



# CANADIAN NAVAL REVIEW

VOLUME 7, NUMBER 3 (FALL 2011)

**In the *Dreadnought's*  
Shadow**

**No Passport Needed**

**Canada's Post-Kandahar  
Military: Now What?**

**Comprehensive Undersea  
Domain Awareness:  
A Conceptual Model**

**Canada-US Shiprider  
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Generation of Border  
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# CANADIAN NAVAL REVIEW

VOLUME 7, NUMBER 3 (FALL 2011)

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HMCS *Montreal* participates in a search and rescue exercise off the coast of Greenland during *Operation Nanook 10*.

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# The Halifax Marine Research Institute: Linking Research and Resources

Halifax and the Maritime region in general have the critical elements to become a leading hub for marine science and marine technology. The region contains federal laboratories, universities and marine-based industries, as well as the East Coast home of the Royal Canadian Navy and the Canadian Coast Guard. Until now these institutions have worked largely in isolation from one another with no common agenda or plan for development. The potential of these combined resources is immense. It is these resources that hold one of the keys to improving the region's economic, scientific and social future. In doing so, there will be nation-wide benefits to Canada. The potential of the region is, in turn, linked to the state of the world's oceans. Despite their legal and regulatory borders, unlike countries, oceans have no physical borders. They flow into one another, creating important global interdependencies.

The backdrop for the importance of the Halifax Marine Research Institute (HMRI) at Dalhousie University is neatly summed up by certain economic statistics, in this case drawn from Nova Scotia. The living standard among Nova Scotians, measured by Gross Domestic Product (GDP) per capita, is only about 76% of the Canadian average – and Canada's GDP per capita is only about 84% of that of the United States.<sup>3</sup> Between 1999 and 2008, Nova Scotia's standard of living fell from 8<sup>th</sup> to 9<sup>th</sup> among Canadian provinces.<sup>1</sup> Statistics Canada prepared estimates of labour, capital and multi-factor productivity in the business sector for 10 provinces over the period of 1997 to 2007.<sup>2</sup> These estimates reveal that the annual growth rate of all three forms of productivity in Nova Scotia was much slower from 2000 to 2007 than it was during the late 1990s.

Productivity is generally considered to be an important element in the standard of living. It is often attributed to effort – in other words, how long and how hard people work. In fact, it is about efficiency and effectiveness, about how to make the most out of research and innovation, technology, training and producing the goods and services that are needed locally and globally. Productivity leads to competitive advantage and that, in turn, leads to higher standards of living. It is clear that the Maritime region needs to be mindful of its relatively poor productivity. New means of achieving more productive ends are imperative. This includes new ways of building partnerships among university scientists, federal government scientists and industries, and between them and, for example, the navy

and coast guard. The ships in Canada's fleets will need equipment that is at the cutting edge of technological development. Finding a place in the supply chain for the navy and coast guard – as well as in global supply chains – has real economic consequences that the Maritime region cannot afford to ignore.

In the case of ocean-related concerns in general, information sharing can lead to better regulatory frameworks, better marine management, better equipped naval and coastal forces, and better responses to changing environmental conditions. This can only happen if the government laboratories that are charged with creating regulatory frameworks, the military arm of the government that is responsible for safety and security, and the scientists who provide the information on which regulations and new response management are based work together. Furthermore, it means that physical scientists, engineers and social scientists need to work in a concerted fashion, spanning disciplinary boundaries. Universities are homes to many kinds of scientists, both in the physical and the social sciences. In this regard, they are an important complement to Canada's federal laboratories that are primarily staffed by physical scientists and engineers.

The regional economic and the national policy needs are striking but so are the region's assets. Oceans expertise abounds on the Atlantic coast of Canada. In Nova Scotia, alone, oceans-related activity accounts for \$5 billion in revenue and produces 60,000 jobs – 14% of the province's employment.<sup>4</sup> Nova Scotia has more ocean science and technology companies per capita than any other province or state in North America. *Defined by the Sea*, a document released in June 2011 by the province of Nova Scotia, notes that ocean technology companies are 5% of the claimants for 27% of the provincial research and development tax credits.<sup>5</sup> In addition, the revenues of these companies have doubled since 2003, with 2009 revenues at \$500 million.<sup>6</sup> The companies range in size from big to small. Some have their own research and development capacity and others rely on universities and federal laboratories for this.

More than 10% of the researchers in Atlantic Canada are ocean researchers. Dalhousie University, alone, has over 100 researchers spread across a variety of disciplines. Several of them are Canada Research Chairs and one holds the prestigious Canada Excellence Research Chair. Altogether Halifax is home to approximately 450 doctoral-level ocean researchers located in its universities





Halifax is a hub of marine institutions, including industries, universities, laboratories, the Royal Canadian Navy and the Canadian Coast Guard.

and five federal laboratories. This is the largest number of laboratories involved in one area of science in one city in Canada. They include: Department of Fisheries and Oceans Maritime Region; Defence Research and Development Canada (DRDC) Atlantic; Environment Canada - Atmospheric Science and Technology; National Research Council Canada - Institute for Marine Biosciences; and Natural Resources Canada-Geological Survey of Canada - Atlantic. Additional ocean-related federal laboratories exist in New Brunswick and Prince Edward Island as well. Two of these are administratively linked to the Halifax-area laboratories.

This powerful set of assets and the striking economic and social imperatives have led to the creation of HRMI, a collaborative marine research vehicle that will align and increase the institutional and industrial capacity in ways that will address regional, national and international challenges and opportunities. It is designed to forge connections by harnessing world-class science to commercial, military and public policy applications.

The science of HMRI will be relayed to and conducted in conjunction with federal laboratories, thereby helping to build Canada's policies, regulatory frameworks and response protocols. HMRI will also help in the commercialization of products and processes and lead to the formation of new companies. Already, certain existing ocean science and technology companies in the Maritimes are spin-off companies from local universities. More are expected to follow that same route.

