of *Operation Reassurance*. Without a dedicated amphibious capability, Canada can only land such heavy equipment in intact and secure ports facing little to no opposition.



With all the advantages that an amphibious sealift capability provides, it is very puzzling why Canada has not yet adopted this capability like so many of its allies. There are those who oppose the development of this capability in Canada because it would constitute such a large institutional change. However the true reason Canada has not yet adopted an amphibious sealift capability is due to fiscal constraints. A growth in the force, the procurement of ships, connector vessels, amphibious vehicles, aircraft, training, and the research and development for it all, come with a pricetag which Canada currently cannot afford.

An amphibious sealift capability would prove to be a sound investment since it is something Canada has used in the past, could have used recently, and will be required to use in future operations. This capability would have been beneficial during recent operations to provide HA/DR. And although the capability is not specifically mentioned in Canada's latest defence policy, it would certainly enhance the CAF's ability to complete the missions laid out in its pages.

Canada shares many of the same international interests as its allies, and regularly participates in international security and relief operations. However, by being the only G8 state without an amphibious sealift capability, Canada is diminishing its political significance on the world stage by limiting its military involvement to maritime operations. The global security situation is ever-changing and Earth's human population will grow dramatically by the year 2025, of which 60% will be concentrated in littoral regions. Therefore, one can imagine a myriad of situations where Canada might need to intervene in these regions, and in order to do so, an amphibious sealift capability will

be critical. This capability would improve national security and interoperability with allies, reduce Canada's reliance upon other states, and allow for the projection of a more robust force into different theatres globally.

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**Amphibious sealift capability would improve national security and interoperability with allies, reduce Canada's reliance upon other states, and allow for the projection of a more robust force into different theatres globally.**

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Among the appropriate sealift options, the most practicable are ships specifically designed and purpose-built for expeditionary or amphibious operations and possessing capacities to move the force in its entirety. Among other features, amphibious ships provide a secure base for generating local air superiority and local air mobility assets. They may also act as a secure base for an initial HQ location, as well as provide logistics and supply facilities. These are flexible, specialized military assets that are highly valued by Canada's allies, and by the international organizations to which Canada belongs. Amphibious assets are likely to be in great demand on all three oceans in the uncertain future security environment. The list of capabilities amphibious platforms provide ranges from evacuating citizens from hostile shores (non-combatant evacuation operations), to the tactical recovery of an air pilot, to all points in between. Canada's navy will need to become better equipped for peace-support operations, including rendering HA/DR assistance at sea. The RCN will also need to sustain joint operations from the sea, have robust command and control capabilities and contribute to joint actions ashore. Such measures will improve the future fleet's agility and capacity to respond to conflicts and disasters at home and abroad.

In choosing a strategic sealift capability, several states have generally selected the battalion as the standard unit in the design of expeditionary ships, all with amphibious delivery capabilities as well as dockside unloading. Besides the longstanding US amphibious capability, other allies that are re-investing in this area include the UK, France, Australia, the Netherlands, Spain and Italy.

These ships have capabilities that can be assigned to high-profile humanitarian missions overseas where the opportunity to 'show the flag' arises. Additionally they can also serve domestic emergencies. However, the fundamental need and task is to provide mobility and support for training, readiness and deployment of Canada's land-locked army. Unless the minimum of at least four Landing Helicopter Dock (LHD) and two Landing Helicopter Assault (LHA) ships is provided for both Atlantic



Credit: MCpl Chris Ringius,  
Formation Imaging Services

A CH-124 Sea King helicopter from HMCS *St John's* lifts a water bladder to South Caicos Island, 16 September 2017, as part of Canada's humanitarian assistance and disaster relief operation after Hurricane Irma.

and Pacific embarkation locations (one of each LHD/LHA would normally be in periodic refit or maintenance), availability for humanitarian and national security missions is by no means certain. Needed are types of ships that can transport a ground force and are robust enough to be able to carry and deploy air defence and ground attack elements. The possible use of naval assets for command and control must be part of the expeditionary package. The requirement is for a prudent choice of ships, adequately sized with the flexibility and growth potential to meet changing needs over their lives of 40 to 50 years, a period in which Canada's population, economic power, external interests and defence requirements will grow. These ships should be capable of providing space and infrastructure for medical support, and for offshore command and control HQs.

Recent operations after Hurricane Irma by the RCN and allied navies have highlighted a pressing need for Canada to consider the acquisition of dedicated 'peace-support' ships to meet the unique demands of HA/DR. Specialized naval vessels dedicated to this mission would offer an adaptable solution to address catastrophes worldwide. They would represent a visible symbol of Canada's commitment to bringing stability to fragile states and helping societies recover in the aftermath of crisis. Such strategic amphibious ships would act as a sea-base, with features that include a substantial sealift capacity to move personnel, vehicles, force logistics and humanitarian materiel into theatre. There would be equipment to transfer cargo

at sea, and deck space to accommodate and operate medium/heavy-lift aircraft and landing craft. These landing craft would act as the ship-to-shore connectors to project, sustain and support a force ashore, as well as to recover it. The internal space could be dedicated to a joint operation HQ, act as a floating civil-military coordination centre, as well as medical and dental facilities with accommodations for evacuees.

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**Specialized naval vessels dedicated to 'peace-support' missions would offer an adaptable solution to address catastrophes worldwide.**

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Such vessels would likely be among the most heavily used assets in the future Canadian maritime force inventory. They would be capable of anticipatory pre-positioning or rapid deployment, be able to carry large volumes of humanitarian cargo, emergency vehicles and related supplies. These vessels would also be able to accommodate Vertical and/or Short Take-Off and Landing (VSTOL) aircraft for joint operations. With these features, such peace-support ships would be an ideal platform for Canadian joint action across a range of relatively permissive expeditionary scenarios. Situations where the ships would be used include the evacuation of non-combatants from zones of incipient conflict, and support to forces ashore during conflicts. Moreover, such vessels would likely emerge as the principal Canadian defence diplomacy assets. They could be deployed routinely to regions of strategic interest to Canada, with a range of personnel and joint capabilities to strengthen regional capacities and strategic partnerships. More broadly, they could conduct goodwill missions with other federal agencies and non-governmental organizations.

The Canadian navy cannot now provide appropriate ships to transport ground force troops with associated air support, equipment and stores. The planned two *Protecteur*-class and interim AOR ships will each have a very small measure of this capability but are being designed for employment primarily as replacements of the old AOR fleet supply ships in direct support of long-range operations of future frigates. They are not designed to carry troop formations. Subject to availability, they will not eliminate reliance on chartered sealift when speed of delivery is a key requirement.

A force development plan that provides for appropriate manning and training for a force designed for expeditionary missions is required



Credit: Cpl. Thor Larsen, United States Marine Corps

A MV-22 Osprey takes off from USS *America* LHA 6 during integration testing for the F-35B Lightning II Joint Strike Fighter, visible upper right, in November 2016. The USS *America*-class is one option Canada should consider.



with a command element that serves as the at-sea or land-based HQ for the entire force and allows a single command to exercise control over all ground, aviation and combat service support forces. A ground combat element would provide the force with its main combat punch, built around an infantry battalion reinforced with armour, artillery, amphibious vehicles, engineers and reconnaissance assets. The deployment of these assets is totally mission dependent. The force must always be capable of dealing with the worst-case scenario and always have the capability of being augmented and sustained by additional follow-on forces. Aviation combat elements that consist of medium- to heavy-lift helicopter assets, air defence and ground attack aircraft either fixed wing (VSTOL) or rotary wing, and all necessary ground support assets will be a required element of any strategic sealift capability. An on-board service support group will provide the force with mission-essential support such as medical/dental assistance, logistics, supply and maintenance, and forward ship-based operation capabilities.

A base like Shearwater on the Atlantic, with its generous facilities including a long runway and railway infrastructure in close proximity to the Halifax Harbour, would be a critical element to a dedicated sealift capability. Shearwater is an ideally located part of any Canadian sealift expeditionary force. Similarly, Esquimalt is the location of choice for basing sealift ships on the West Coast, although the limitations of the Victoria airport and lack of a suitable railhead on the island would favour Vancouver as the West Coast port of embarkation.

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**When humanitarian disasters strike at home or overseas, one of the most prominent responses the government of Canada can deploy are the ships, aircraft and personnel of the RCN.**

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There are large numbers of classes of amphibious ships around the world with each having its basic specialized mission. For example, the US Navy has amphibious command ships (LCC), amphibious assault ships (general purpose) (LHA) and amphibious assault ships (multi-purpose) (LHD). Most contemporary amphibious assault vessels are conceived with built-in aviation facilities, as well as a stern well-dock for operating much faster ship-to-shore connectors. Major amphibious vessels can act as command ships, with facilities for an embarked staff and large communication suites as well as robust command-and-control systems. The HA/DR role is of particular importance. Amphibious vessels offer a unique and often critical capability, able to transfer large amounts of supplies and/or engineering and rescue equipment even without the availability of harbour



*HMCS Regina and USCGC Mellon, along with three Orca-class patrol training craft and two Kingston-class maritime coastal defence vessels, dock at Canada Place in Vancouver during exercises to prepare for the 2010 Winter Olympics. With its transcontinental railhead and large international airport, Vancouver would play an essential role in supporting RCN amphibious ship operations.*

facilities. This has made these ships attractive to navies that would otherwise never contemplate the possibility of amphibious assault operations in the traditional meaning of the term. Many of Canada's allies have placed great emphasis on dedicated amphibious sealift capabilities.

Ships with these capabilities have a diverse range of uses other than combat. Amphibious ships would provide the RCN with the ability to perform a 'peacetime helping role' for which the Canadian public has an expressed appetite. When humanitarian disasters such as typhoons, earthquakes, or hurricanes strike at home or overseas, one of the most prominent responses the government of Canada can deploy are the ships, aircraft and naval personnel of the RCN. Ships and their crew provide self-sustaining, self-contained humanitarian assistance, as sailors can live aboard and be fed from their ship's galleys without straining local resources. On site, these ships could aid in the evacuation of residents and tourists, repair infrastructure and provide supplies to stranded citizens. Having such dedicated amphibious sealift capabilities would better equip the RCN to provide humanitarian aid, respond to natural disasters (especially in remote stretches of coastline), engage in search-and-rescue operations and participate in United Nations peacekeeping missions. As platforms from which the full range of helicopter support operations can be conducted, as well as VSTOL fighter operations, if necessary, ships of the LHA/LHD type would provide an important part of the necessary fleet balance and flexibility needed to meet government mandates for Canada's navy.

There are several ships that would make excellent options. Any one of these LHDs would be a substantial flag ship for the RCN and a game changer for Canada. First, is the Spanish *Juan Carlos*-class, a 27,500 ton 230.8m (758ft) LHD that has four decks, a dock and garage for heavy cargo, a habitability deck, a hangar and light cargo garage and a flight deck with a 12° sky-jump. This LHD runs on



Credit: Fincantieri

Fincantieri's Multirole LHD design was selected to replace Italy's *Giuseppe Garibaldi* light aircraft carrier, and steel was cut 12 July 2017.

combined diesel-electric and gas turbine (CODELOG) propulsion systems. The electric engines are powered by one gas turbine and two diesel generators. Two pod-type propellers of 11mw each support the system with a maximum sustained speed of 21 knots. The ship is equipped with four 20mm guns and four 12.7mm machine guns, however armaments can be upgraded as required. This LHD is a multi-purpose vessel that can be used as an aircraft carrier as well as for amphibious and HA/DR operations. The Australian navy has already acquired two *Juan Carlos* (Canberra-class) LHDs – HMAS *Canberra* and *Adelaide* – which are now operational. Australia's naval humanitarian response is centred on this helicopter dual-purpose platform, which can carry four landing craft, 100 vehicles, six to 10 helicopters and over 1,000 troops (short term). In early 2016, HMAS *Canberra* responded to a typhoon in Fiji with over 100 tonnes of humanitarian supplies, and a complement of several hundred engineers, carpenters, electricians and plumbers, all of whom were able to access even the most remote areas in the Fijian archipelago using the ship's helicopters and landing craft. Turkey has also bought this LHD, now being constructed.

The next option is the Italian *Trieste*-class. The first of the Italian *Trieste*-class is a 33,000 ton, 245m (803ft) LHA, with a maximum speed of 25 knots. It was laid down in July 2017 and is expected to be commissioned in 2022. It is equipped with two gas mt30 turbine engines (CODELOG) models from Rolls Royce with improved weight/power ratio efficiency. It can accommodate 1,064 personnel (crew and battalion strength). It has a range of 7,000 nautical miles (nm) and can sail over 30 days without storing. The Indian Navy may also acquire this LHA. This class has similar characteristics to the *Juan Carlos*-class but is able to carry more aircraft and humanitarian relief equipment, has better armaments and a top speed of 25+ knots.

The third option is the German *Blohm-Voss*-class design, a 23,000 ton, 209m (686ft) LHD, with a beam of 31.3m (103ft) and a draft of 6.45m (22ft). Its main propulsion plant of six diesel-electric generators and two electric motors gives it a maximum speed of 21 knots. The robust, proven and economical diesel-electric propulsion system driving two CODELOG propulsion plants is simple

to operate and maintain but provides a superior acoustic signature, vulnerability and shock resistance as well as a shallower navigating draught than other propulsion arrangements, such as pod-mounted drives. It can accommodate 1,434 personnel (crew and battalion strength) and provides a cost-effective means of transporting and supporting a mechanised battalion and its vehicles, equipment by helicopter, landing craft, hovercraft and rafts. It has a range of 10,000 nm and can sail over 30 days without storing. This LHD design uniquely incorporates a stepped multi-purpose deck aft, which can be a landing spot for helicopters, with horizontal hangar access, or used for the stowing of up to 54 TEU containers, allowing the ship to carry a large amount of logistic support equipment and stores without interrupting flying operations, as the large 4,800m<sup>2</sup> main flight deck remains clear with four landing spots and vertical hangar access. The main flight and multi-purpose decks are served by a 24-ton slewing crane. A spacious 985m<sup>2</sup> well-dock plus four davit positions can carry up to eight landing craft of various types. Vehicles are stowed on a special 2,250m<sup>2</sup> vehicle deck, with roll on/roll off (Ro-Ro) access via stern and side ramps. This LHD class is equipped with theatre-level command and control for amphibious operations, extensive casualty evacuation and hospital facilities and is capable of carrying 1,000 tons of cargo. These capabilities make this ship superb at HA/DR operations and general support to remote stations and islands.



Credit: ThyssenKrupp Marine Systems

Known better for its submarines, surface combatants and logistical support ships, Germany's ThyssenKrupp Marine Systems has also offered the *Blohm+Voss*-class LHD in its product line.

The fourth option is the USS *America*-class, a 45,000 ton, 257m (844ft) LHA with a beam of 32m (105ft) and a draft of 7.9m (26ft). There are several of these LHAs either in service, under construction or planned. It has a crew of over 900 sailors and can carry two Landing Craft Air Cushioned (LCACs) and one utility landing craft (LHA-8 and beyond). Armaments include two rolling air-frame missile launchers, two Evolved Sea Sparrow missile launchers, two 20mm Phalanx, two close-in weapon system mounts and seven Twin .50 bmg machine guns.