HMRI's founding members and research partners include the five Halifax federal laboratories, seven universities and seven companies. These numbers are expanding as the institute sets up its operations following its launch in June 2011. In addition to the Halifax area federal laboratory research partners mentioned above, founding members include Acadia University, Cape Breton University, Dalhousie University, Nova Scotia Agricultural College, the University of New Brunswick, the University of Prince Edward Island, Amirix-Vemco, Irving Shipbuilding, Meocean,

Ocean Nutrition Canada, Satlantic and Ultra Electronics.

The idea for HMRI came from the Halifax Oceans Forum held in March 2009 in which government, university and industry leaders met. One of the most memorable moments of the forum was when John Risley, founder of Clearwater Fine Foods, addressed the crowd. His comments focused on the promise of the numerous new industries in Nova Scotia. He concluded by saying "[w]e have had many successes for which we are grateful but our greatest failure has not been working more together." This statement provided the impetus to identify new ways to work together across the Maritime region's industries, universities and federal laboratories. HMRI is the result.

Partnerships will not stop at the boundaries of the East Coast. National links are being created with Oceans Advance in St. John's, Newfoundland, the *Technopole maritime du Quebec* in Rimouski, Quebec, Arcticnet in Quebec City, and Ocean Network Canada in Victoria, British Columbia. International agreements have been signed with the Woods Hole Oceanographic Institute in the United States, the Institute for Marine Sciences in Germany, and the Sino-German Marine Research Centre in Qingdao, China. These links will grow and with them the capacity for research, innovation, economic development, policy-making, marine management and response mechanisms centred on oceans. 🍷

Martha Crago

Vice-President Research, Dalhousie University

#### Notes

1. Statistics Canada, CANSIM, tables 384-0013 and 051-0001, 2009.
2. Andrew Sharpe and Jean-Francois Arsenault, "New Estimates of Multi-factor Productivity Growth for the Canadian Provinces," *International Productivity Monitor*, No. 18 (Spring 2009), prepared for the Centre for the Study of Living Standards, available at [www.csls.ca/ipm/18/IPM-18-Sharpe-Arsenault.pdf](http://www.csls.ca/ipm/18/IPM-18-Sharpe-Arsenault.pdf).
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5. Province of Nova Scotia, *Defined by the Sea: Nova Scotia's Oceans Technology Sector Present and Future*, 2011.
6. *Ibid.*

# In the *Dreadnought's* Shadow: Comparing China's Rise with the Anglo-German Naval Arms Race

Sean Clark

Then there awoke in me the wish to build ships of my own like these someday, and when I was grown up to possess as fine a navy as the English. Kaiser Wilhelm II, June 1904.<sup>1</sup>

Today it is our turn to speak and their turn to listen. Chinese Diplomat Ling Qing, 1985.<sup>2</sup>

"I christen you *Dreadnought*." With that declaration and a shattered bottle of wine, King Edward of Britain let slip the last dry dock mooring of a magnificent new vessel. The 18,000-ton, 527 foot, steam turbine-powered, all-big-gun battleship then slid down the ramp and into the waters of Portsmouth harbour, already the pride of the Royal Navy (RN). The *Dreadnought* was a marvel of engineering, so revolutionary in design that it immediately consigned all of its contemporaries to obsolescence. The ship also served as a symbol. It was built as the consequence of a rivalry that had broken out between two countries which seemed destined more for friendship than enmity. Indeed, longstanding historical, economic and political ties could have been expected to keep Britain and Germany as allies. Their royal houses, for example, were tied by common blood; Kaiser Wilhelm II was one of Queen Victoria's many grandchildren. Yet as the 20<sup>th</sup> century progressed, tensions between the two states rose sharply. Germany's leap from also-ran to fully-industrialized great power unhinged the state of European strategic affairs. Many Germans chafed under Britain's privileged international position, feeling Germany's place in the world order poorly befitted its newfound economic stature. Meanwhile in Britain, few viewed fast-rising Germany as a welcome peer; many more saw it as a menacing challenger.

Although the Great War of 1914-18 had many causes, the crescendo of Anglo-German antagonism – reflected in the naval arms race of which the *Dreadnought* was a crucial salvo – played a significant part. This fact is worrisome for some observers of the modern-day

rise of China for they fear that history is repeating itself. Indeed, many see China's growth and behaviour as closely mirroring that of Wilhelmine Germany. Just as Germany sought to challenge Britain's hegemonic position in the years leading up to World War I, they feel that China aims "in the near term to replace the United States as the dominant power in East Asia and in the long term to challenge America's position as the dominant power in the world."<sup>3</sup> It is certainly an interesting analogy, and in many ways seems apt. Like Germany and Britain, the United States and China have good reason to be friends. They enjoy close trading ties, a common enthusiasm for basketball and capitalism, and even fought alongside one another in the Second World War. And yet like Germany and Britain, such goodwill has been undermined by the revival of old suspicions and the arrival of new ambitions. Perhaps, then, we are re-living the lead-up to 1914. What follows is an exploration of whether or not this is the case.

## *China's Tumultuous Rise*

After two centuries spent languishing in poverty, China has roared back to the front rank of world economies. Beginning with the cautious reforms of Deng Xiaoping



*"The most powerful battleship in the world" – the launch of HMS Dreadnought.*

Credit: Internet



in 1978, markets have been freed, property rights have been promulgated and profit has been made legal. With the vibrancy of capitalism unleashed, Chinese productivity has soared and entrepreneurialism flourished. A large, disciplined and low-cost workforce has made China attractive to overseas investors. Even more, the country's high rate of domestic saving has led to unprecedented capital accumulation. Indeed, at over \$2 trillion, China has already built up the world's largest financial reserves. More importantly, the product of these economic forces has been profound. Hundreds of millions of Chinese have been lifted out of poverty as China transformed from agrarian backwater to 'workshop of the world.'

The reverberations of China's economic expansion have been felt in many fields, but perhaps nowhere are the implications more profound than in the matter of national power. So-called 'realists' have long contended that economic strength underlays military capability. This notion finds agreement within Chinese strategic culture, where the expression "prosperous army and strong country" is commonly repeated. Indeed, Chinese defence spending has been buoyed by the country's dramatic economic growth. Noteworthy developments include the digging of 5,000 kilometres of tunnels – dubbed the "Underground Great Wall" – to keep China's strategic missile squadron safe in the event of a nuclear attack.<sup>4</sup> New fighters, ships and missiles have also been purchased, to say nothing of dramatic improvements in basic kit and training. Even more remarkable is that research in 'stealth' airplane technology has proceeded far enough to put a prototype in the air, and that aircraft carriers have been put on order by a navy now willing to travel further afield. As China's economy continues to grow, so too will military spending. One senior Chinese strategic advisor has suggested that China's high economic growth will, by 2020, enable military spending equal to that of the United States today.<sup>5</sup>

It is possible that such observations are overly dramatic. True, the country will develop new and sophisticated military capabilities – as rising powers usually do – but these need not upset the international system. Chinese scholar and Communist Party theorist Zheng Bijian has asserted that China would "not follow the path of Germany leading up to World War I or those of Germany and Japan leading up to World War II." Instead, it will "transcend the traditional ways for great powers to emerge" and "strive for peace, development, and cooperation with all countries of the world."<sup>6</sup> Such a pacific strategy is eminently plausible given that, unlike in the past, China is strong and its land borders are secure. Yet what if this assumption does not hold true? What if, like prewar Germany, China took little

comfort in its growing power and instead felt ever-greater worry from new threats and past injustices?

We need not travel far to uncover such sentiment. It is, for example, deeply discomfiting to the Communist Party leadership that so much of the Chinese economy depends on inputs from abroad. Never before has China had to worry about foreign energy supplies keeping the lights on and the factories humming. China also remembers that in the early 1800s, its role as regional hegemon was upset in dramatic fashion as it found itself brutally cast to the margins of a suddenly Eurocentric world. A century of humiliation ensued, a wrenching memory that lingers, ever feeding the conviction that China's status must one day be restored.



*People's Liberation Army vehicles on parade in Beijing. As China's economy continues to grow, so too will military spending.*

We see this today. Nationalist websites seethe with rage at every perceived slight from the West. In fact, common is the perception that the United States is "not just arrogant," but actively seeking "to prevent China from prospering and gaining its rightful place at the top of the world system."<sup>7</sup> Even China's Premier, Wen Jiabo, has accused the United States of "trying to preserve its status as the world's sole superpower, and [preventing] any country the chance to pose a challenge to it."<sup>8</sup> Worse, the Chinese leadership generally assumes that this tension with the United States will only increase as China becomes more powerful.

Already the rivalry between China and the United States has grown heated. The ongoing squabble over currency valuation is a case in point. While American leaders argue Beijing needs to let the yuan appreciate, China views the collapse of the dollar as a tactic used to undercut Chinese exports. These complaints are not idle grousing, for Beijing

has warned that it considers itself better placed to survive a tariff war than the United States. At sea, there have been a half dozen incidents in recent years where US naval surveillance vessels in the South China and Yellow Seas have been harassed by Chinese forces. Events like the forced landing of an American EP-3E Aries II aircraft in 2001 and the altercation involving the USS *Impeccable* in 2009 – to say nothing of the full-scale naval alert and carrier deployments during the Taiwan Strait crisis in 1995-96 – suggest that China's rise has been tumultuous. To gain a proper perspective of these events, however, we must look at the most obvious historical comparison: the Anglo-German arms race of 1897-1914.

### ***The Anglo-German Template***

Like China today, Imperial Germany's rise up the ranks of world powers was rooted in torrid industrialization. The German states that united at Versailles in 1871 went from rustic agriculturalists to an industrial colossus in just over a generation. The region had just 500 kilometres (km) of railway track in 1840, 30 years later the network had expanded to almost 20,000 km.<sup>9</sup> Heavy industry progressed as well, propelled in part by the discovery of synthetic fertilizers and innovations in the production of dyes. These laid the foundation for large-scale chemical industries. Similar expansion occurred in the metals, shipping, machine tools, electrical, optical, banking and insurance sectors. By 1870, large firms like Hoechst, Hapag, Siemens, Bayer, Man, Henschel and Krupp loomed large in the international marketplace, and eroded the market share of foreign competitors. In 1870, Germany produced 169,000 tonnes of steel compared to England's 286,000. By 1910, Germany was out-producing England by 13,698,000 tonnes to 6,374,000.<sup>10</sup> Table 1 illustrates how the British economy was being squeezed by Germany's growing industrial prowess. The reversal of economic power caused great consternation in Britain. This was reflected in alarmist tracts such as E.E. Williams' book



A crew member on a Chinese trawler uses a grapple hook in an apparent attempt to snag the towed acoustic array of the USNS *Impeccable*.

*Made in Germany*. Published in 1896, this book argued that "[o]n all hands England's industrial supremacy is tottering to its fall, and this result is largely German work."<sup>11</sup> While the book overstates the degree of Britain's economic decline, its encapsulation of the prevailing sentiment in Britain certainly does not.

Alongside growth in German economic power came new strength in armaments. Gifted generalship, railways and Krupp guns proved particularly useful to German empire-building efforts. These efforts, however, began to worry Germany's rivals. Benjamin Disraeli, leader of the British Opposition and later Prime Minister, immediately recognized that Germany and Britain would come into conflict over this expansion. The Kaiser certainly did his best to bring this to fruition, advocating that Germany not only add to the few colonies it had acquired in the mid-1880s, but also build a navy of the first rank to go with them. In 1896, Korvettenkapitän Georg von Müller summarized this *Weltpolitik* strategy as attaining the maritime capability needed to break "Britain's domination of the world and thus make available the necessary colonial property for the central European states which

**Table 1. Indicators of Relative British and German Industrial Strength (1880 and 1913)**

|   | 1880<br>Britain | Germany | 1913<br>Britain | Germany |
|---|-----------------|---------|-----------------|---------|
| Relative share of world manufacturing (%)               | 22.9            | 8.5     | 13.6            | 14.8    |
| Total industrial potential<br>(Britain in 1900 = 100)   | 73.3            | 27.4    | 127.2           | 137.7   |
| Per capita industrialization<br>(Britain in 1900 = 100) | 87.0            | 25.0    | 115.0           | 85.0    |

Source: Niall Ferguson, *The Pity of War: Explaining World War I* (New York: Basic Books, 1998), p. 35.