The final option is the French-built *Mistral*-class, a 21,300 ton (full load), 199m (652ft) LHD with a beam of 32m





A USN Landing Craft, Air Cushion offloads an ambulance on to a beach during Exercise Bold Alligator 2017, which took place along the US eastern seaboard October 2017. The ability to land emergency assets on to unprepared areas is crucial in the aftermath of some natural disasters which may render port facilities inoperable.

(105ft) and a draft of 6.3m (21ft). It has a crew of 160 sailors. It can carry up to four landing craft, up to 59 vehicles, up to 16 heavy-lift or 35 light helicopters, and has a troop capacity of 450 for long durations. It has three diesel and one auxiliary diesel alternators with two Azimuth thrusters of 7mw each and two five-bladed propellers giving it a top speed of 18.8 knots. Armed with two Simbad launchers, and four 12.7mm m2-hb Browning machine guns, two Breda-Mausier 30 mm/70 guns are also included in the design. There are three of this class now operational in the French Navy with a further two of these ships having already been sold to the Egyptian Navy.

With the exception of the *Mistral*-class, all other classes can carry, as a minimum, at least one full Canadian army regiment strength with the *Trieste*-class able to carry closer to one Canadian battalion strength, if required, and the USS *America*-class able to carry at least one Canadian battalion/brigade strength for forced landings with all equipment. All have exceptional command-and-control capabilities. Both *Juan Carlos*- and *Trieste*-classes are fitted with up to four Landing Craft Mechanized (LCMs) with room for up to 46 Leopard II tanks per ship. All classes can carry updated LAV IIIs along with all support vehicles. The *Juan Carlos*-, *Trieste*- and *America*-classes carry as a minimum at least 10-12 Chinook heavy-lift helicopters, Griffin helicopters and/or up to 15 attack or reconnaissance helicopters and up to 24 VSTOL aircraft (8A Harrier or F35B), with a significant capability for unmanned aerial vehicles. (The *Mistral*-class is unable to carry any VSTOL aircraft.)

They all have substantial triage hospitals with room from 70 to 100+ patients along with x-ray and dental facilities and pilot briefing rooms. They have a significant HA/DR capability with the ability to carry up to 144+ large containers. Any one of these ship classes would give Canada the potent amphibious sealift capability it has been sorely missing and give the Canadian government the flexibility and agility to respond quickly to crises around the world. These ships (with the exception of the *America*-class) could be built either in Canada or Spain, Italy, France

or Germany with contracts awarded to the best bidding shipyard.

Canada, however, must have enough naval, air force and army personnel to man these amphibious peace-support ships. Recruitment and training of more sailors, airmen and army personnel into the CAF will be vital, possibly bringing up CAF strength by at least 4,000-5,000.

Hopefully, the Canadian government will learn from the experiences of its NATO allies and Australia and recognize the unique abilities of dedicated, multi-role strategic amphibious sealift ships such as these, and the innovative missions they could enable Canada to take on, amid a changing geostrategic environment.

## Conclusion

There is no denying the current Defence Department fiscal constraints, but there is also no denying the fact that many of Canada's allies believe that an amphibious sealift capability brings with it enhanced flexibility to conduct military operations, HA/DR and the ability to collaborate with allied states on matters of global importance. If Canada were to spend (as a minimum), at least \$5 billion more annually on national defence or 2% of Gross Domestic Product as is the target for NATO countries, this amphibious sealift capability would not only be possible, but these peace-support ships could easily be built in Canada from existing LHA/LHD amphibious ship designs already being built or under construction worldwide. There would be absolutely no lasting negative effects on Canada's defence needs in the future, or on Canada's economy if this were done. To try to achieve this capability under current fiscal constraints would be difficult at best. To accomplish this perhaps the *Victoria*-class submarines may have to be utilized in service for several years longer than their shelf-life. 🙏

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# Strategic Maritime Planning and the Role of P&I Clubs

Heinz Gohlish



Credit: PH2 Richard Moore, US Navy

USCGC *Boutwell* WHEC 719 approaches a cargo ship in the Arabian Sea in support of United Nations sanctions in February 2003.

Maritime sanctions are one of the tools used to convince a target state to engage in behaviour acceptable to the global order, usually in response to a specific action deemed harmful to international interests. Clearly, among the most important actors needed to make maritime sanctions effective are ship owners. However, ship owners operate on a profit-making basis, and sanctions may be problematic and contrary to their own interests. As an international industry, ship owners are unlikely to take an altruistic view in pursuit of more narrow political objectives that do not concern them. Nevertheless, ship owners can be encouraged to comply if their own assets are at risk and, short of military or police action, the most effective pressure point comes from their Protection and Indemnity (P&I) Club, particularly if the P&I Club operates in the region where the sanctions are being enforced.

*Canadian Naval Review* recently published a thought-provoking article by Dr. Robert Huish of Dalhousie University which highlighted the importance of P&I Clubs in successfully implementing effective maritime sanctions against a target rogue state – or not.<sup>1</sup> This premise introduced a valid and serious point of an external commercial organization affecting the legally constituted policy of a governmental or international authority.

There are circumstances in which the commercial maritime world collides with strategic maritime objectives normally reserved for naval and military planners. The matter of maritime sanctions is certainly one of them. However, it is not the only one and commercial shipping may also diverge from governmental objectives in areas of

potential war activity and policies affecting piracy. In all three, the commercial solutions or interests may not be in line with government or international policies.

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**P&I Clubs are international players who seldom feature in naval or governmental thinking but yet are closely involved with ship owners and operators in exactly the area where there may be a serious divergence among governmental objectives, naval and military planning, and commercial interests.**

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From the perspective of a government or military policy-maker, the go-to organization for the coordination of international maritime policy is the International Maritime Organization (IMO). This UN secretariat is a highly effective inter-governmental body which represents the interests of national authorities in international maritime affairs. However, its primary remit is safety at sea with respect to ships, mariners and the environment.<sup>2</sup> It does not support or foster commercial interests, nor does it wish to be involved in disputes among members or to take a political stance. It is therefore not necessarily the right organization to force commercial maritime interests to comply with governmental objectives. Who then?

This makes the recent *CNR* article so timely. It has introduced the P&I Clubs – international players who seldom (if ever) feature in naval or governmental thinking but yet are closely involved with ship owners and ship operators in exactly the area where there may be a serious divergence



among governmental objectives, naval and military planning, and commercial interests. Policy-makers should therefore be asking: what are these P&I 'Clubs,' who are the people behind them and how can they help (or hinder), for example, international maritime sanctions?

It is the objective of this article to investigate these questions and to suggest where P&I Clubs may be of assistance to naval planners and policy-makers. To do so requires at least a rudimentary understanding of how P&I Clubs are structured, how they work and how they have an impact across the international maritime community.

### Structure of P&I Clubs

The main P&I Clubs operate as mutual associations to provide third-party liability insurance to ship owners and to offer legal/contractual services associated with operating ships worldwide. As mutuals they are non-profit businesses but still subject to all relevant financial regulations and best practices.

A ship owner becomes a member of his (or her) chosen club for all his vessels (a large owner will likely have more than one club). The members agree to appoint about 20 of their fellow owners to form the Board of Directors. The board (part-timers) appoints a management staff (full-timers) to manage the club on their behalf. The management formally reports to the board about four times per year.

Member premiums for their entered ships are paid on an annual basis. If total claims for a club exceed the estimate for the year, premiums are augmented through 'additional calls' shared by all members on a percentage premium basis. Policy years are ultimately balanced and closed after about four years. The nature of their work makes P&I Clubs top-heavy with maritime lawyers, but they also employ a scattering of mariners and commercial executives.

**P&I Clubs exist for one purpose only: to indemnify ship owners or ship charterers for their worldwide legal and contractual liabilities incurred in the operation of their ships.**

There are currently only 13 principal P&I providers worldwide. These are spread out as follows: UK (UK Club, West of England, Steamship Mutual, North of England, Standard, Ship Owners', London, Britannia); Norway (Gard and Skuld); Sweden (Swedish Club); Japan (Japan Club); and USA (American Club).<sup>3</sup> These clubs compete fiercely



*These 13 P&I Clubs form the International Group of P&I Clubs. Together, they cover some 91% of the world's shipping by tonnage.*

for business but they also cooperate very closely with each other in the pooling of large claims and their common reinsurance policy through a contract known as the International Group Agreement (IGA). Together, these 13 clubs subject to the IGA include about 91% of the world's commercial shipping activity in terms of gross tonnage.<sup>4</sup> These 13 P&I Clubs are known as the IGA Clubs or the Group Clubs.

The P&I Clubs within the IGA have a large underwriting department headed by a senior manager who reports directly to the board. All members are vetted on entry and annually thereafter. For new members, the application procedure includes all conventional underwriting criteria (exposure, spread of risk, compliances and previous insurance records) as well as many additional criteria such as a classification, port state control activity, registration (flag), crew, trade, beneficial ownership and standard contracts (non-standard contracts are approved (or not) on an ad hoc basis). Existing members are reviewed annually through a lengthy process involving a detailed analysis of the claims record as well as changes in contracts, operating conditions and premiums to be paid, usually finally agreed during a face-to-face meeting with the ship owner. Each year some members are not renewed.

Every other P&I insurer is simply 'the rest.' Of these only the China P&I Club and the Korea P&I Club are noteworthy. The China Club has applied to join the IGA and will likely do so in the near future. The Korea Club (of course not including North Korea) is more problematic as the major Korean ship owners are already entered with an IGA Club. The remaining non-IGA insurers are small and regional in scope. Some specialize in charterer's liabilities (as opposed to ship owner's liabilities). There are also several would-be mutual associations which attempt to emulate the IGA Clubs in their local regions (such as Iran) but make almost no impact. There is therefore a large gap between the IGA Clubs and the other commercial P&I



*The International Maritime Organization headquarters in London, UK, is lit up in blue as part of the 70<sup>th</sup> anniversary of the founding of the United Nations.*

insurers. They should be treated as separate entities and one should not generalize across the two groups. In short, only the 13 IGA Clubs matter.

### **Operation of P&I Clubs**

P&I Clubs exist for one purpose only: to indemnify ship owners or ship charterers for their worldwide legal and contractual liabilities incurred in the operation of their ships. Such liabilities include cargo, crew, collision, property damage, pollution and wreck removal among others. For example, cargo liability works as follows: the ship owner does not have an insurable interest in the cargo per se but only a liability for loss or damage to the cargo while it is in his care, custody and control and under an approved contract of carriage, usually a bill of lading. Actual cargo insurance is taken out by the cargo owners but this usually excludes maritime contracts and the sea voyage. Therefore the cargo owner/shipper needs an indemnity for loss or damage to the cargo during the sea voyage or, if the cargo is sold, up to the point where the cargo ownership switches to the buyer/receiver.<sup>5</sup> It is the P&I 'cover' that enables this process to happen.

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**P&I cover can be described as the lubricant of international seaborne trade. Without P&I cover, world seaborne trade would come to an immediate and grinding halt.**

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En route to a specified destination, any ship deviation from the voyage stipulated in the bill of lading (b/l) will fall foul of the terms governing the b/l. Bills of lading terms are usually given legal effect by national authorities through a Carriage of Goods by Sea Act.<sup>6</sup> At voyage destination, the Master may release the cargo only to authorized parties, as evidenced by their being in possession

of the original bills of lading. These, and other, safeguards should, in theory, make it unlikely for a club to cover the liability for an unauthorized voyage or unlawful cargo, as was suggested in the article by Dr. Huish.<sup>7</sup> Other indemnities work in a similar manner but subject to different conventions such as the Civil Liabilities Convention (tanker pollution from cargo), Marpol (ships' bunkers pollution), Athens (cruise ship passengers), London (property damage) and others. Details will vary across a wide range of international jurisdictions.

P&I Clubs therefore deal not only with insurance (protection) but also with the legal and contractual obligations (indemnity) of operating ships. The P&I indemnities are relied upon by cargo shippers and receivers (as noted above), banks (letters of credit),

port authorities (dock damage and stevedore injuries), governments (environmental damage) and any other third party who has an interest in the successful completion of the voyage. P&I cover can be described as the lubricant of international seaborne trade – known in the industry as the ship's 'ticket to trade.' Without P&I cover, world seaborne trade would come to an immediate and grinding halt.

It should be emphasized that P&I cover is not open-ended. The cover is in fact tightly defined within the Rule Book that is issued to each member at the beginning of each new policy year. This outlines precisely what is covered as well as certain events which are not covered.<sup>8</sup> For example, the rules clearly state that sanctioned cargo or illegal trade is not covered.<sup>9</sup> No two members have exactly the same terms and there will be variations in clauses, premiums and deductibles, but all will be within the scope of the rules. In addition, each entered vessel is issued with an annual Certificate of Entry which refers to the rules and any special terms, a copy of which should be placed on board the vessel. This is the ship's evidence of P&I cover and is available for inspection by port state control.

The influence of a P&I Club is in line with the size and quality of its membership. Individually this is moderate and the variation among P&I Clubs that are part of the IGA is not great. However, collectively the 13 clubs of the IGA form a powerful legal force and lobbying body. The IGA clubs do not collude but they do cooperate in three areas for their own self-interest:

1. Individual clubs cover their members for the first \$10 million of any claim. Above that, up to \$100 million, all 13 clubs contribute via an agreed formula through the IGA in what is called the 'pool.'
2. For claims over \$100 million, the clubs, collectively





HMCS *Winnipeg* escorts a World Food Program vessel in the Gulf of Aden in April 2009 at the height of the Somali piracy attacks.

via the IGA, purchase reinsurance in the commercial market,<sup>10</sup> led by marine syndicates at Lloyd's, up to \$2.1 billion.

3. Claims in excess of the market reinsurance, and up to \$3.1 billion, fall back into the pool. If necessary, the clubs are empowered by their rules to make an 'overspill' call on *all* ship owners in all 13 clubs. Fortunately, to date this has never happened.

If the numbers seem a bit excessive, think of a 20,000 TEU container ship or a cruise ship with 6,000 passengers and 2,000 crew. The liability claims on such a ship could be enormous. The just completed wreck removal and passenger claims of *Costa Concordia* will likely top out at \$1.5 billion.<sup>11</sup> In fact, the IGA states that the pooling agreement can cover ship owners for claims up to \$7.75 billion.<sup>12</sup> No commercial insurance company can compete with that as they must allocate 'capacity' to their cover limits, whereas the P&I Clubs secure their limits through 'mutuality,' that is, by the willingness of ship owners to pay unspecified

future calls on demand by their club.<sup>13</sup> By harnessing the mutuality across 91% of the world's ship owners, the P&I Clubs within the IGA achieve their influence and power.

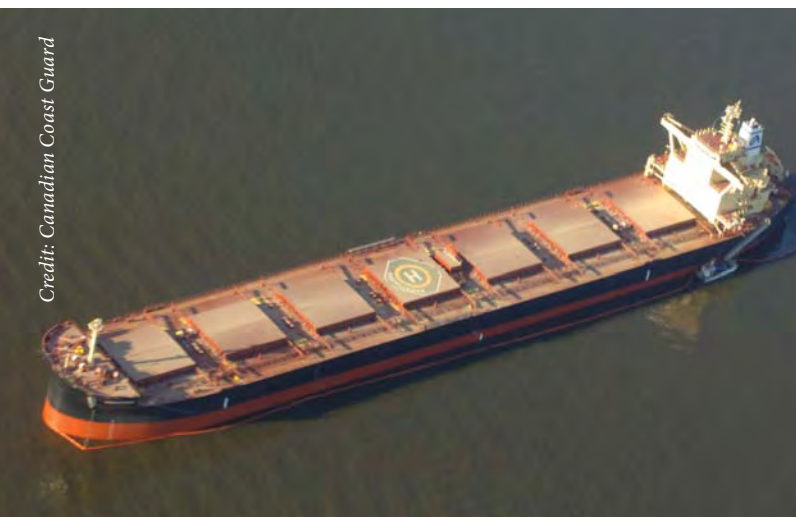
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**When sanctions were imposed on Iran, the 13 IGA Clubs complied instantly. P&I cover for Iranian ship owners was cancelled immediately, with a premium loss of millions of dollars to the main club exposed to this business.**

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One further important point needs to be made before discussing the impact of the clubs and how they might interact with strategic planners. We have not yet mentioned how clubs compel their members to follow the rules. On the face of it, it appears possible that a ship owner could join a P&I Club, pay his premiums and then go his own way. However, the clubs have two effective weapons at their disposal to prevent this from happening:

1. Any breach of the rules, breach of an approved contract (mainly bills of lading and charter parties), non-payment of premiums, breach of Institute Warranty Limits (IWL), defiance of War Exclusion Zones, non-compliance of sanctions, transporting contraband cargo or submitting false information on which the underwriter would have relied, whether deliberate or inadvertent, results in an immediate and automatic cancellation of cover for that vessel or voyage. If the breach is deliberate or persistent or through gross negligence, the cancellation can be made retrospective, that is, from inception and could apply to *all* the member's entered ships.
2. The clubs are indemnity insurers, not direct insurers. Therefore, when cover has been cancelled for a ship owner, there is no recourse by third parties against the clubs. When cover is cancelled



The bulk grain carrier MV *Marathassa* leaked 2,700 litres of fuel oil while anchored in English Bay off Vancouver in April 2015. Since February 2017, the ship has been covered under Standard Club P&I, one of the 13 IGA Clubs.

retrospectively, *all* existing claims will no longer be supported and files will be closed. A member will likely have hundreds of active claims; a large member may have over a thousand. Again, the claimants will have no direct recourse against the club.

Cancellation of cover is a serious event but exercised frequently (most often due to non-payment of premiums).

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**If a businessman is in trouble, he will likely say 'call my lawyer'; a ship owner will say 'call my club.'**

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While the P&I Clubs can enforce their rules, they cannot physically stop illegal trade. If a ship owner breaches the rules but there is no incident, the owner may get away with it. If there is an incident, and almost every voyage has the potential for an incident, the owner will be exposed to cancellation. A sub-standard single-ship operator may take such a risk but a reputable ship owner or one with exposed assets will not.

### ***Impact of P&I Clubs***

It should now be evident that the 13 IGA P&I Clubs, individually and collectively have a very detailed knowledge of commercial seaborne transport as well as a close working relation with almost all shipping companies worldwide. It could be inferred that the senior management of P&I Clubs have an unrivalled understanding of *all* of the following: maritime practice; international trade; commercial shipping; maritime conventions; maritime institutions; and maritime law across multiple jurisdictions. And they have at their disposal day-to-day contacts directly with the key ship owners who make the globalization of maritime trade happen. In addition they have access to their own network of legal and commercial representatives in each trading port around the world. This confluence of knowledge, experience and contacts is arguably unique.

Despite their business rivalry, P&I Clubs do work together when they must. For example, when sanctions were imposed on Iran, the 13 IGA Clubs (and others) complied instantly. P&I cover for Iranian ship owners was cancelled immediately, with a premium loss of millions of dollars to the main club exposed to this business (Steamship Mutual). Owners of non-Iranian ships trading into Iran but entered with an IGA Club were given precise instructions on their duty of care to ensure only compliant cargo was carried. However, the caveat here is that the clubs do not offer a vetting service and they cannot directly enforce compliance with sanctions or other edicts.

Therefore, even though P&I Clubs remain commercial or-

ganizations whose sole interest is their ship owner members, the clubs within the IGA are uniquely placed to harness their experience, information and contacts to achieve wider objectives via international bodies such as the UN/IMO. At strategic or maritime planning levels, the following should be relevant:

- With 13 IGA Clubs, each with about 20-25 ship owner board members, there are about 300 ship owners to whom there is direct access via the P&I Clubs. It can safely be assumed that these are the key ship owners worldwide and the leaders in the ship owning industry. The board members will represent every maritime state and every seaborne trade. On a specific policy matter, having this group on board has in effect covered the worldwide shipping community.
- While several aspects of P&I work such as cargo, crew, property damage, collisions and groundings need not trouble planners, others may have a direct impact on planning issues. These include environmental damage (e.g., *Exxon Valdez*), wreck removal (e.g., *Costa Concordia*) and piracy (e.g., *Maersk Alabama*). In the matters of sanctions, contraband cargo and drug trafficking, the clubs can make a useful contribution with information, contract vetting and ship ownership structures.
- P&I Clubs can bring commercial and legal pressures to bear on ship owners worldwide. This could be crucial in matters such as oil pollution, sub-standard ships, compliance with international conventions and cargo transparency. In addition,



US Navy landing craft assist with the oil spill cleanup after the 24 March 1989 grounding of *Exxon Valdez*.

Credit: PH2 Poche, US Navy





Credit: Mass Communication Specialist 2<sup>nd</sup> Class Daniel Barker, US Navy

*SS Santa Leonora ran aground upon Isla Shoal in the Strait of Magellan on 31 March 1968. The ship was operated under Grace Line Inc. at the time.*

clubs already work closely with classification societies and surveyors to form an effective triumvirate in pursuit of maritime safety and regulatory compliance.

- Finally there is a wealth of statistical information on ships and owners. The clubs will not readily share this for their own commercial reasons, but their collective knowledge can inform planners of the likely ramifications of any proposed policies.<sup>14</sup>

## Conclusion

If a businessman is in trouble, he will likely say ‘call my lawyer’; a ship owner will say ‘call my club.’ It is therefore useful to understand the relationship between a shipping company and its P&I Club. It would also be useful to understand the relationship between an individual P&I Club and the International Group (IG) of P&I Clubs (i.e., the IGA). It then becomes clear that the constituents of the IG completely dominate the P&I market. Further, the IG office enables those outside the ship owning circles to access the P&I market at a single point of entry. Generally, few persons or organizations outside the shipping industry require access but there are times when strategic planners and maritime policy-makers would be well advised to avail themselves to the worldwide knowledge, experience and contacts of the P&I Clubs.

In the matter of recent sanctions, there appears to be a marked difference in the effectiveness of UN sanctions against Iran and North Korea. In the former case, ship owners were largely mainstream and entered with the major P&I Clubs, whereas in the latter case there appears to be a predominance of ships operating outside the mainstream P&I market. It follows therefore that policy-makers should be looking at the margins of the shipping

industry for the rogue operators. Above all, policy-makers will find their task easier and more likely to succeed if the IGA P&I Clubs are on board. 🍷

## Notes

1. Robert Huish, “How to Sink the Hermit Kingdom: Improving Maritime Sanctions against North Korea,” *Canadian Naval Review*, Vol. 13, No. 2 (2017), pp. 5-10.
2. This is primarily effected through the key Safety of Life at Sea (SOLAS) agreement. There are many other important conventions, but working with 172 members can be a slow and grinding process.
3. P&I Clubs originate from the middle of the 19<sup>th</sup> century and grew regionally when ships changed from sail to steam. Their full names are therefore related to their region of origin and are rather archaic in form. I have therefore only used their short names by which they are generally known today.
4. That is, ships  $\geq 500$  GT.
5. As per the relevant Incoterms in use, which defines the exact moment of ownership transfer.
6. For example Hague Rules (1924), Hague-Visby (1968), Hamburg (1978) and Rotterdam (2008) which stipulate the ship owner’s responsibilities and outline the terms of package limitations for loss of or damage to the cargo.
7. This is not to say that Dr. Huish’s point is not valid. Such practices do occur but they are not covered by mainstream P&I Clubs.
8. For example, see the West of England Rules (all group clubs have similar provisions) which are available on the website ([www.westpandi.com](http://www.westpandi.com)). See Rule 2, Sections 1-24.
9. See West of England Rule 19.
10. Known as the General Excess of Loss Reinsurance Contract, the largest marine insurance contract extant.
11. This does not include the owner’s loss of the ship which is insured separately under a Hull & Machinery policy.
12. See International Group of Protection and Indemnity Clubs, “Group Agreements,” available at <https://www.igpandi.org/group-agreements>.
13. This has not escaped the European Union (EU) Competition Directorate. The EU directorate sees this as unfair collusion and has spent the last 20 years trying to break up the IGA. So far unsuccessfully.
14. The thing *not* to do is to ram through a poorly thought-out policy such as Canada’s Bill C-15 in 2005. For a discussion of this, see, for example, my commentary “In a Mess about Pollution,” *Canadian Naval Review*, Vol. 1, No. 2 (Summer 2005), pp 32-33.

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# Making Waves

## *After the New Protecteur-class, What Next?*

Commander (Ret'd) R.A. Rutherford

The Royal Canadian Navy (RCN) is finally on track to restoring its afloat logistic support, albeit with an embarrassingly long gap. The promise that two new supply ships (AORs), based on the German *Berlin*-class, will be built as part of the National Shipbuilding Strategy (NSS) can only be viewed as good news, and indeed better late than never. But are two ships enough? Can we do better next time? My purpose here is to look beyond Canada's two future AORs to consider what should follow and when.

### *Need for a Third AOR*

Two AORs are not enough. With one based in Halifax and the other in Esquimalt, there is nothing in reserve when either ship goes into refit, or suffers a disabling breakdown. Even when both AORs are operating at peak efficiency, a ship can only be in one place at one time. A third AOR can provide a level of flexibility to an operating schedule way beyond what one ship per coast can.

The AOR Replacement Project certainly recognizes this by calling for an option of a third AOR. However, given that two AORs will restore the basic ability to support fleet operations, we might consider a different design for the third one.

Project Resolve can provide the third AOR beyond its primary purpose which gives the RCN something to work with while the new *Protecteur*-class ships are being built. This ship (MV *Asterix*) will simply add flexibility if retained in service after acceptance of the two new ships but we can do more than that, as I hope to point out in the following paragraphs.

We need to remember that Canada has a third ocean, which is receiving increasing attention. The building of



The German combat support ship *Bonn*, which is the latest of the three *Berlin*-class vessels upon which Canada's *Protecteur*-class Joint Support Ships are based, at sea in December 2013.

the Arctic Offshore Patrol Ships (AOPS) opens up a vast new area for naval operations in the Arctic Ocean. With a range of 6,800 nautical miles and one metre ice capability, these ships will be able to do the job with support from the naval facility at Nanisivik. However, operating that far from home (Halifax to Nanisivik is a voyage of over 2,500 nm) will be a considerable challenge, especially if operating alone. So given that we accept the need for a third AOR for sustainability and continuity, that third AOR should be capable of delivering fleet support in the Arctic. Operating from Nanisivik during the navigation season, it can provide logistic support to the AOPS and their embarked aircraft, and medical and dental facilities beyond that intrinsic in the ships. To give support to the AOPS and other government ships in the Arctic, it should have at least equal ice-breaking capability as the AOPS themselves, namely Polar-class 5.

In this third, ice-capable ship, we should take advantage of its size to incorporate a modest beginning of an amphibious capability. A hull of Panamax dimensions would allow space to carry a sizeable combat team together with



On 16 October 2017 MV *Asterix* re-entered the water for the first time since entering Davie Shipbuilding for conversion to the Royal Canadian Navy's interim Auxiliary Oiler Replenishment ship.

Credit: Davie Shipbuilding





*A view of the Nanisivik Naval Facility in summer 2015 during its modernization and construction. The facility includes two new tanks for naval distillate fuel, dramatically increasing the endurance of Canadian vessels operating in the Arctic.*

its vehicles and equipment of at least platoon strength (50) and possibly even company strength (200). Alternatively, this space can be used to embark a Combat Engineer unit for construction and environmental protection activity, or a field hospital and other disaster relief units for a response to a catastrophic emergency. The extra accommodations and vehicular cargo space could be put to good use in any number of different ways.

I am not suggesting that this ship should look like a USN Landing Helicopter Assault (LHA) ship with its devotion to aviation, or even a Landing Platform/Dock (LPD) ship with its well deck. Those ships are of course needed for landing armed forces on a defended beach and such power projection is well beyond Canada's means at the present time. But if Canada is going to get into the amphibious game, a lift-on lift-off capability built into its third AOR can point us in the right direction with relatively minor investment.

Were too many eggs put in one basket? Much has been written about the fact that the Joint Support Ship (JSS) project stumbled and failed by putting too much capability and too many roles in one hull. While I accept that argument, I would counter it by suggesting that construction of two hulls, one being a third AOR and one being a JSS would be far more expensive than a single, larger hull containing enough of both roles to get the job done. If need be, we can treat the need for the third AOR and its Arctic role as essential, and the amphibious capability as desirable, with weight and space reservations built into a larger-than-necessary hull. Ships by their very nature are flexible and can be tasked with many jobs. Given the third AOR's large size and capabilities built in or yet to come, this ship will prove to be the most flexible and 'taskable' that we have.

Is this in fact a resurrection of the JSS ship (the big honkin' ship of former Chief of the Defence Staff General Rick Hillier's dreams)? Some might argue that it is. However, I would prefer to view this ship as the third AOR with some added capacity for amphibious-type cargo and personnel. Subsequent ships in the fleet-support role can perhaps see a shift in emphasis from logistic support to amphibious capability, when Canada has had the opportunity to try its hand with the facilities in this ship and assess the need for ships more dedicated to the amphibious role.

How would this third ship be used? Since the Arctic is much more accessible from the east, the third AOR (let's call it AOR3) should be based in Halifax, along with the majority of the AOPS. If the West Coast-based AOR should become unavailable for an extended period, its sister ship from the East Coast would be the logical choice to go west to replace it. This would obviously curtail Arctic operations to some extent, but only until the availability of the first AOR was restored.

Under normal circumstances, AOR3 would proceed north at the start of the navigation season in company with the AOPS squadron. After a courtesy visit to Iqaluit, the group would continue north to Nanisivik. There, the first task of AOR3 would be to land the personnel and equipment to run the station. Next, the fuel supply at Nanisivik would be tested and topped up. After that, the ship would undertake its specific tasking for that season, which would include such activities as:

- hydrographic survey of the Arctic;
- resupply of northern military facilities and those of other government departments and northern communities;
- periodic at-sea replenishment of the ships on patrol; and
- landing of embarked troops for construction projects, environmental tasks or combat-related exercises.

At the end of the season, the ship would return south in time to be incorporated into the fall program of the Atlantic fleet, and head south for the winter to the Canadian naval base in the Caribbean (my favourite dream).