need to expand.”<sup>12</sup> Lacking a strong maritime deterrent, the thinking went, the RN could simply shut off German access to the North Sea. This would cut maritime access to world markets with devastating consequences. For all these reasons the Kaiser was convinced that “our future lies upon the water.”<sup>13</sup>

It was towards the fulfillment of this ambition that the Germans used their tremendous wealth to build an impressive new fleet. From the first Navy Law of 1898 the German *Kaiserliche Marine* jumped from the world’s sixth largest to its second. Germany’s naval construction budget ballooned from £3.2 million (m) in 1900 to £13.1 m in 1911.<sup>14</sup> By the eve of war, the High Seas Fleet consisted of 13 *Dreadnought*-type battleships, 16 older ones and five battlecruisers.<sup>15</sup> Although still numerically inferior – Germany’s access to the North Sea was blocked by 20 British *Dreadnoughts* and six battlecruisers – the German ships were technically as good if not better than the RN’s. More importantly, so powerful was this new fleet that the Admiralty had to move virtually all of its ships from overseas stations to Britain’s home waters.

The British responded to the German naval challenge with more than just the redeployment of forces. The RN identified Germany as Britain’s foremost potential enemy almost as soon as construction of the High Seas Fleet began. By 1902 the First Lord of the Admiralty, the Earl of Selborne, had become so unsettled by Germany’s building

that he was “convinced that the new German Navy is being built up from the point of view of a war with us.”<sup>16</sup> Even if the intent was falsely appreciated, the potential danger certainly was not. As Sir Edward Grey noted to King Edward VII in July 1908, “[i]f the German fleet ever becomes superior to ours, the German army can conquer the country.” But, he pointed out, “[t]here is no similar risk of this kind for Germany; for however superior our fleet [is], no naval victory could bring us any nearer to Berlin.”<sup>17</sup>

The British were convinced that the German challenge had to be forcefully dealt with. In 1906 Britain launched the HMS *Dreadnought* in response. Germany’s rejoinder was to build its own version, but this only incensed the British even more. “We want eight and we won’t wait,” became the popular slogan in circles both political and public.<sup>18</sup> In Winston Churchill’s telling, “[t]he Admiralty had demanded six ships: the economists offered four: and we finally compromised on eight.”<sup>19</sup> The government was decidedly amenable – by 1909, eight of the battleships could be found on the stocks simultaneously.

### Conclusions

Both cases have shown how economic growth and its concomitant expansion of ambitions can cause tremendous tension between established and aspirant powers. The stresses become particularly acute as burgeoning wealth is translated into military power. The similarity



Credit: US Library of Congress

Ordered in 1907, SMS *Von der Tann* was Germany’s first major turbine-powered warship.



Credit: US Department of Defense

*Chinese sailors stand at attention during a visit to Beijing by then-Secretary of Defense Donald Rumsfeld.*

between the cases gives reason for caution. Given how tragically the pressures of the Anglo-German arms race were resolved, there is a good reason to fear a repeat with the United States and China. There are two chief reasons, however, to consider the current path different than that which led to calamity in 1914.

The first is that while the Anglo-German and Sino-American cases display many of the same hyper-nationalist tendencies, they are different. No doubt the hard-liners who riot against Japanese footballers and clamour for a military solution for 'rebellious' Taiwan would find common cause with the prewar Pan-German league. However, China's foreign relations do not yet match the climate of suspicion and insecurity that characterized prewar Europe. In Europe there existed "a widespread belief that war was not only inevitable but desirable."<sup>20</sup> Echoing a common sentiment, Friedrich von Bernhardi claimed that "[w]ar is a biological necessity of the first importance, a regulative element in the life of mankind which cannot be dispensed with.... But it is not only a biological law but a moral obligation, and, as such, an indispensable factor in civilization."<sup>21</sup> That such commitment would entail sacrifice was taken as given, if not eagerly embraced. An anonymous German author professed in January 1913 that "[i]t will be more beautiful and wonderful to live for ever among the heroes on war memorials in a church than to die an empty death in bed, nameless.... Let that be heaven for young Germany."<sup>22</sup> Modern nationalist Chinese websites like Anti-CNN.

com, which focus on refuting 'untrue reports' about Beijing's heavy-handedness by the Western media seem remarkably tame in comparison.

The second asymmetry is that while the United States has not – at present – perceived China's rise as a direct threat to its national survival, Britain saw the German challenge in a very different light. Almost immediately, London perceived a threat to the sea lines that kept Britain fed and dominant in international trade. This challenge could not be taken idly, for the Empire was considered an essential part of Britain and its prosperity, and its preservation was seen as a matter of life and death. As Sir Eyre Crowe noted in 1907, "[a] German maritime supremacy must be acknowledged to be incompatible with the existence of the British Empire."<sup>23</sup> How prepared Britain was to fight for it was made clear in 1911 with the warning issued by David Lloyd George, Chancellor of the Exchequer and the man viewed as the least belligerent member of the British Cabinet, when he said,

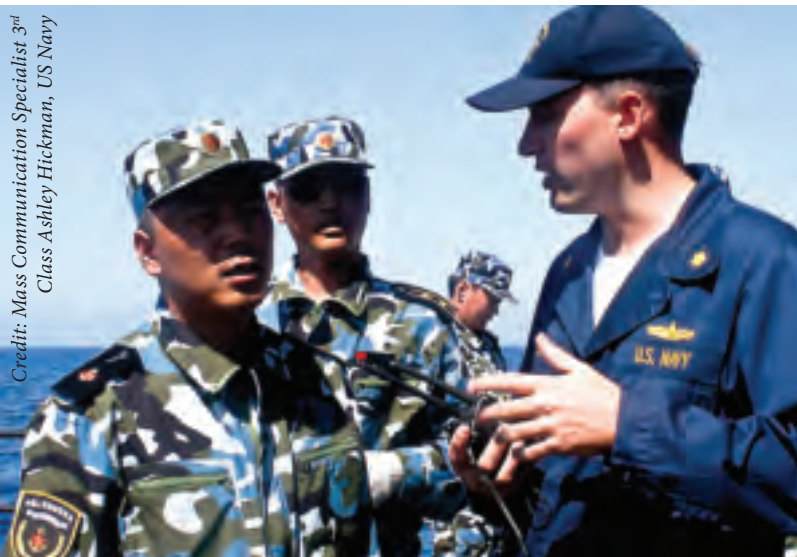
If a situation were to be forced upon us where peace could only be preserved by the surrender of the great and beneficent position Britain has won by centuries of heroism and achievement, by allowing Britain to be treated, where her interest were vitally affected, as if she were of no account in the Cabinet of Nations, then I say emphatically that peace at that price would be a humiliation intolerable for a great country like ours to endure.<sup>24</sup>