### **Conclusion**

It is clear that more than two ships are needed to sustain fleet replenishment operations. Given the restoration of basic logistics capability in the new *Protecteur*-class AOR, the opportunity is then afforded to develop an even more capable ship for the additional Arctic and amphibious



Credit: Chief Mass Communication Specialist Mark C. Schultz, U.S. Navy

HMCS *Nanaimo* leads two *Avenger*-class mine countermeasures vessels and the Landing Platform Dock USS *Anchorage* LPD 23 off southern California during RIMPAC 2014 on 17 July 2014. *Anchorage* is part of the LPD 17 *San Antonio*-class.

roles. Beyond that, by establishing a continuing stream of design and construction of this type of vessel, we need never again face the total loss of fleet replenishment capability that occurred with the loss of HMC Ships *Protecteur* (AOR 509) and *Preserver* (AOR 510). Finally, Canada will be well served by having such capable, flexible and adaptable ships in its naval inventory. 🇨🇦

### **'Amphibiosity,' 'Big Honking Ships' and Royal Canadian Marines: A Reassessment**

Colonel (Ret'd) P.J. Williams, MSM, CD

Full disclosure: I'm a landlubber. Over a decade and a half ago now, and feeling in a particularly maritime frame of mind, I wrote an article for the then *Army Doctrine and Training Bulletin* (now *The Canadian Army Journal*), called "Which Way to the Beach? The Case for 'Amphibiosity.'" In the article I argued that the Canadian Armed Forces (CAF) should develop amphibious capability through, *inter alia*, the better integration of training, equipment and doctrine with the US Marine Corps (USMC) and through the purchase of some US Landing Platform Dock (LPD-17) class warships. At least two people read the article and they were good enough to respond, citing at the time what were quite legitimate concerns over the requirement to 'sell' the concept of amphibiosity<sup>2</sup> to political masters and the doubtless large outlay of cash that would be required.<sup>3</sup>

Fast forward to now, still having an interest in naval affairs, and prompted by the Editor of this journal, I decided that a re-assessment of what I'd written in 2000, particularly considering recent national and international developments, might be in order and hopefully would stir up some debate.

So, what has changed in the world since the turn of the century? Much, you might say – 9/11, non-state actors, concern over climate change, the emergence of cyber as

an increasing defence and security threat, a resurgent Russia, mass migrations on an unprecedented scale, the North Korean nuclear program, a world supposedly more 'connected,' and of course Donald Trump, to name quite a few. Back in 2000, I argued that "both our foreign and defence policies will likely take a more Pacific Rim focus than the Eurocentric flavour [they] may have had in the past."<sup>4</sup> Well, I'll admit that I was somewhat wrong on that one, and the North Atlantic Treaty Organization (NATO) along with the North American Aerospace Defence Command (NORAD) continue to remain cornerstones of Canada's defence strategy.

That said, the South China Sea, referred to in my article, remains a potential flashpoint, and indeed its archipelago has had many additions made to it, courtesy of the People's Republic of China creating new islands with infrastructure capable of supporting the projection of power on, above and perhaps even from under the sea. Linked to this has been the emergence of so-called anti-access warfare which strives to keep potential adversaries at a distance through the threat, *inter alia*, of anti-ship missiles. Further, the People's Liberation Army Navy (PLAN) is now the proud owner of two aircraft carriers, including one built indigenously. The United Kingdom is also getting back into the carrier game with the commissioning of HMS *Queen Elizabeth* in late 2017 and her sister ship,



The second Chinese aircraft carrier, Type 001A *Shandong*, was launched on 26 April 2017. It is based on the same general principles as China's first carrier, *Liaoning*, but with newer radars, a smaller island and other upgrades.





HMS *Prince of Wales* expected to be in service in the next decade.

I mentioned NATO and NORAD above. While it is true that Canada's commitment to both institutions remains inviolate, both NATO and NORAD have evolved in terms of their missions. Following a NATO Defence Ministerial meeting in November 2017, Secretary-General Jens Stoltenberg announced the creation of a Command for the Atlantic, "to ensure that sea lines of communication between Europe and North America remain free and secure. This is vital for our transatlantic Alliance."<sup>5</sup> Similarly, NORAD's mission sets now include maritime warning in addition to its previous missions of aerospace warning and aerospace control in the defence of North America.



*The interim Auxiliary Oiler Replenishment ship MV Asterix arrived in Halifax on 27 December 2017, following construction and sea trials at Davie Shipbuilding in Quebec.*

For Canada, the new century has brought much change as well. The CAF has transformed, particularly in terms of how its operations are commanded and controlled. As we emerged from what former Chief of the Defence Staff (CDS) General Rick Hillier called the "decade of darkness,"<sup>6</sup> there was talk of the CAF acquiring a 'big honking ship' (remember that?) and the CF enjoyed a degree of fiscal largesse and an increased, indeed highly positive public profile which it had not seen in generations.

More recently, and with a Liberal government in power, we have a new, resourced defence policy, which was preceded by a statement by Minister of Foreign Affairs Chrystia Freeland on Canada's foreign policy priorities, in which she highlighted the "rapid emergence of the global South and Asia – most prominently, China,"<sup>7</sup> as one of the main challenges facing the world order. Interestingly, and perhaps in recognition of the importance of this part of the world, the December 2017 National Security Strategy of the United States lists the Indo-Pacific region *first* in the chapter dealing with the strategy in a regional context.<sup>8</sup>



*Canadian Army members board HMCS Goose Bay at Cartright, Labrador, during Operation Nanook on 18 August 2017.*

So, all of this is to say that what happens on the world's oceans, and in those areas adjacent to it, will form an increasingly important part of considerations related to how Canada acts in the world, and of the role of the CAF in particular. The bulk (over 90%<sup>9</sup>) of the world's commerce is transported on the sea, and the trend of populations being concentrated near coastlines, which I referred to in my 2000 article, continues.

As NATO and NORAD are increasingly thinking along maritime lines, so are others. The US Army, seemingly always at the forefront of new thinking on doctrinal matters, is examining how fires can be delivered from and against points on land but also from land to sea and vice versa.<sup>10</sup>

Although neither the highly welcomed arrival of the MV *Asterix* as the Royal Canadian Navy's interim Auxiliary Oiler Replenishment ship, nor the future Joint Support Ships represent the 'big honking ship' envisaged what now seems like a lifetime ago, the new defence policy does say that "Canada's Navy will also be positioned to contribute meaningfully to joint action ashore and support the sustainment of joint operations from sea."<sup>11</sup>

### So What?

As some of Canada's greatest strategic and economic challenges have an inextricable maritime link, people are increasingly living in littoral regions and two key defence alliances are now considering the impact of the global commons on how they operate, is the time not opportune for the CAF to add 'amphibiosity' not only to its lexicon but as an arrow to its quiver?



Credit: Mass Communication Specialist 2<sup>nd</sup> Class Matthew Dickinson, U.S. Navy

A High Mobility Artillery Rocket System fires a rocket from the helicopter deck of USS *Anchorage* LPD 23 somewhere in the Pacific Ocean on 22 October 2017, during Exercise Dawn Blitz. This unusual demonstration may well be adaptable for other weapon system combinations and militaries.

As we've all been taught in school, we have the world's longest coastline. And, as our new defence policy reminds us, Canada possesses "the second largest continental shelf, and the fifth largest Exclusive Economic Zone in the world."<sup>12</sup> One could also argue that with climate change we have inherited a third ocean on our borders and unlike when I went to school, we now speak of Canada running from coast to coast to coast.

To be clear, I am not advocating, as I didn't advocate back in 2000, the creation of a Royal Canadian Marine Corps, or that the CAF become a niche, amphibious force. However, we would do well to learn from those who do have long traditions of amphibiousness, in particular our American and British allies. Some steps have already been taken in this regard, particularly in that area of Canada where the CAF has perhaps its most joint footprint, the Atlantic provinces. In summer 2017, Brigadier-General Derek Macaulay, the Commander of the Atlantic Canada-based 5<sup>th</sup> Canadian Division noted that during *Operation Nanook*, soldiers were transported by *Kingston*-class Maritime Coastal Defence Vessels and frigate, which was a significant change from previous years. He said "[t]his is a long way from amphibious operations like so many of our wartime soldiers faced at Juno Beach, but it did underscore that there may be opportunities for the two forces to cooperate and inter-operate."<sup>13</sup>

Should such cooperation not be the norm? Might there be a place for amphibiousness in our Reserve units? The new defence policy outlines a new vision for this component of the CAF and that the expectation in future will be of the provision of "full-time capability through part-time service."<sup>14</sup> Extending this to overseas operations, might

not our contributions to *Operation Caribe* (to fight illicit trafficking by transnational organized crime in the Caribbean basin and the eastern Pacific Ocean) and *Operation Artemis* (maritime security and counter-terrorism operations in the Arabian Sea) benefit from a land or Special Operations Forces (SOF) component? In the case of the latter, perhaps they are already doing so. In any event, I'm not trying to put Canada's crack naval boarding parties out of a job; forces comprising the land or SOF component of a sea-based joint task force would be used mostly in support of operations ashore, including capacity-building, now one of the CAF's core missions.<sup>15</sup>

Could Canada's Disaster Assistance Response Team be pre-positioned in whole or in part, afloat, in a region of the world where natural disasters occur with seemingly predictable, and regrettable, regularity? I'm thinking here particularly of the Caribbean region. Finally, in a future where access denial operations may preclude Canada from leveraging bases ashore, might not an offshore joint footprint, whether generated by Canada alone or in concert with allies and partners, provide us the strategic and operational flexibility we would need in such an instance?

## Conclusion

While much has changed since I wrote my original 2000 article, I've also been struck by how much has remained the same, namely the importance of the seas and littoral regions to Canada's security and prosperity. A good portion of the world's population thinks so too, as that's where they're continuing to choose to live. Surely then, this must remain a major consideration in the role Canada plays in the world and how it wishes to have the CAF act on its behalf. In this respect, amphibiousness has a lot to commend it and its implications for the CAF merit further serious consideration. In writing this article I did not purport to have all the answers, including how we'd fund this, but merely to have another look at the issue of amphibiousness as it applies to Canada and to initiate some debate.

What say you? I hope that more than two people read this. And in the meantime, I'll 'stand by to repel all boarders,' as it were. 🇨🇦

## Notes

1. See Colonel P.J. Williams, "Which Way to the Beach? The Case for 'Amphibiousness,'" *The Army Doctrine and Training Bulletin*, Vol. 3, No. 3 (Fall 2000), pp. 48-52.
2. I first encountered this term upon reading, *Amphibious Assault Falklands: The Battle of San Carlos Water* by Michael Clapp and Ewen Southby-Tailyour (Annapolis: Naval Institute Press, 1996). Back then, the word 'amphibiousness' was unknown outside maritime, and particularly UK, circles. Since then, while it has not fully entered our lexicon, a Google search turned up about 1,280 results, and the UK Chief of Defence Staff, Air Chief Marshal Sir Stuart Peach, used it in his 14 December 2017 Annual Lecture at the Royal United Services Institute in London.
3. See Sergeant Arthur Majoor, "Commentary: The Infrastructure for Amphibiousness," *The Army Doctrine and Training Bulletin*, Vol. 3, No. 4/Vol. 4, No. 1 (Winter 2000/Spring 2001), p. 76; and Major Ian Hunt,





"Commentary: More on Amphibiosity," *The Army Doctrine and Training Bulletin*, Vol. 4, No. 2 (Summer 2001), p. 63.

4. Williams, "Which Way to the Beach," p. 49.
5. A separate Allied Command Atlantic had existed during the Cold War but in 2003 its functions were subsumed by Allied Command Operations.
6. As quoted in Gloria Galloway, "Hillier Decries Military's Decade of Darkness," *The Globe and Mail*, 16 February 2007.
7. See Global Affairs Canada, "Speech by Minister Freeland on Canada's Foreign Policy Priorities," 7 June 2017.
8. See, "National Security Strategy of the United States of America," December 2017, p. 45, available at <http://nssarchive.us/wp-content/uploads/2017/12/2017.pdf>.
9. See United Nations, International Maritime Organization, "Overview," available at <https://business.un.org/en/entities/13>.
10. The US Army *Fires Bulletin* devoted its May-June 2017 issue to the theme of cross-domain fires. Available at <http://sill-www.army.mil/firesbulletin/archives/2017/may-jun/may-jun.pdf>.
11. Department of National Defence, *Strong, Secure, Engaged: Canada's Defence Policy*, June 2017, p. 35.
12. *Ibid.*, p. 34.
13. See Tim Dunne, interview with Brigadier-General Derek Macaulay, "Mighty Maroon Machine in Atlantic Canada," *FrontLine Defence*, Vol. 14, No. 5 (2017).
14. Department of National Defence, *Strong, Secure, Engaged*, p. 67.
15. *Ibid.*, p. 17.

## **National Shipbuilding Strategy: Not Perfect, Not Broken**

Howie Smith\*

There has been much written about Canada's National Shipbuilding Strategy (NSS), with most commentary highly critical of the processes, costs and schedule of the program. In December 2017, the University of British Columbia (UBC) added to the discussion through release of the report entitled "Onto the Rocks: With Disaster Looming National Shipbuilding Strategy Needs Urgent Change of Course." Employing hard-hitting language that warns of imminent disaster and citing examples of government failure, the UBC report concludes that the NSS is on track to fail. The report reflects a bias from the author, Professor Michael Byers, that dates to his previous analysis in 2014. Throughout this commentary many defence experts and industrial players have focused almost exclusively on the problems within the individual NSS projects while rarely conceding the successes. While acknowledging that significant challenges have been encountered, many of which were foreseen in 2010 when the strategy was created, it must be argued that the shipbuilding strategy is not broken.

Undeniably the NSS has faced setbacks and complex issues. In 2010 Canada had limited experience within government or industry in major naval vessel construction. Essentially, due to a lack of any large vessel construction since the 1990s, the navy and the coast guard fleets required a complete rebuild.<sup>1</sup> The ability to manage major

shipbuilding projects was a diminished skill and the necessary infrastructure and expertise in marine industries had to be rebuilt.

Criticism of the NSS has been founded on three main themes. These are:

- The policy of building ships in Canada is unsustainable and should not continue. Often this argument is advanced with comparisons to offshore build programs that can lack context, reflect different quantities and requirements, and do not acknowledge the hidden subsidies provided to offshore shipyards.
- The maintenance of a capable Royal Canadian Navy (RCN) and Canadian Coast Guard (CCG) is too expensive and should not be a national priority. Canada's operational requirements both for naval and coast guard ships and submarines are too stringent and should be similar to those of Canada's allies.
- The economic benefits of building and supporting federal fleets in country are overstated, unaffordable and focused on an industry in decline.

Addressing these criticisms is difficult as the issues are complex and relate to the importance assigned to sovereignty, preparedness and readiness of forces, and sustainment of industrial capability in Canada. In the main, the benefits of maintaining capable naval and marine forces



The final 'megablock' of HMCS *Harry DeWolf*, the first Arctic Offshore Patrol Ship, is rolled out of the Irving Shipbuilding construction hall on 8 December 2017, shortly before it was moved into place next to the rest of the ship.



*In preparation for carrying out construction, the NSS shipyards had to acquire modern equipment, such as this computer-controlled automated panel welding station at the Seaspan Vancouver Shipyard, pictured October 2014.*

are hard to quantify to Canadians given Canada's geography and national security situation.

However, one statistical example of the importance to Canada is reflected in the following. Canada has the world's longest coastline and area of territorial waters and each day (on average) the CCG:

- saves eight lives;
- assists 55 people in 19 search and rescue operations;
- services 55 navigation aids;
- handles 1,127 radio contacts; and
- manages 2,436 commercial ship movements.<sup>2</sup>

In addition to its primary role of security and defence, the RCN too is involved in search and rescue, drug interdiction, counter-piracy operations and humanitarian assistance/disaster relief. Indeed, Canadian warships and submarines can be found in most ocean areas of the world contributing to the security of the oceans and the sovereignty of Canada.

The debate on the priority to be placed on deriving economic benefits and employment from federal fleet construction and ship maintenance is not new. Every national government since the Second World War has established a priority on maintaining an indigenous shipbuilding and ship repair capability. Additionally Canada has reaped the benefits especially during times of emergency. This feature is unchanged with the NSS and remains a crucial strategic objective.

Perhaps the most significant shortcoming in the critical examinations of the strategy is the absence of context. Rarely does criticism of the NSS acknowledge the backdrop to the development of the strategy or recall the failed procurements at the outset of recapitalization of the

federal fleets. These included the first attempt at the Joint Support Ship (JSS) and the CCG Midshore Patrol Vessels. In August 2008 Ottawa terminated the process of the JSS procurement, noting that the two industry proposals were not compliant with the basic terms. Among other compliance failures, both bids were significantly over the budget which had been established.

As a result of inactivity, the shipbuilding and marine industries were not well positioned to deliver on Canada's ambitious shipbuilding objectives. The industry was clear in stating that modern technology and manufacturing processes are essential ingredients in their strategy to combat more heavily subsidized competitors.<sup>3</sup> Recent history in Canada demonstrated that without a long-term plan, vessel procurement provided only short-term employment with minimal retention of knowledge and technical expertise, often at a high cost to taxpayers.

An extensive review of the industry in 2008 concluded that significant investment in capacity building for the shipbuilding industry was going to be required.<sup>4</sup> Following consultation with the shipbuilding and marine industries both in Canada and abroad, it was clear that a new approach to vessel procurement was needed. No procurement in Canada's history established such an ambitious strategic goal of recapitalizing the major elements of the RCN and the CCG while simultaneously producing a sustainable Canadian shipbuilding industry. To sustain this industry the shipbuilding strategy needed to ensure that the expenditure of taxpayers' money returned as much economic value to Canada as practical. Moreover, it reflected common practice among most of Canada's allies respecting government fleets. As is being witnessed across the country now, valued, highly paid and technologically advanced employment is in place as a direct result of the program.

Since then we have witnessed a transformation in the combatant and non-combatant NSS shipyards as they have become productive world-class facilities, with trained and motivated work forces. In December 2017 the first Offshore Fisheries Science Vessel was launched and the first Arctic and Offshore Patrol Ship (AOPS) is nearing completion and construction of the second is well underway. Unfortunately the UBC report provides no mention of this progress and does not acknowledge the point of departure for the shipbuilding strategy. Instead the report asserts that there has been an absence of direct government involvement in the NSS projects and that costs have more than doubled. In fact the government has been an active participant with the two prime contractors in addressing all significant issues relating to the contracts. As has been widely reported, the original estimated NSS



project costs did not reflect the total all-inclusive program costs. Recent direction from the Treasury Board and the introduction of more accurate costing approaches has revised the overall estimated costs of the NSS. This should not be presented as a doubling of the estimated project costs.

The UBC report notes that the shipyards were not ready for the NSS. This is factual. However, it is incorrect to state that the government and industry did not appreciate the considerable time and investment needed to equip, staff and ready the shipyards for the projects. In fact, this formed a foundation of the competitive bids submitted to select the NSS shipyards.

In my view perhaps the most egregious claim in the recent UBC report is the statement that there was apparent incompetence in the federal civil service. This comment is both unhelpful and unfair. Justification is provided through mention of an error in applying the inflation rate on the original JSS project. This clearly was an error but not an example of systemic incompetence. Additional justification is offered by referring to the award of the in-service support (ISS) contract for the JSS before the vessels are completed. The combined AOPS/JSS classes ISS (AJISS) project identified a compelling need to have the ISS contractor in place in advance of the arrival of the first ships. Countering the validity of such arguments may have contributed to the debate, but citing apparent incompetence for doing so provides little value. The AJISS contract addresses two different classes of new vessels and, as noted, the first AOPS will be entering service shortly.

The Canadian Surface Combatant (CSC) project is the largest, most complex project in Canadian defence procurement history. The sequencing was designed to allow both Canada and the NSS shipyard to learn together and reap the benefits of working collaboratively on the *Halifax*-class Modernization (HCM) project and the AOPS prior to the CSC.

In the UBC report, Professor Byers has grabbed the headline concerning two proponents who have attempted to circumvent the CSC procurement process. Through an intervention at the ministerial level there has been an offer that would allegedly save Canada in excess of \$30 billion. Professor Byers argues that such cost-savings are so substantial that deviating from the intended procurement approach is warranted. He offers little to explain how such an incredible amount could be saved while respecting the government's 'build in Canada policy' or



*The future CCGS Sir John Franklin passes under Vancouver's Lion's Gate Bridge on the way to Victoria after its 8 December 2017 launch. Franklin is the first large ship to be launched under the NSS. In Victoria, Seaspan will complete outfitting the vessel before delivery to the Canadian Coast Guard.*

when considering the costs of an interruption in existing contracts and the disruption to the prescribed procurement approach. Based on the minimal information publicly available on the late-breaking offer, it is hard to gauge what were the desired outcomes. Notwithstanding the headline view of potential multi-billion dollar savings and alleged significant improvement on the build schedule, it is unsurprising that the government gave this intervention minimal attention, especially since the proponents did not submit a proposal in accordance with the published Request for Proposals.

The final thrust of the UBC report is to cancel the contracts that are in place for the CSC and JSS design work, and the polar icebreaker. In effect this would dismantle the NSS. Such recommendations are naïve, ill-informed and would be hugely expensive, especially in light of the multi-party consensus that has been achieved on the NSS. Such a course of action would disrupt Canadian industry, erode trust in the federal government, affect people's lives and employment, and cause new delays measured in years. Such a course would interrupt the work advanced through important investments by industry in the NSS Value Propositions.<sup>5</sup>

Moving forward, it is imperative that the government of Canada continue to update Canadians on NSS progress

– including the challenges. The government must be more proactive in addressing legitimate concerns and avoid secrecy respecting schedule and budgetary issues, and it must acknowledge that Canadian taxpayers deserve full transparency on this vital national investment. 🍷

#### Notes

- \* Howie Smith is past President of the Naval Association of Canada, Ottawa.
1. See Tom Ring, “The National Shipbuilding Procurement Strategy: How Did We Get to Where We are Now?” Canadian Global Affairs Institute, March 2016, p. 2.
  2. Shipping Federation of Canada, “Canadian Success Series, Volume III,” p. 43.
  3. “Breaking Through,” Industry Canada, Canadian Shipbuilding Industry, The National Partnership Project Committee, March 2001, p. 14.
  4. Ring, “The National Shipbuilding Procurement Strategy,” p. 2.
  5. Sherry Scully, “Planned for Obsolescence, A White Paper of the Institute of Ocean Research Enterprise,” December 2017.

## New Funding Model for Veteran Charities

Dermod Coombs, CD

The issue of how to provide care for Canada’s veterans first arose during The Great War and continues to occupy Veterans Affairs Canada (VAC) today. Although all political parties vow that the veteran issue is, in the words of Prime Minister William Lyon Mackenzie King, “far too serious to be dealt with in a partisan manner,”<sup>1</sup> and an increasing number of veteran stakeholder groups are working for their fellow veterans, there continues to be significant discussion as to how best to meet the needs of the modern-day veteran.

Organizations such as Army Navy Airforce Veterans (ANAVETS) and the Royal Canadian Legion were created years ago to help veterans re-integrate into Canadian society post service and help them access services from VAC. These organizations also created opportunities for those who had served primarily in the First and Second World Wars and the Korean War to maintain comradery across Canada from big cities to small towns.

Those who served in the numerous post-Cold War conflicts such as former Yugoslavia, Gulf War, Somalia, Rwanda and most recently Afghanistan, are referred to as ‘modern veterans’ by VAC. Although they face similar issues to the traditional veteran cohort, the modern veteran’s needs have shifted to include not only physical injuries but psychological injuries as well, also known as operational stress injuries which, until recently, had often been labeled as ‘shell shock,’ or even cowardliness in previous conflicts decades ago.

More than 40,000 members of the Canadian Armed Forces (CAF) served in Afghanistan; 158 of them paying the ultimate sacrifice. Many other veterans returned to Canada with their lives changed, altered by physical and/or psychological injuries. Although CAF and VAC programs existed and attempted to meet this increased demand for services, patriotic Canadians, many of them veterans themselves, wanted to provide additional assistance to these modern-day veterans. Organizations began to arise – such as Wounded Warriors, Vets Canada, True Patriot Love, V-42 Foundation, Prince Entrepreneur Organization, Canadian Institute for Military and Veteran Health Research (CIMVHR), Aboriginal Veterans Autotones, Paws Fur Thought, Team Rubicon and Army Navy Airforce Veterans (ANAVETS) to name a few – in order to provide services and/or access to programming that complements the suite of veteran-centric programs offered by the government. Although some of these veteran support organizations receive government funding through grants, pilot projects or contracts, the bulk of their funding comes from private fundraising and the kindness of everyday Canadians.

Depending solely on donations is limiting for these charitable organizations. The organizations are forced to expend their efforts on fundraising instead of focusing on direct service or program delivery to veterans. As well, it prevents them from being able to count on long-term sustained funding so that they can have a strategic plan regarding future programming. This uncertain funding often leads to difficult decisions about limiting access to services and/or programming.

In fall 2017, a new organization emerged in the veterans’ stakeholder sphere proposing a different and unique funding model for these veteran charities. A group of veterans teamed up with leaders in the financial industry establishing Arcs of Fire Investments (AOFi) and created a mutual fund called the Arcs of Fire Tactical Balanced Fund which leverages investments in the defence and security sector. The Arcs of Fire Tactical Balanced Fund is one of the first to include a yearly donation to veteran charities from the management fees of the fund. It is intended that this new



Veterans from the First World War learn handicrafts as part of their reintegration under the Department of Soldiers’ Civil Re-establishment, a distant predecessor to today’s Veterans Affairs Canada.

Credit: Peake & Whittingham / Library and Archives Canada / PA-068115





Credit: MCpl Patrick Blanchard, Canadian Forces Combat Camera

Department of National Defence and government of Canada representatives greet the last Canadian troops returning home from Afghanistan at Ottawa International Airport on 18 March 2014.

funding approach will create a dependable stream of revenue for veterans' charities while also giving all Canadians, including veterans, a tool they can use to manage their wealth. AOFi has sponsored and officially partnered with the Veteran Fund, a new not-for-profit organization that will decide how the funds raised from the mutual funds' management fees are to be distributed.

The Veteran Fund has taken a somewhat different approach than most not-for-profit organizations. "The Veteran Fund has partnered with the Benefaction Foundation in Toronto for a 1% flat fee on all money raised," said Peter Stoffer, the Chair of the Veteran Fund Board of Directors and long-time veterans' advocate. Stoffer notes that "[t]his means that, with Arcs of Fire also covering much of the cost, and none of us financially benefiting from our roles, the Veteran Fund can still issue tax receipts to donors and the entire administration cost will be less than 5% once we get going."<sup>2</sup>

This coming together of veterans with the financial community to create AOFi and the Arcs of Fire Tactical Balanced Fund is a new funding model to ensure sustained funding for veteran organizations while providing all Canadians with low-to-medium risk investment opportunities which includes RRSPs and TFSA options. The fund is believed to be a global first and Canadian innovation at its best. 🇨🇦

#### Notes

1. *The Liberal Speakers' Handbook*, 1930. Within the Handbook, there is a section entitled "Justice for the War Veterans," National Liberal Committee. Issued June 1930, Publication No. 12. In that section, on p. 82, Prime

Minister William Lyon Mackenzie King is quoted there as saying this in his 4 March address in the House of Commons.

2. Peter Stoffer, AOFi Launch Event, the National Arts Centre, Ottawa, 23 October 2017.

## ***The Mulroney Institute of Government is Launched at StFX with a Focus on Maritime Security***

Adam Lajeunesse

Last summer St. Francis Xavier University (StFX) in Antigonish, Nova Scotia, broke ground on an exciting new project: the Mulroney Institute of Government (MIG). Canada's newest public policy research centre, the institute has already laid out an ambitious and focused plan to engage with some of the most pressing public policy issues facing Canada in the 21<sup>st</sup> century. Planned research chairs in Canadian-American relations and women's leadership are well timed to the seismic shifts in cross-border attitudes and the revolution in gender relations now underway. The interests of Canada's maritime community, meanwhile, should be piqued by the new focus on marine security at StFX.

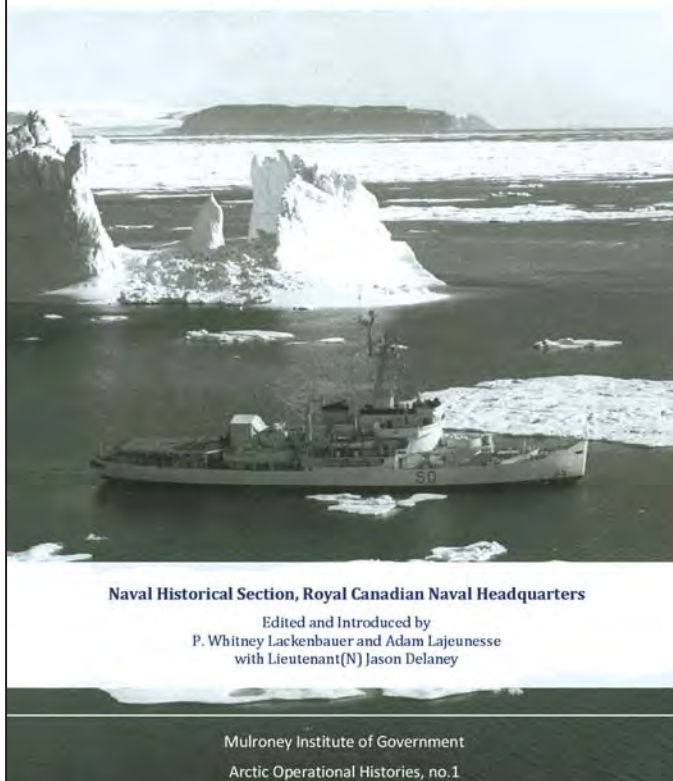
As a new institute, the MIG had to start its work somewhere and its initial focus fell to Arctic and maritime security. With the support of Irving Shipbuilding, StFX has announced two research chairs in this field; the first Irving Chair was filled in April 2017 by Dr. Adam Lajeunesse, with a second likely to be occupied in early 2018.

This focus has already yielded some exciting results in a country far too willing to ignore its Northern and maritime history and character. In the fall of 2017, the Institute launched the Arctic Operational History Series, a collection of e-books dedicated to bringing operational lessons from Canada's northern history to light at a time when the Royal Canadian Navy (RCN) is making a concerted effort to re-engage the region (see *OperationalHistories.ca*). Each of these volumes offers a unique window into the evolution of Canada's northern deployments and capabilities, as well as a detailed look at the challenges faced by the Canadian Armed Forces and other government agencies during Canada's multi-generational effort to develop and maintain basic operational capabilities in the Far North.