Such hostility did not sit well with Germany, particularly as the British drifted towards alliance with the French in 1904 and, to a lesser degree, with Russia in 1907. Berlin interpreted these moves as a tightening noose around Germany. Chancellor Bernhard Ernst von Bülow spoke of these fears in the Reichstag on 14 November 1906:

A policy aiming at the encirclement of Germany and seeking to form a ring of Powers in order to isolate and paralyze it would be disastrous to the peace of Europe. The forming of such a ring would not be possible without exerting some pressure. Pressure provokes counter-pressure. And out of pressure and counter-pressure finally explosions may arise.<sup>25</sup>

Germany had begun to fear for its own survival as well.



An American sailor speaks with a Chinese interpreter during a search and rescue exercise. China and the United States do not eye each other with the same fear that Germany and Britain did during the naval arms race.

It is to our good fortune that such talk does not colour discussions regarding China today. Despite the country's clear territorial ambitions, including claims to Taiwan and the Spratley Islands, no reasonable American leader suggests that China threatens the survival of the United States in the same manner as Germany's navy did prewar Britain. The absence of popular calls of 'we want eight and won't wait' in budget debates over the F-22 and F-35 fighter programs is evidence of this fact. Nor has fear of foreign invasion swept Beijing like the panic that gripped Berlin in 1904-5, where rumours swirled of a pre-emptive British assault. And neither Chinese nor American media echo the extremist sentiment of the *Daily Mail* which warned in 1909 that "Germany is deliberately preparing to destroy the British Empire.... We are all to be drilled and schooled and uniformed and taxed by Prussian officials, and the Emperor William II is to rule us with a rod of iron."<sup>26</sup>

True, China's growing power and claims for greater prestige and prominence have brought tension to the international system; yet China and the United States do not eye each other with the same fear that Germany and Britain did during the naval arms race. Given what transpired in the fateful summer of 1914, any prudent policy-maker must work to ensure that does not change. 🇺🇸

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# No Passport Needed

Amitai Etzioni\*

What do Al Qaeda and the US Department of Homeland Security (DHS) have in common? They obsess about airlines and ignore the fact that US shorelines – some 95,000 miles (152,888 kilometres) – are wide open. Al Qaeda keeps trying to bring down more airplanes, but it also knows that boats can be used to inflict major, headline-grabbing damage. Its agents blew a sizable hole in USS *Cole* in Aden harbour, Yemen, in October 2000. Other terrorists used boats for their dramatic attacks on Mumbai in November 2008. And while there is a limit to what a terrorist can carry when boarding an airplane, small vessels (defined as any watercraft of less than 300 gross tons and used for recreational or commercial purposes) can readily accommodate a terrorist SWAT team, a sizable nuclear bomb and have room to spare. Moreover, many boats have easy access to critical infrastructure, such as nuclear power plants, oil tankers and refineries.

DHS may well be avoiding the subject because it knows that there are some 17 million small vessels that operate in US waters (including commercial fishing vessels, recreational boats and yachts, and towing vessels).<sup>1</sup> Unlike major airports and train stations, where most of the people are funneled through small entry- and exit-points at specific times (arrivals and departures), small boats may land anywhere at any time and have practically the entire space to themselves while they are on the water. They travel great distances, visit other countries, take on passengers or loads, and meet up with boats of other countries. When they return – or arrive for the first time – to the United States, they go unchecked. When I write ‘unchecked,’ you may think that this is just a turn of phrase. After all, it is hard to believe that while the 50,000 Transportation Security Administration agents<sup>2</sup> (who are DHS employees) are taking infants out of their strollers to check for bombs hidden in their diapers, insisting that senior citizens get out of their wheelchairs and ensuring that the volume of carry-on liquids is within security parameters and the liquids are not flammable, they are letting those who sail yachts, motorboats, houseboats and fishing vessels unload persons and goods and come and go without having to present a passport or even a driver’s license or pass *any* checkpoint. And their loads are not examined.

Obviously, DHS is aware of the problem. It does not mince words about the size of the challenge or the fact that the department cannot get its sizable arms around it. It stated in 2008:



*The security screening area at Denver International Airport. While the Department of Homeland Security directs considerable attention to air travel, coastal security is largely neglected.*

The large numbers of small vessels and the dearth of information regarding the user, owner, or operating patterns of those vessels make it extremely difficult to precisely identify the population and distinguish legitimate users from those with the intent to do harm. When evaluating and addressing the risks, law enforcement agencies are faced with sorting through thousands of small vessels, which can be closely intermingled with large commercial cargo vessels, cruise vessels, military warships, and critical infrastructure, at or near hundreds of seaports, along thousands of miles of U.S. coastline and navigable waterways, or originating from foreign waters.<sup>3</sup>

DHS did not merely declare ‘Houston, we have a problem,’ it did what I learned to do during my year in the White House. When we had no clue how to proceed, we did just as DHS has done about small vessel safety: called for more studies, for ‘multi-layered’ and ‘coordinated’ strategies, and we convened meetings to examine whatever we could not handle. True to form, the administration of President George W. Bush decided to turn to the private sector for succour. It held five regional ‘summits’ with the private sector in which small vessel security was explored.