The first volume is a topical one given the progress now being made on the new Arctic Offshore Patrol Ships. Providing important historical context, the Operational History Series offers an in-depth account of HMCS *Labrador*

# HMCS *Labrador*

An Operational History



– Canada’s first Arctic patrol ship – and its critical few years with the RCN. The second volume, just published, is a history of the RCAF’s Arctic and sub-Arctic operations from the 1920s to the early Cold War. Future volumes will include a history of Canada’s first transit of the Northwest Passage by the RCMP schooner *St. Roch*, the early history of the RCN in the Arctic, and the story of *Operation Morning Light*, the CAF mission to recover debris from a downed nuclear-powered Soviet satellite.

An occasional paper series, the *Arctic and Maritime Security Series*, will also be launched this winter. The series will offer essays by academic experts and practitioners in the field to generate debate and bring forward new perspectives on the many security challenges facing the Canadian offshore and Arctic regions in the 21<sup>st</sup> century. The series will include papers examining everything from northern defence and unconventional security to governance and development.

## ***One of Canada’s First Undergraduate Focused Public Policy Schools***

The Mulroney Institute will also offer one of Canada’s first public policy programs with a purely undergraduate focus. The Public Policy and Governance (PGOV) program at StFX elevates this subject in a unique way, by beginning

to train Canada’s future policy leaders early in the field of public affairs and leadership.

This new program introduces students to a broad field that integrates many different disciplines to answer the crucial questions of public policy: how do we solve the common problems we have as a society; and how do we organize ourselves to provide those solutions? Combined with its promising research program, this new approach to undergraduate education promises to maintain the StFX tradition of punching well above its weight in producing leaders, politicians and influential thinkers.

## ***New Work from the Mulroney Institute***

### ***HMCS Labrador: An Operational History***

HMCS *Labrador* was Canada’s first heavy icebreaker and the RCN’s first vessel capable of reliably operating in the waters of the Arctic. For three seasons in the mid-1950s, the ship served as Canada’s workhorse in the Far North – charting sea lanes, conducting research and aiding in the construction and supply of joint defence projects. As the Canadian navy builds the capacity to sustain its modern Arctic presence, the early operations of HMCS *Labrador* offer an instructive history and a fascinating glimpse back into the RCN’s early forays into the frozen waters of the Canadian North.

### ***Whole of Government through an Arctic Lens***

In a region where government resources are scarce and logistics strained, cooperation can make the difference between success or failure. This volume explores how the whole-of-government (WoG) framework works, shedding light on the full spectrum of activities, themes and practices which constitute a WoG approach to the defence of the Canadian Arctic. This includes a multi-perspective understanding of the legal, environmental, policy, strategic, developmental and operational perspectives that inform the approaches of the Department of National Defence, the Canadian Arctic Forces and the government of Canada to Arctic defence, security, sustainable development and environmental stewardship.

### ***Per Ardua Ad Arcticum: The RCAF in the Arctic and Sub-Arctic***

This pioneering history by Edward P. Wood offers valuable insights into the pivotal role played by the Royal Canadian Air Force (RCAF) in opening the Canadian North from the 1920s to the early Cold War. Filled with interesting first-person accounts of Arctic operations and rich descriptions of the region, *Per Ardua Ad Arcticum* is a valuable resource for scholars, military personnel and aviation enthusiasts who want to learn more about the early history of the aviation that did so much to connect the North to the rest of Canada. 🍷



# India and the Quad: Balancing National Interests and Regional Realities

**Jocelyn Sandhu**

On the periphery of the 2017 East Asia Summit in Manila, the Philippines, senior officials from four countries – Australia, India, Japan and the United States – met to exchange views on issues surrounding the status of “freedom and open[ness]” in the Indo-Pacific region.<sup>1</sup> The participants discussed the importance of maintaining international law and expanding regional cooperation, as well as maritime security and freedom of navigation in the region. With the conclusion of the meeting, the commencement of analysis and speculation about a potential strategic partnership began – again.

In 2007, a similar gathering took place in Manila among the same group of democratic countries whose common interests and maritime capabilities prompted them to discuss the potential expansion of their cooperation in the Indo-Pacific region. Despite only holding an inaugural session, this four-party roundtable became referred to as the Quadrilateral Security Dialogue, or more colloquially, the Quad – a designation that has persisted throughout the last decade. This new dialogue structure, however, did not last, as speculation on the strategic implications of the assembly resulted in a decidedly negative reaction from China. Beijing was alarmed by the prospect of being encircled at sea at a time when it was starting to rediscover the strategic importance of the maritime realm. The reaction caused the Quad’s members to hesitate to set up another meeting. In particular, Australia and India, which were attempting to strengthen their economic ties with Beijing, felt that fostering positive relations with the rising regional power superseded the need to maintain an initiative like the Quad. Although the Quad faded from the agendas of each state, it was nonetheless widely analysed for the next decade, as the backlash from Beijing had

attracted attention from Asia observers, and sustained the idea that beneath the surface-level discussion of common values and interests lay a potentially much more substantial strategic partnership.



*The Indian aircraft carrier INS Viraat sails between USS Nimitz (left) and USS Kitty Hawk during Exercise Malabar 2007-02 in which all four Quadrilateral Security Dialogue members, plus Singapore, carried out naval exercises in the Indian Ocean.*

So why meet again now? Since the last Quad engagement a decade ago, the Asia policies of the members have shifted notably. The United States undertook its ‘pivot’ to Asia and the re-election of Japanese Prime Minister Shinzo Abe restored the Quad’s champion in Japan, as Abe has pushed to expand Japan’s partnerships in the Indo-Pacific region. Australia’s 2017 foreign policy White Paper emphasized the need for coordinated maritime engagement in the region, and legislation was introduced in December 2017 to curb Chinese influence in domestic politics and education.<sup>2</sup>

Meanwhile, China’s position in the region has also shifted considerably as it has pursued island building in the South China Sea, asserted claims in disputed waters, and significantly expanded the People’s Liberation Army Navy (PLAN). Additionally, the Maritime Silk Road component of China’s Belt and Road Initiative (BRI) has raised concerns about the intent of this project, and whether it is another avenue through which China can exert its influence in the region.

Although some Indo-Pacific commentators have viewed the second Manila meeting as the revival of the Quad, it is clear that sustaining the dialogue will be challenging,



*Leaders gather for a photo at the beginning of the 12<sup>th</sup> East Asia Summit on 14 November 2017.*



*The Maritime Silk Road of China's Belt and Road Initiative has been facilitated by Beijing acquiring port access rights along the Indian Ocean rim, including Djibouti, Pakistan and Bangladesh.*

especially if some participants have doubts about the Quad's strategic value. In this regard, India's commitment to maintaining the relationship remains questionable. Unlike the other three parties, New Delhi's statement after the 2017 Quad meeting notably avoided any mention of maritime security or international law – a sign that it was perhaps more cautious of Beijing's reaction than the other three.

However, over the past decade India has become concerned by China's growing presence in the Indian Ocean, and therefore its willingness to participate in the meeting may signal that New Delhi is looking for a viable solution to ensure it maintains a leadership position in the Indian Ocean, as well as expands its economic prospects and naval presence into southeast Asia. Would India's participation in the Quad ultimately help advance its maritime interests in the Indo-Pacific region? Or would the potential strain on its relationship with China, as well as other limiting factors, prevent it from committing to developing the strategic dialogue? This article will explore these questions.

### ***The Case for the Quad***

One argument in favour of committing to the Quad now is that India's strategy in the Indo-Pacific region has shifted since 2007 and could be advanced through its participation in the multilateral partnership. As an estimated 90% of India's trade volumes – including 90% of its oil imports – are carried by sea, it has an interest in ensuring the security and openness of key maritime trade routes in the region.<sup>3</sup> These interests are reflected in new policy iterations, such as the 2014 Act East Policy, by which New Delhi planned to deepen its economic and security ties with states in the region. For example, India allocated USD \$1 billion to promote connectivity between India and the Association of South East Asian Nations (ASEAN) states,

and the Indian Navy (IN) has conducted multiple bilateral exercises with member-state navies.<sup>4</sup> India has also bolstered its naval ties with Japan, Australia and the United States, albeit not all together, in the Indo-Pacific region over the last decade. The IN's Malabar exercises with the US Navy have expanded to include the Japanese Maritime Self-Defense Forces, and India has fostered maritime relations with the Royal Australian Navy through bilateral exercises since 2015.<sup>5</sup> This shift towards broader engagement in Asia would be aided by participating in the Quad as all parties have an interest in preventing the contested region from being dominated by a single power.

Another argument is that commitment to the Quad could help India balance against China's expanding influence in the Indian Ocean. For example, Beijing's BRI has led to its acquisition of a site for a military facility in Djibouti, as well as major port deals with Bangladesh, Sri Lanka and Pakistan.<sup>6</sup> Establishing these strategic installations has given China a strong military and economic presence in the Indian Ocean, threatening India's influence in its maritime neighbourhood. In particular, the China Pakistan Economic Corridor, which will connect Xinjiang in northwest China to the Gwadar port in southwestern Pakistan as part of the BRI, has alarmed India. New Delhi has argued that as the corridor runs through Pakistan-occupied Kashmir, it violates Indian sovereignty and gives legitimacy to Islamabad's claim over the contested area. Although Beijing has stated that it supports India's position in the dispute, it has done little to pacify New Delhi, which responded by boycotting China's May 2017 BRI summit.

And, finally, China's assertion over disputed territories, maritime and otherwise, has revealed that its adherence to international law is not consistent. For instance, its refusal to abandon a road development project that would cut through India-allied Bhutan without its consent led to a prolonged border dispute between China and India on the Doklam plateau in the summer of 2017. China also completely dismissed a July 2016 decision by the Permanent Court of Arbitration (PCA) that ruled in favour of the Philippines in the matter of disputed territory in the South China Sea. Somewhat like China, India has traditionally been wary of subjecting its own disputes to the authority of international legal bodies. Therefore, its acceptance of the PCA's ruling on its maritime boundary dispute with Bangladesh in 2014, which favoured Bangladesh, marked an important shift in position for India. Participation in the Quad could help India assert a rules-based maritime realm in the Indian Ocean, and provide it with an extra bargaining chip when negotiating with China.





Credit: Indian Navy

The destroyer INS *Kolkata* leads a formation during the Indian Navy's 2016 International Fleet Review. Similar to the rest of the fleet, *Kolkata* is fitted with Western, Israeli and Russian systems, complicating coordination with other Quad members at the technical level.

## Challenges Remain

Key concerns that pushed India away from the Quad a decade ago have continued to dissuade it from pursuing a tighter relationship today. First, the strategic goals of the other members with regard to China may not match up with New Delhi's broader interests, which could lead to a Quad-breaking disagreement on how the four powers should cooperate in the Indo-Pacific region. Second, the ramifications of a strained relationship with China remain a significant calculation when India engages with other states internationally. India's trade relationship with China is substantial – bilateral trade between the two countries totaled approximately USD \$71.5 billion in 2016.<sup>7</sup> New Delhi may also be questioning the necessity of participating in a *quadrilateral* arrangement, as in the past decade India has fostered strong trilateral naval relationships with Japan and Australia, and Japan and the United States separately. These relationships do not antagonize Beijing nearly as much as the Quad does because the trilateral arrangements help hold Beijing's fears of being encircled by cooperative democratic powers at bay.

Furthermore, it is important to consider the legacy of India's traditional position as a non-aligned power. Although India's diplomatic and economic engagement with other states, particularly Western states, has expanded significantly since the end of the Cold War, the concept of neutrality, distance and independence in relations persists as a part of India's national identity, and continues to play a role in its foreign policy decisions. Observers have noted that this legacy has made military cooperation difficult. For example, even though IN exercises with others have increased over the last decade, India's reluctance to share data and use common communication systems has hindered these cooperative drills.<sup>8</sup>

Ultimately, India's hesitance to integrate could hurt the Quad's ability to establish an effective strategic maritime relationship, and hurt India's strategic interests. Indian

maritime commentator Abhijit Singh argues that rhetoric from New Delhi that insists on being first among equals in the Indian Ocean prevents India from confronting the reality that its naval capabilities may not be developed to the degree that it can unilaterally balance against China's expansion into the Indian Ocean.<sup>9</sup> Allowing this mentality to persist at a time when its strategic considerations have changed hurts India's ability to foster relationships, like the Quad, even though doing so could serve its interests in the Indo-Pacific region.

## Looking Ahead

It remains to be seen whether the 2017 renewal of the Quad will outlast its previous iteration and grow to become a more permanent fixture in the Indo-Pacific region. At present it seems Australia, Japan and the United States are ready to, at the very least, hold another meeting. As for India, it is evident that concerns about China, as well as practical challenges with cooperation, will need to be addressed before it can be counted on to support a more substantial quadrilateral dialogue structure.

That being said, shifts in India's posture on its role in the Indo-Pacific region suggest that it is steadily moving towards supporting the Quad initiative. Its growing appreciation for international law in the face of China's maritime expansion has made it evident that India's participation in the four-state strategic relationship could help advance its interests in Southeast Asia, balance China's presence in the Indian Ocean, and add credibility to its actions in the region. Ultimately, the Indo-Pacific remains a complex and strategically crucial maritime theatre in which a consistent, cooperative and communicative Quad could provide a viable alternative for regional engagement. 🍷

## Notes

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6. Abhijit Singh, "Indian Ocean 'Leadership'? Delhi's Boasts Ignore Reality," *The Lowy Institute*, 8 September 2017.
7. K.S. Venkatachalam, "How to Fix India-China Trade," *The Diplomat*, 31 August 2017.
8. Sanjeev Miglani, "Indian Navy the Odd Man Out in Asia's 'Quad' Alliance," *Reuters*, 22 November 2017.
9. Singh, "Indian Ocean 'Leadership'?"

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# *Dollars and Sense:* How is the National Shipbuilding Strategy Going?

**Dave Perry**

By the time this issue goes to print, we will be approaching the eighth anniversary of the announcement of the National Shipbuilding Procurement Strategy in June 2010. So, how is the renamed National Shipbuilding Strategy (NSS) going?

In a notably candid speech at the CANSEC Trade Show in May 2016, then Minister of Public Services and Procurement Canada Judy Foote acknowledged that the success of the NSS “has been overshadowed by challenges and growing pains, and we have to recognize the ways in which it has fallen short.”<sup>1</sup> To remedy the deficiencies, Foote promised more expertise, oversight and shipbuilding capacity, improved budgeting, performance monitoring, and better and more frequent communications. With respect to communications, Foote stated that “updating Parliamentarians and Canadians more frequently on our projects going forward is a priority.” The news release accompanying her speech promised both annual and quarterly reports and a status report on shipbuilding efforts from 2012 through December 2015 was released the same day, elaborating on the same issues raised in the speech.<sup>2</sup>

Since Foote’s speech, six full fiscal-year quarters have passed without a single quarterly report being published. And it was not until 14 December 2017 that the annual report for 2016 was released. In addition to its lateness, the report is notable for offering significantly less information than its predecessor on some key aspects of the shipbuilding efforts. It reiterates the identified areas for improvement on aspects of the NSS that Foote identified for remediation. It notes that oversight and governance are being enhanced by the reinvigoration of the Deputy Minister’s Governance Committee, and that the efforts to increase capacity had “already begun.” It further reiterates the other commitments to better budgeting, detailed monitoring and (ironically) the commitment to better communication through more reporting.

But the report fails entirely to offer a performance management assessment along the lines identified by Foote. Given the nature of the NSS, both a procurement plan for federal fleet replacement and a shipbuilding strategy, the fourfold performance measurement areas identified by Foote are prudent. They include: timeliness of project execution; delivery of vessels within approved budgets; shipyard productivity; and economic benefits. It is troubling that, seven-and-a-half years after the strategy was launched, the government is reporting on only *one* of



*Credit: Roberia Gal, Public Services and Procurement Canada*

*The Honourable Judy M. Foote, Minister of Public Services and Procurement, delivers her keynote speech at CANSEC 2016, in which she highlighted new measures to alleviate problems with the National Shipbuilding Strategy.*

these metrics, the strategy’s economic benefits. Here, the 2016 report estimates that the contracts awarded to date under the strategy will contribute \$7.7 billion to Canada’s Gross Domestic Product and create or sustain 7,350 jobs through 2022.<sup>3</sup> Further, it talks about the value of Industrial and Regional Benefits committed to date (\$791 million), and skills developments programs at each shipyard, especially their efforts to increase the share of their work force that is aboriginal.

In contrast to this fulsome update on economic impact, there was no assessment of shipyard productivity. The 2016 report states only that “the shipyards remain committed and continue towards achieving the target state.”<sup>4</sup> The target state reference refers to one of the tenets upon which the NSS was based: that two yards would be awarded long-term packages of work, and be designated centres of excellence, but in doing so they would be required to achieve a level of productivity that would place them in the top 25% of shipyards around the world. To achieve this, First Marine International was engaged to provide initial assessments of both shipyards and has subsequently reassessed them.

So, are the Vancouver and Irving Shipyards in the top 25% of shipyards in terms of productivity? If not (possibly because they have not yet finished sufficient work to make that determination), are they on a path to achieving it? To ask these questions suggests neither that they are or are not. And to ask does not imply that, if the latter is the case, the shipyards not being at the requisite level of productivity is the cause, uniquely, or otherwise, of the repeated changes in schedule outlined below. But answering those questions is fundamental to assessing how the NSS



is going, and Canadians have been provided no information on this crucial topic.

Project budget information is also lacking. Assessing the delivery of projects against their budgets is impossible, since as noted below, no projects have yet been delivered. Nonetheless, the absence of any budget information for the Offshore Oceanographic Science Vessel and Joint Support Ship is strange, as those projects list their budgets as under review. The report states the same for the Canadian Surface Combatant (CSC) project, which Foote had pledged would not see a new project budget announced until a construction contract is signed (a milestone which remains years away). Interestingly, a new budget for the CSC project of \$56-62 billion was announced with *Strong, Secure, Engaged*, Canada's new defence policy, but that same policy was silent about a new budget for the Joint Support Ship. As 2018 begins, the costs for two of the five new-build shipbuilding projects are not known to the public.

Similarly, the 2016 report contains no updates on when any of the NSS projects will actually deliver a ship, with the exception of the Interim Auxiliary Oiler Replenishment (AOR) project. Here, the report states that the project is to be completed in early 2018, whereas the 2012-2015 report stated service delivery was slated to start in fall of 2017.<sup>5</sup> To be sure, there has been progress at renewing Canada's federal fleets which has been reported by the government of Canada. The Request for Proposals for the CSC closed

in November 2017, and bids (reportedly three of them submitted through the formal process) are being evaluated in the winter of 2018. The third mega-block for the first Arctic Offshore Patrol Ship has been joined with the first two outside of Irving Shipbuilding's UltraHall and construction has started on the second and third ships. At Seaspan, the first Offshore Fisheries Science Vessel, and first ship built as part of the NSS, was launched in December 2017. In February 2017 a design and production engineering contract was awarded for the Joint Support Ship. And, finally, in August 2017, a \$5.2 billion contract for in-service support of that ship and the Arctic Offshore Patrol Ship was awarded to Thales Canada.

But aside from the Interim AOR project, the 2016 report is silent about when new ships will actually be delivered to the navy and coast guard. While these 'annual' NSS reports provide no information on schedule, the Departmental Plans of the Department of National Defence and Department of Fisheries and Oceans do. Table 1 compiled all of the dates listed for 'first delivery' (or Initial Operating Capability where a first delivery date was unavailable).

The first column in the table starts with the information reported for fiscal year 2011/2012, the first year of annual planning reports compiled after the National Shipbuilding Procurement Strategy was announced in June 2010. Some of the large ship construction projects were announced prior to 2011/2012, but those announcements



Credit: Alion Canada

Alion's submission for the Canadian Surface Combatant design adapts the Dutch *De Zeven Provinciën* frigate design, adding SeaRAM point-defence missile launchers and static phased-array radar antenna for volume search.

**Table 1. National Shipbuilding Projects: Publicly Released Schedule for 1<sup>st</sup> Ship Delivery (or IOC if denoted with a \*)**

Project	2011/2012	2012/2013	2013/2014	2014/2015	2015/2016	2016/2017	2017/2018	As of Nov. 9, 2017
OFSV	2014	2014	2015-2016	2016-2017	2016-2017	N/A	N/A	N/A
OOSV	2014	2014	2015-2016	2017-2018	2017-2018	2018-2019	2020	2021
Polar	2017	2017	2017-2018	2021-2022 <sup>a</sup>	2021-2022	2022-2023	2024	2024
JSS	2017	2017	2018*	2019*	2019*	2020*	2021	2021
AOPS	2015	2018	2018	2018	2018	2018	2018	2018
CSC	2021	TBD*	mid-2020s	2025	2025	late 2020s	mid-2020s	mid-2020s
Source: Reports on Plans and Priorities for that Fiscal Year (1 April - 31 March).								Departmental Results Report 2016/2017
<sup>a</sup> In October 2013 it was decided that the Polar Icebreaker will be built after JSS. This was the first document published after that decision.								
<p>Reports on Plans and Priorities was renamed the Departmental Plan in fiscal year 2017/2018 and the Departmental Results Report was known as the Departmental Performance Report prior to that year. Available at Canadian Armed Forces and the Department of National Defence, "Reports and Publications," <a href="http://www.forces.gc.ca/en/about-reports-pubs/index.page">www.forces.gc.ca/en/about-reports-pubs/index.page</a>.</p> <p><b>Legend:</b></p> <p>OFSV: Offshore Fisheries Science Vessel      Polar: Polar Icebreaker      AOPS: Arctic Offshore Patrol Ship  OOSV: Offshore Oceanographic Vessel      JSS: Joint Support Ship      CSC: Canadian Surface Combatant</p>								

pre-dated the announcement of the procurement strategy for acquiring them, and are therefore not really fair representations of an initial starting point. But all of the reports published from 2011/2012 onwards came after the strategy was announced. As the table shows, the projected first delivery dates for all of the projects are now scheduled significantly further into the future than initially suggested in 2011/2012. Indeed, the first reports issued to Parliament by the two relevant departments indicated that first delivery of five different classes of ship (the Offshore Fisheries Science Vessel, Offshore Oceanographic Vessel, Polar Icebreaker, Joint Support Ship and Arctic Offshore Patrol Ship) would happen by the end of 2017. So far, none have been delivered.

Similarly, the table shows that several of the projects, those that comprise the non-combat work package, have had multiple revisions to their first delivery dates over time. While these dates may have been set early, without an expectation that they constituted a firm project schedule, they nevertheless constitute the initial expectations for the shipbuilding strategy set by the government of Canada. The results for all of these projects have obviously fallen short of these initial expectations. More troubling, several of these projects have seen their posted schedules revised multiple times and the projects continue to fall short of these revised expectations.

In her 2016 speech, Minister Foote offered a frank acknowledgement that there was a need for change, and the government would henceforth be better at discussing

federal shipbuilding efforts with the public. The 2016 shipbuilding report fails to live up to that intent. If the government of Canada wants to regain and maintain public confidence in the NSS, it needs to provide the type of honest communication Foote promised. That must include the type of performance assessment she outlined – timeliness of project execution, delivery of vessels within approved budgets, and shipyard productivity – not solely economic benefits. Performance measurement should also be expanded to include the efforts Foote launched to improve shipbuilding with the 2016 speech to CANSEC. If the government doesn't start talking openly and honestly about shipbuilding, and soon, it risks losing public confidence. 🙄

#### Notes

1. The Honourable Judy M. Foote, "Keynote: CANSEC Trade Show," Ottawa, 26 May 2016, available at [www.canada.ca/en/public-services-procurement/news/2016/05/cansec-trade-show.html](http://www.canada.ca/en/public-services-procurement/news/2016/05/cansec-trade-show.html). Her speech also effectively renamed the National Shipbuilding Procurement Strategy the National Shipbuilding Strategy.
2. Government of Canada, "Government of Canada Announces Way Forward for National Shipbuilding Strategy: News Release," 26 May 2016.
3. Public Services and Procurement Canada, *National Shipbuilding Strategy: 2016 Annual Report*, 14 December 2017, available at <https://www.tpsgc-pwgsc.gc.ca/app-acq/amd-dp/mer-sea/sncn-nss/rapport-report-2016-eng.html>.
4. *Ibid.*, p. 11.
5. Public Services and Procurement Canada, *National Shipbuilding Strategy: February 2012 to December 2015 Status Report*, 26 May 2016, available at <https://www.tpsgc-pwgsc.gc.ca/app-acq/amd-dp/mer-sea/sncn-nss/rapport-report-dec2015-eng.html>.

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# Warship Developments: Snippets

Doug Thomas

## Chinese Aircraft Carrier Construction

China announced in late 2017 that construction of its third aircraft carrier has commenced. The start of construction closely follows the launch of China's first domestically built aircraft carrier, the Type 001A *Shandong*, which took place in April 2017. *Shandong*'s design is based on that of the first aircraft carrier, *Liaoning*, which was purchased by China from Ukraine in 1998, together with a complete set of blueprints. The third and subsequent aircraft carriers will be built to a new and larger design.

Unlike the first two carriers which have no catapults and employ a ski-jump ramp to enable short take-offs, the third carrier (currently referred to as CV-18) may feature catapults – either steam catapults or perhaps, as Chinese media reports state, an electromagnetic aircraft launch system (EMALS). It will have an estimated displacement of around 80,000 tons, and therefore be larger than *Liaoning* which displaces around 60,000 tons. The new ship is expected to be ready for launch in two years. In an April 2017 article, it was reported that China's official military newspaper *PLA Daily* stated that China could build a fleet

of six aircraft carriers.<sup>1</sup> It is likely that four of the new CV-18 carriers will be built by 2030, and added to the existing *Liaoning* and *Shandong*.

The rapid pace of the Chinese aircraft carrier program is truly impressive. The CV-18 class, with its additional size and catapult launch capability, will be capable of carrying a much more significant air wing compared with the first two vessels, and will definitely change the strategic balance at sea in the western Pacific.

The indication that EMALS will be fitted in CV-18 is very interesting. Presumably this is a Chinese-developed system. The new US Navy carrier USS *Gerald R. Ford* is at sea with the first system of this type in the world, and there are many bugs still being sorted out. It seems unlikely that the US version of EMALS is being sold to China, although it has been offered to India.

## MV Asterix

MV *Asterix*, the refitted container ship which has been comprehensively modified by Davie Shipyard in Levis, Quebec, and leased by the Department of National



Credit: Xinhua

The second Chinese aircraft carrier, *Shandong*, was launched in Dalian on 26 April 2017, and is the first to be built from the keel-up in China. The third carrier is expected to provide significantly enhanced aviation capabilities through the use of electromagnetic catapults.





With a deck full of snow, MV *Asterix* sails on its maiden voyage to Halifax as part of initial sea trials.

Defence (DND) to act as an Interim AOR, arrived in Halifax on 27 December. The 36-person civilian crew sailed from Levis on 23 December, and conducted propulsion and navigation trials en route to Halifax. During January the ship will embark a total of 114 naval personnel and aircrew who will operate replenishment-at-sea (RAS) and communications equipment, and maintain and operate the embarked helicopters. Crew familiarization and trials will be conducted prior to deploying to Esquimalt, sometime in the next few months.

As part of the reconstruction of *Asterix*, the ship's upperworks were stripped off, and she was fitted with a 2,000-ton superstructure built in Finland and brought by barge to Davie Shipyard last year, comprising the bridge, operations and communications rooms, accommodation for civilian and military crew, and twin hangars big enough to accommodate the CH-148 Cyclone helicopter which is starting to enter service. In addition there are aircraft, electrical and machinery maintenance spaces, a briefing room and pilot's ready room, communications spaces, and RAS control stations on either side forward. The flight deck is spacious enough for the large Chinook helicopter, however the Chinooks have not been marinised and cannot readily be carried in one of the hangars without removal of their rotor blades which do not fold like the blades of the Cyclones.

### ***HMS Ocean Sold to Brazil***

Brazil has purchased the UK helicopter carrier which recently returned from her final deployment as a commissioned Royal Navy ship, serving the role of NATO Standing Maritime Group 2 flagship in the Mediterranean. The vessel will undergo some modifications in the UK before delivery to Brazil in late 2018.

Commissioned in October 1995, the 202-metre long HMS *Ocean* replaced HMS *Bulwark* as fleet flagship in June



HMS *Ocean* sails in the Mediterranean in September 2016 as part of task group operations. On the deck are Merlin, Apache and Chinook helicopters.

2015. In her role as a helicopter carrier and amphibious assault ship, *Ocean* is designed to deliver troops by helicopter or by landing craft.

The acquisition of HMS *Ocean* comes after the Brazilian Navy decided to decommission its only aircraft carrier, BNS *Sao Paulo*, after it had been determined that returning the elderly aircraft carrier to an operational status was too risky and expensive. 🇧🇷

### **Notes**

1. "China Building Third Aircraft Carrier, Plans to Build More," NDTV, 21 February 2017, available at <https://www.ndtv.com/world-news/china-building-third-aircraft-carrier-plans-to-build-more-1661873>.



# Book Reviews

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*Hunters and Killers, Volume 1: Anti-Submarine Warfare from 1776 to 1943*, by Norman Polmar and Edward Whitman, Annapolis, Maryland: Naval Institute Press, 2015, 210 pages, US \$46.50 (hardcover), ISBN 978-1-59114-689-6

*Hunters and Killers, Volume 2: Anti-Submarine Warfare from 1943*, by Norman Polmar and Edward Whitman, Annapolis, Maryland: Naval Institute Press, 2016, 254 pages, US \$47.86 (hardcover), ISBN 978-1-61251-897-8

Reviewed by Colonel (Ret'd) P.J. Williams

Oh dear, I thought when these two volumes arrived, a set of coffee-table books. Having now read them both, I can happily report that I was wrong and that these books are much more than they first appeared.

Norman Polmar and Edward Whitman are Americans. Polmar is a consultant, analyst and author specializing in naval, aviation and technology areas, and Whitman is an electrical engineer who has held senior management positions in the US Navy and the Department of Defense. Thus, their combined backgrounds are admirably suited to writing the history of a type of warfare which, think about it, spans over 2½ centuries and which remains one of the most technologically challenging fields of military endeavour.