## ***A Communitarian Approach***

The meetings, surprisingly, yielded an approach that warms the cockles of the heart of a communitarian like myself: a neighbourhood watch program called America’s



Waterway Watch. Its mainstay is a 24-hour national hotline established by the US Coast Guard on 10 February 2005. DHS hopes that recreational boaters and the public will call the hotline to report suspicious activity on the water. I write ‘hopes’ because DHS has done little to promote the program. According to the DHS Office of Inspector General, it is likely that more than 90% of registered boaters do not even know that the program exists.<sup>4</sup>

DHS also promotes the Pleasure Boat Reporting System established by the *Tariff Act* of 1930, which requires that all small vessel operators who arrive from foreign ports telephone the local US Customs and Border Patrol office (CBP) upon arrival. Some do not, and those who do may have already unloaded their goods and are not required to show any documents. And terrorists, one can safely assume, are unlikely to comply.

Similar neighbourhood watch programs exist in Canada. Many Royal Canadian Mounted Police (RCMP) branches have developed coastal watch programs, encouraging citizens to report to their local detachments any suspicious activities on Canadian waterways, including vessels without identifying markings or navigation lights, overly sophisticated equipment, or offloading of cargo to trucks ashore.<sup>5</sup> How successful these programs are remains unclear, and resources available to them are limited. For example, only two full-time coordinators and 13 officers overall were dedicated to marine security on Nova Scotia’s 7,300 km coastline as of 2003.<sup>6</sup> Furthermore, while the RCMP is the chief agency mandated with marine security, it relies largely on a convoluted relationship with the Canadian Coast Guard (CCG) and the Canadian Navy for on-water capabilities, including delivery of personnel when boarding vessels. The CCG’s lack of an enforcement mandate on Canada’s coasts and waterways surprises many, and remains a point of contention with Canada’s Standing Senate Committee on National Security and Defence.<sup>7</sup> Despite this, any changes in the organizational relationships have not been forthcoming. Therefore, coastal policing in Canada largely depends upon volunteer-based initiatives of uncertain effectiveness.

I could write a sizable book about neighbourhood watches and asking citizens to volunteer to do good in general, and to enhance homeland security in particular – but I won’t. Instead I’ll make a few comments. Western society is suffering from atomization, from the loss of communal bonds which leaves individuals isolated, lonely and without the informal webs of social controls that help make us better than we would otherwise be. One of the most effective ways to shore up communities is to involve members in meaningful missions. Many tasks other states leave to their government, for which they pay with high



*A US Coast Guard helicopter manoeuvres near a speedboat during a training exercise. Many small vessels – and their cargos – enter and exit the United States without inspection.*

taxes, Americans undertake without compensation – and have a good time serving. Thus, 72% of all firefighting in the United States as of 2008 is carried out by volunteers.<sup>8</sup> Likewise, in Canada, approximately 127,000 firefighters are volunteers, saving the province of Ontario alone an estimated \$1 billion annually in staffing costs.<sup>9</sup> And there are some 600,000 Americans who are trained in advanced first aid so that they can serve as Emergency Medical Service volunteers who, on a moment’s notice, will dash to help people involved in a car crash.<sup>10</sup> Why not enroll these good people in discharging the most important mission of any state – providing security?

One reason is that Americans are extremely allergic to the notion that they should act as eyes and ears of the government – that they should spy on their neighbours. This is not some sociological hypothesis. The United States tried to so mobilize citizens – and at a time when Americans were much hotter under the collar about 9/11 than they have been recently. In July 2002, US Attorney-General John Ashcroft unveiled a program called the Terrorism Information and Prevention System (TIPS), which asked Americans to keep an eye on each other and report suspicious activities, with special appeals to mail carriers and meter readers. The program encountered such a firestorm of opposition, from many different parts of society and the political spectrum – including

the libertarian publication *Reason*,<sup>11</sup> the *Boston Globe* editorial page,<sup>12</sup> Congressman Dick Armey (R-TX) and Senator Patrick Leahy (D-VT) – that Congress rushed to pass a bill prohibiting implementation of the program in November 2002.<sup>13</sup> The only reason I can see that the Waterway Watch program has not elicited a similar response is that next to nobody has heard about it.

In Canada, public willingness to engage in volunteer-based security initiatives is much less tempestuous. In some instances, Canadian citizens have banded together to aid authorities. Thus, for example, following the riots in Vancouver in June 2011, almost 20,000 people mobilized through social media within 12 hours to assist police in identifying rioters and looters, and to clean up the city.<sup>14</sup> While Americans have fiercely opposed initiatives like TIPS, any opposition in Canada to programs like the RCMP's coastal watch seems mute. Still, as noted above, it is unclear how successful such volunteer-based initiatives have been in the realm of marine security.

I believe that there is room for citizen homeland security volunteers, and the shorelines might be a good place to engage them. However, several issues must first be sorted out. Can Americans and Canadians learn to accept that acting as the eyes and ears of the government is a public service? Can they be protected when they come forward? Can we find a way to bridge the differences among local, state and federal agencies involved? And can political leaders recapture the call to service, before there is another major attack?

## Key Questions

In the United States, the issues at hand have been dealt with in a pattern all too familiar to us from our courts in which we rely on an adversarial system to form a judgment. Thus, we assume that if each side puts its case in a one-sided way, however biased, the clash between these conflicting presentations will allow the truth to appear. No wonder our politicians, many trained as lawyers, follow the same pattern when they engage in policy formation and law-making. Public dialogue often takes the same pattern. Thus, the American Civil Liberties Union (ACLU) (and its Canadian equivalent too, I suspect) and other civil libertarians see in new security measures the end of freedom, the death of privacy, the shredding of the constitution. And security advocates consider such criticisms as leaving the country vulnerable to terrorist attacks, and aiding and abetting the enemy.

Lost in these adversarial contortions is, first of all, the fact that rights are not cast in stone and have been recalibrated throughout history as technological and social conditions changed. Strong advocates of rights tend to imply that rights have clear and immutable definition, and for good reason: if rights are cast in stone, any changes entail breaking them. The reality is that rights have been redefined and modified throughout their history. Thus, the right to free speech/expression, embodied in the 1<sup>st</sup> Amendment of the US Bill of Rights and Section 2 of the Canadian *Charter of Rights*, did not begin to gain its present understanding until the 1920s in the United States,



RCMP and Canadian Coast Guard officers cooperate to board and inspect a sailboat during an exercise in 2005.



and even later in Canada. Privacy is not mentioned in the US Constitution and its Bill of Rights, or the Canadian *Charter*. It was forged out of a line of court cases throughout the 20<sup>th</sup> century. The Universal Declaration of Human Rights, now often cited as semi-sacrosanct, was issued by the United Nations in 1948. Not only were numerous new rights minted (e.g., of women and minorities), but some were scaled back (e.g., the rights of those charged with treason). Other rights are constantly recalibrated. Miranda rights in the United States were not established until 1966, and since then there has been a tug-of-war about their expansion and retraction, particularly with regard to terrorism suspects.