In writing this history the authors set out to fill what they perceive as a gap in the historiography of anti-submarine warfare (ASW). While the literature on submarines and ASW in general is vast, particularly as regards the Battle of the Atlantic in the Second World War, there does not exist a single work which covers ASW from 1776 to the present. Volume 1 begins in 1776 with the attack by the American submarine *Turtle* on HMS *Eagle* in New York Harbor during the Revolutionary War. It covers the time until the so-called 'Black May' of 1943 when Allied ASW successes forced German Admiral Karl Dönitz to withdraw his U-boats from the North Atlantic, and which represented the turning point of the longest battle of the Second World War. Volume 2 then picks up the story and covers the story of ASW to the present, with a major focus on the competing ASW efforts over, on and below the waves by the US and Soviet Navies. The study concludes with a discussion of what the future may hold, including the implications of advances in the Chinese People's Liberation Army Navy (PLAN).

Those familiar with the story of ASW since the 18<sup>th</sup> cen-

tury will indeed find much of what they know already, including the exploits of the Confederate submarine *H.L. Hunley* during the US Civil War, the Atlantic battles of both World Wars, and the victory of the US submarine campaign in the Second World War. Here, in a reversal of the Battle of the Atlantic, it was the Americans, assisted by the British, who were associated with the use of submarines against Japanese surface vessels, which in turn were woefully unprepared to counter the Allied underwater threat.

However, there was much more that I learned that I didn't know previously. For example: it was a Canadian (or more accurately, a Newfoundlander), Dr. William Boyle, who was instrumental in helping the Royal Navy develop early ASDIC (later sonar) systems in the Great War; the Second World War US submarine *Batfish* became the only US submarine to be credited with sinking three enemy (Japanese) submarines; and during the Cold War, US nuclear depth bombs were provided to several countries, including to Canada (Volume 2, p. 172).

In terms of other Canadian content, Canada is mentioned, and not in a very favourable light it must be said, in reference to the Battle of the Atlantic in the Second World War. The authors highlight the Canadian role in convoy protection, but without an explanation of the major expansion of the Royal Canadian Navy in that conflict, the less-than-complimentary comments on Canadian naval forces lack a degree of balance and context.

For a subject such as this, it is inevitable that the language sometimes becomes technical. However the authors handle this very well, whether it is a description of underwater acoustics or the operation of passive and active sonar.

Both volumes are well illustrated with photos, maps, diagrams, charts and tables which depict how the hunters and killers fared in the conflicts chronicled. Biographies are provided of various personalities throughout the period studied, from Vice-Admiral Gordon Campbell, Royal Navy (a noted 'Q-Ship' commander in World War 1) to Captain Joseph Kelly US Navy ('the father of SOSUS,' the underwater sound surveillance system). Unfortunately, these are without any photos. The Notes are quite extensive (12 pages in Volume 1 and 17 pages in Volume 2) and in many instances refer the reader to other works on a particular topic. The Bibliography, contained in Volume 2, incorporates a wide variety of sources including German and Soviet/Russian sources, official US and British documents, papers and presentations, conference transcripts and internet sites. As a Canadian I was happy to see that the works of two of our foremost naval

historians, Michael Whitby and Marc Milner, are listed in the Bibliography.

Having started my military service during the Cold War, it was always quite clear that nuclear missile submarines were the most potent and stealthy weapons that existed. Tremendous resources of both NATO and the Warsaw Pact were put into maintaining this capability while also trying to counter that of the other side. Even Hollywood got into the act with films such as *The Bedford Incident*, *The Hunt for Red October* and *Crimson Tide*. Nowadays so-called 'narco submarines' have been used by drug traffickers to smuggle their deadly cargos, and the future portends great potential for unmanned underwater vehicles (UUVs).

Canada's recent experience with submarines has shown that the maintenance of this capability comes at great cost, indeed, tragically human in Canada's case, and has spawned a continuing debate on the place of these weapons in the national arsenal. All this is to say that as the global commons continues to be used by under-sea vehicles of increasingly sophisticated types, the game of hunter vs hunted will doubtless continue and further volumes in this over 250-year old history will be written. Recommended. 🍷

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*Disarming Conflict: Why Peace Cannot be Won on the Battlefield*, by Ernie Regehr, Toronto: Between the Lines, 2015, 232 pages, Cdn \$27.95 (paperback), ISBN 978-1-77113-164-3

Reviewed by Michael Kocsis

Ernie Regehr's latest book, *Disarming Conflict*, offers valuable perspectives on one of humanity's oldest evils. Its chapters canvass the complex dimensions of modern war, including: how wars begin; civil wars; wars between nation-states; limits of war; security operations; the arms trade; nuclear disarmament; prevention of armed conflict; and measures to promote peace. The book's overarching theme, enunciated provocatively in its title, could not be clearer. Regehr argues that armed conflict almost never effectively establishes peace and security. As he notes, "[a]ssumptions about the force of arms as the guarantor of peace and security remain prominent," but careful study of 25 years of armed conflict "points in another direction" (p. ix). He argues that collective violence leads to "spectacular failures" and "gradually, the human community is starting to turn away" from warfighting (p. 116).

A striking feature of the book is Regehr's sophisticated

understanding of the nature of military conflict in the early 21<sup>st</sup> century. Wars of the past several decades are driven and accelerated by extremism, zealotry, ideology and radicalism (p. 9). He argues that radicals prosper in places where the four "root causes" of military conflict – political grievances, competing identities, militarization and the absence of trustworthy alternatives – are allowed to fester (p. 42). Regehr regards war as a form of collective pathology; in societies where militarized practices and institutions become habitual, war becomes a viable objective in spite of its obviously colossal human price. Those holding power come to operate on dubious assumptions about "military Keynesianism," which is the idea that "military spending can be a driver of economic growth" (p. 135). Such assumptions obscure the fact, Regehr argues, that war prevention is always possible if it is backed by adequate attention and commitment. Leaders must learn to rely on diplomatic negotiation strategies, and only when negotiation fails should they resort to force of arms which should generally take the form of multilateral security operations under UN auspices.

Another feature of the book is the toolbox of recommendations Regehr offers to scholars and leaders who wish to encourage the apparent shift from violent conflict to peaceful politics. This is no easy path, of course, and Regehr points out that war prevention demands "no less preparation and commitment [than] it takes to fight a war" (p. 120). States interested in promoting peace can devote their will and resources to the "five Ds" of security – development, democracy, disarmament, diplomacy and defence – where the last item, defence, is stipulated as "a capacity to resort to the use of force in extraordinary circumstances *in support of the full range of peace and security efforts*" (p. 124).

The book includes numerous other practical proposals acquired during Regehr's distinguished career as an advocate for peace and a non-governmental organization representative. Those who come to these issues from other backgrounds might dispute some elements of Regehr's proposals. Some might suggest that war is not as much a strategy planned and executed by individual decision-makers as a collective trap societies unintentionally stumble into through successive mistakes. From this point of view, any viable remedy to armed conflict will need to correct public decision-making structures. And although Regehr's recommendation to increase the space in which diplomatic negotiators perform their important work is generally a wise one, critics might wish to emphasize that diplomatic failures and disappointing negotiations can undermine as well as engender peace and security. It may also be worthwhile to remember that political stability



is not the sole or exclusive object of legitimate wars. Soldiers and citizens sometimes believe their cause is worth fighting for, even worth dying for, so it would seem no less important today than at any moment in the past to determine which side in a given war is right, which side fights for the common good, and which is guilty of armed aggression.

Regehr pushes these critical questions to the centre of an important dialogue. His book will be a substantial inclusion to the scholarly bookshelves of peace advocates, international relations scholars, military strategists and scores of others who wish to understand how humanity might learn to cope with the scourge of war in the 21<sup>st</sup> century. 🍷

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*Before Jutland: The Naval War in Northern European Waters, August 1914-February 1915*, by James Goldrick, Annapolis, Maryland: Naval Institute Press, 2015, 382 pages, US \$44.95 (hardcover), ISBN 978-1-59114-349-9

Reviewed by Colonel (Ret'd) Brian K. Wentzell

Rear-Admiral James Goldrick, Royal Australian Navy (Ret'd), is a naval author who has undertaken a well-researched analysis of the naval war between the United Kingdom and Germany in the North and Baltic Seas during the first seven months of World War 1. Russian involvement is also explained. The analysis is exhaustive and Goldrick's conclusions reflect his professional background.

The author focuses on the leaders of the respective navies and their interpersonal as well as their professional skills. Ultimately, it is the application of those skills to naval strategies, tactics and technologies of the period that drove the successes and failures in the various naval actions between August 1914 and February 1915. The fear of submarines coupled with practical limitations of communications, targeting, propulsion machinery, hydrographic knowledge and fog affected the naval commanders of all participants as they tried to emerge victorious in each battle. Mistakes were made and culpability was assessed, not always after objective analysis.

Goldrick concludes, "[t]he greatest naval battle had yet to be fought, and so did the most important campaign. Yet enough had happened that the six months described here can be called the true beginning of modern naval warfare" (p. 299). The questions of how well prepared the protagonists were and how effectively they responded to

the challenges they faced are assessed by the author in his final chapter.

The book is well worth its price and challenges the reader to think about how well prepared potential protagonists are today for war at sea. Rear-Admiral Goldrick is to be congratulated for his objectivity and thoughtful conclusions in this work. 🍷

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*Commanding Canadians: The Second World War Diaries of A.F.C. Layard*, edited by Michael Whitby, Vancouver: University of British Columbia Press, 2005, 383 pages, maps, photographs, notes, appendices, bibliography, index, ISBN 978-0-7748-1193-4

Reviewed by Ken Hansen

This is the eighth book in the "Studies in Canadian Military History" series for the Canadian War Museum. Michael Whitby, a professional naval historian with the Department of National Defence, has edited the personal wartime diary of Commander Arthur Frank Capel Layard, RN, who served as an escort group commander of Canadian warships from October 1943 until the end of the Second World War. Layard kept a diary throughout his service, beginning in 1913, so Whitby limits his work to the last 20 months of the war when he commanded Canadians.

Whitby includes a prologue to outline Layard's earlier experiences, and an introduction to each of the chapters when he served in Canadian ships. An epilogue sums up the post-war service and later life of Layard. These additions are expertly done to provide context but without exerting undue influence on the author's narrative. Extensive notes explain the identity and relevance of people and events Layard mentions in passing, but which had great relevance to the immense scope of this story.

The keeping of personal diaries during the war was in violation of Admiralty orders against the practice. As a result, it is highly unlikely that Layard at the time of writing expected that anyone other than immediate family members would read his musings. Strangely, Layard donated his collection of more than two dozen journals to the Royal Navy Museum in Portsmouth, which is where Whitby found them after Layard was interviewed by Dr. Alex Douglas in 1987. What results is an intimate insight into the man, his actions, large-scale operations and the huge organizations involved in a major part of the Second World War.

By December 1934, Layard is a passed-over Lieutenant-

Commander and he is relegated to shore duty. The war offered more sea time and, although he was part of major events, including *Operation Torch* and the attack on the port of Algiers, which earned him a Distinguished Service Order, Layard is still unable to move up. He is sent to Canada for service with the Royal Canadian Navy (RCN), where he is welcomed by the Canadian admirals whose policy is to assign higher fleet duties and destroyer-frigate commands to 'professional' officers of the RCN and RCN Reserve (p. 73). Desperately short of such officers, a passed-over Brit was most welcome. 'Volunteer' officers of the RCNVR were, with only rare exception, confined to commanding corvettes.

Layard arrived in Halifax in October 1943 newly promoted to Acting-Commander, to take over local escort group W10 operating between Halifax and St. John's, Newfoundland. He relieves another RN officer, Commander B. de St. Croix, who is "intensely hostile to the RCN" and is clearly fed up with everything (p. 43). The six old four-stack ex-USN destroyers are worn-out maintenance nightmares that overtax the limited facilities in Halifax (pp. 31-32). By late January Layard is moved to command of Escort Group (EG) 9, comprised of two frigates and five corvettes. By mid-March the group is in the UK and is changed to a frigate-only force.

The description of the 'inshore campaign' by Layard brings home the crushing boredom and periodic excitement of these times. His narrative is clear and illuminates his personality throughout the many and varied events.

The insight we gain is often unflattering to Layard, who reveals himself to be insecure, jealous and highly critical of most of what transpires in Canadian warships. He also struggles with the lack of clear doctrinal direction to guide him in conducting shallow water anti-submarine operations. Often criticized for abandoning bottom contacts and alternatively then being berated for claiming kills on 'unacceptable' evidence, Layard's frustration is palpable. Despite these problems, EG 9 manages to sink five U-boats between 10 March 1944 and 16 February 1945, a very good outcome all things considered. There are high cost to the RCN ships because of severe shock damages sustained expending large amounts of ordnance in very shallow water. The 'group' is sometimes reduced to only two ships by the need for emergency repairs.

This excellent book can be read on several levels. It provides insights to the social nature of the times and ship-board life. It also reveals the wide cultural gulf between the British professional navy (including its minuscule Canadian offshoot), and the massive wartime expansion of the Canadian volunteer navy. Layard is valued by the establishment in Canada because he is a product of the system they emulated but he was ill-at-ease with the people he commanded because of this spit-and-polish character and overly critical manner. This is a wonderful time capsule that allows casual readers and serious researchers alike the opportunity to relive the past vicariously and see how things actually were, both good and bad, in the formative days of the RCN. 🇨🇦

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## 2018 CANADIAN NAVAL MEMORIAL TRUST Essay Competition

*Canadian Naval Review* will be holding its annual essay competition again in 2018. There will be a prize of \$1,000 for the best essay, provided by the **Canadian Naval Memorial Trust**. The winning essay will be published in *CNR*. (Other non-winning essays will also be considered for publication, subject to editorial review.)

Essays submitted to the contest should relate to the following topics:

- Canadian maritime security;
- Canadian naval policy;
- Canadian naval issues;
- Canadian naval operations;
- History/historical operations of the Canadian Navy;
- Global maritime issues (such as piracy, smuggling, fishing, environment);
- Canadian oceans policy and issues;
- Arctic maritime issues;
- Maritime transport and shipping.

If you have any questions about a particular topic, contact [naval.review@dal.ca](mailto:naval.review@dal.ca).

### ***Contest Guidelines and Judging***

- Submissions for the 2018 *CNR* essay competition must be received at [naval.review@dal.ca](mailto:naval.review@dal.ca) by Monday, **30 September 2018**.
- Submissions are not to exceed 3,000 words. Longer submissions will be penalized in the adjudication process.
- Submissions cannot have been published elsewhere.
- All submissions must be in electronic format and any accompanying photographs, images, or other graphics and tables must also be included as a separate file.

The essays will be assessed by a panel of judges on the basis of a number of criteria including readability, breadth, importance, accessibility and relevance. The decision of the judges is final. All authors will be notified of the judges' decision within two months of the submission deadline.



MV *Asterix* was launched at Davie Shipbuilding in Lévis, Quebec, on 16 October 2017. A converted container ship, *Asterix* will be leased by the Royal Canadian Navy to serve as the interim Auxiliary Oiler Replenishment vessel until the *Protecteur*-class Joint Support Ships are built. *Asterix* is seen here entering Halifax Harbour at the end of the maiden voyage.

*Credit: Chief Petty Officer 2<sup>nd</sup> Class Shawn M. Kent, Formation Imaging Services - Halifax*