So we must ask if another such recalibration is called for. For instance, in the days when people had one phone, courts authorized wiretapping of one particular phone number. However, given that these days people have many different phones, the *Patriot Act* changed the specifications of warrants regarding particularity from one instrument to one person. This seems reasonable. (Remember that both the 4<sup>th</sup> Amendment and Section 8 of the *Charter* do not state that there shall be no search and seizure, but only that there shall be no *unreasonable* search and seizure – and what is reasonable changes as technology and other conditions change.)

Next we must ask which new requirements boaters should be expected to honour without unduly intruding on their freedom of travel, and whether these will significantly enhance security. Benjamin Franklin is often quoted as having stated, “[t]hose who would sacrifice liberty for security deserve neither.” Actually he stated, “[t]hose who would give up *essential* liberty to purchase a *little* temporary safety deserve neither liberty nor safety” (emphasis added).<sup>15</sup> That is, we must learn to accept that carefully limited recalibration of rights for important security gains are legitimate and very much a part of American (and Canadian) constitutional history.

Even more challenging is the call for sacrifices for the common good. When Barack Obama was running for office, he chastised President Bush for not asking Americans to make sacrifices after 9/11 – beyond asking them to go shopping. However, since President Obama has taken office, he has also been rather reluctant to ask Americans to put their shoulders to the wheel. If security requires that boaters watch for suspicious activities, we will have to reconsider our deeply ingrained precepts about privacy and surveillance, about what the right to be let alone entails. It is a challenge the US government so far has not dared to pose to the American people, and instead has chosen to sort out these issues in narrow, ad hoc ways – trying to define Miranda one day and to expand the



In the days following the June 2011 Vancouver riots, Canadian citizens utilized social media to aid authorities by identifying looters and rioters.

possibility for more internet surveillance without court orders the next day. No wonder it has not gotten around to small vessels.

### ***What Might Be Done?***

Meanwhile, there is no way on earth to hire enough border patrol agents to secure US shorelines, which are 10 times longer than US land borders with Mexico and Canada combined. At the same time, it makes no sense to control air passage tightly and leave the shorelines wide open. So what might be done? For starters, the United States could treat small vessels like cars. It could rule that every boat owner must register his/her boat and get a tag to be displayed on it like a license plate on a car. Better yet, it could include a transponder, a locator device, that would help identify the boat as well as help locate it, if disaster strikes. After all, this is a service many cellphone companies now provide, by allowing authorities and others to find out, using GPS, where a given caller is. (By the way, this could be a new source of revenue for the states, which they dearly need.) The owners would be made responsible for any use to which their boat is put. Thus if they rent it out or let someone else use it, they would know that they are accountable for what and whom is carried into North America. The US Coast Guard, acting like traffic cops, could conduct random checks of boats, especially those that lack a transponder. Alert citizens could supplement such border enforcement, especially if the problems noted earlier are sorted out, rather than shouldering this burden all by themselves.

Additional restructuring might be needed in Canada where, even if vigilant citizens phone in their tips, the RCMP's limited marine capabilities and the CCG's lack of an enforcement mandate may impede responses. As



Coast Guard Auxiliarist, Arnie Heath, on the lookout during a Waterway Watch security patrol at Port Hueneme, CA.

the Standing Senate Committee on National Security and Defence observed:

Resources that *could* be used to defend our country remain underutilized and the resources that *are* used to defend our country remain inappropriately utilized. The Coast Guard – which really could play a useful role in guarding coasts if it were properly outfitted and given a constabulary mandate – instead spends 99 percent of its time doing other things.<sup>16</sup>

Therefore, either a stronger on-the-water presence for the RCMP or a constabulary role for the CCG would endow Canada with the capabilities and capacities to conduct random traffic stops on the Canadian side of the border. Such changes could also ensure that Canadian marine security authorities effectively respond to alarms raised by keen Canadian volunteer coast-watchers.

The situation at hand highlights a major point that is often ignored by the simplistic exhortations to civic duty and volunteerism, and facile notions that civil society could replace ‘Big Government.’ It is typically not a question of citizens taking over missions but rather supplementing, backing up and augmenting government efforts. In some cases, citizens may carry a great part of the burden but still could not do so without the government.

Thus the work of charities and voluntary associations, from United Appeal to the Red Cross, depends in part on government. Governments indirectly subsidize their work by allowing donations to be tax deductible and directly by covering an important part of their budgets, and by providing security, for instance, when the volunteers rush into places like Haiti. The EMTs play an important role, and one cannot but admire the willingness of volunteers to expose themselves to the blood and gore of the traumas

they encounter. However, they mainly supplement the work of ambulance crews and emergency room teams.

Once we stop unnecessarily romanticizing volunteerism, we can see more clearly what must be done. Citizens have a role to play. Surely they could be encouraged to lock their boats better so there are fewer opportunities for criminals and terrorists to hotwire them. And they could act as border patrol deputies, but only if properly trained, supervised and in cooperation with security forces such as the Coast Guard, Border Patrol, or RCMP. 🍷

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- \* The author would like to thank Matt Gillis of the Centre for Foreign Policy Studies at Dalhousie University for his excellent work adding some details about Canadian programs.
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# Canada's Post-Kandahar Military: Now What?\*

John Thompson



Credit: MCpl Dan Shouinard, Mission Transition Task Force

*Mission Transition Task Force Commander Brigadier-General Charles Lamarre and his command team board a CH-147 Chinook helicopter to conduct a flyover of Kandahar Province in July 2011.*

## **Introduction**

Canadians tend to think of themselves as an unmilitary people. This is why we forget the long British-French struggle, the Royal Navy's need for naval bases, the American Revolution, two armed revolts, Fenian terrorism and the American Civil War, all of which made significant contributions to the creation of Canada. Canada's unmilitary self-image also conflicts with the sterling performance of our armed forces in both World Wars and Korea.

In November 1918, the hard-fighting Canadian Corps was undoubtedly the most elite formation on the Western Front. The next year we couldn't disband it fast enough. In 1945, we dismantled the tough 1<sup>st</sup> Canadian Army with equal speed, also shedding experienced air force squadrons and naval ships as we did so. Admittedly, we wanted everybody home but we could have kept a skeleton framework for the future.

Canadian troops have been in Afghanistan since 2001 but stepped up to the plate to accept assignment in Kandahar in 2006, knowing it was one of the strongest centres of the Taliban in the country. While Canadians paid attention to the army in Afghanistan, the navy had quietly turned into a global presence – sailing into troubled waters in places where it had never been before to fight smuggling and piracy, and support Canadian interests.

Now that the combat mission in Afghanistan is over, will Canada go back to neglecting its armed forces?

## ***The Canadian Military in Afghanistan***

The first Canadian soldiers in Afghanistan were members of Joint Task Force 2 (JTF 2), who arrived in December 2001 for the hunt for members of al Qaeda and the Taliban. They earned a Presidential Unit Citation from the United States for their work. They were joined in January 2002 by a battle group based on the 3<sup>rd</sup> Battalion of the Princess Patricia's Canadian Light Infantry for more conventional operations against the enemy.

After that, we left until the Americans started looking for contributions for the invasion of Iraq. Instead of participating in that unpopular mission, we expanded our Afghan contribution to 1,900 troops and went to Kabul as a part of the International Security Assistance Force (ISAF). This was a combination of guard duty and infrastructure development. The Americans went into Iraq but were still doing most of the combat operations in Afghanistan – indeed, the United States has always undertaken the majority of combat work there.

By 2005, the United States was pleading for somebody to help carry the freight and Prime Minister Paul Martin pledged that Canada would increase its contribution and return to Kandahar to help suppress the Taliban. In early

2006, a 2,300 strong Canadian contingent moved in, just in time for a major Taliban offensive. The next three years saw much fighting.

While the Taliban have proven as tenacious as a cockroach infestation, their major concentrations have been stamped hard. They remain capable, however, of surging again if left untended. In early years Canadian operations involved working in difficult areas and in recent years operations have had a similarly dangerous focus on protecting the provincial capital. From most accounts, our soldiers have conducted themselves very well.

Prime Minister Stephen Harper extended Canada's combat commitment to 2011, but it is now over. Canada is still committed to providing 950 personnel until 2014 to assist in training Afghan police and military. In almost 10 years in Afghanistan, the Canadian military has lost 157 dead (and five civilians) plus 1,869 wounded. Canada has experienced the highest proportional casualties of any ISAF/NATO contingent and the third highest level of casualties over all, but a larger portion of the contingent was devoted to combat operations.

As an aside, I have been somewhat involved with my old reserve regiment and I've been astounded at the changes between my service of 30 years ago and the unit today. Almost all of the NCOs and officers have campaign service medals (these were great rarities 30 years past). As a one-time reconnaissance troop leader, it was interesting to sit with three contemporary ones, all of whom have been in combat and slain Taliban (although invariably from afar).

This long deployment has seeded the army with blooded, experienced veterans who might be needed in the future. In a similar vein, the navy has picked up a lot of practical experience in recent years. Sailors can only learn seamanship at sea, and being at sea also helps to learn little things – like what a submarine sounds like in shallow water, the radar signatures associated with missiles, or how to keep one's game face on while pointing a shotgun at a pirate off the Horn of Africa.

Alas, most Canadians place little value on these experiences and skills and often seem embarrassed to learn that they may be necessary.

### ***The Usual Way to Treat the Armed Forces***

The usual Canadian inclination after a war is to dismantle what we have assembled and let the regulars retreat back into their isolated shells on remote bases, while the reserves go back to 'Saturday Night Soldiering' with few resources and scanty equipment. The ships are laid up and crews that have accumulated exceptional experience are sent on their ways. Then, next time we need them, we



*Corporal. Sebastien Gratton from Bulldog (Bravo) Company, 1<sup>st</sup> Battalion, Royal 22<sup>e</sup> Régiment Battle Group, provides security while patrols search for caches of weapons in Nakhonay during Operation Hamaghe Shay.*

re-assemble an army and the fleet and trust there has been enough retained corporate memory to function properly. This won't do anymore.

In the nervous peace of the Cold War from 1953 to 1991, the Canadian Army maintained a brigade group in Germany and practiced with what it had in Canada – with time out for occasional peacekeeping details elsewhere. We got used to that and started trimming the military's resources, generally replacing five completely obsolete items (fighter planes, trucks, etc.) with two second-rate new ones, and letting the regiments and battalions shrink.

The navy came out of the Second World War with cruisers and an aircraft carrier. These didn't last. Instead, decade by decade, the number of ships in commission shrank and vessels usually stayed in service for longer than was wise, considering the cold and rough home waters.

The military tried to retain its hardest lessons. Peacekeeping was good for carrying on staff training and keeping logistical skills sharp but other lessons learned in the Second World War were transmitted less efficiently to new soldiers and sailors. Every year there was less fuel, less ammunition, less money (particularly for reserves) and less training time. What there was *more* of every year were new regulations, more equipment sidelined for repairs, more staff-work and nonsensical new requirements mandated by the political notion of the day.

Things got worse with the ebb of the Soviet threat in the late 1980s – at least the possibility of confronting the 1<sup>st</sup> Guards Tank or 3<sup>rd</sup> Shock Armies justified some readiness on the army's part. The end of the Soviet Union meant that the best employment for the Canadian military would be 'peacekeeping,' never mind that most advocates of peacekeeping had no notion of what could be involved.



Meanwhile, the public was paying no attention to the Russian submarines nosing into Canadian waters, nor much to the occasional assistance the navy has provided to the Canadian Coast Guard to help rescue of crews off sinking freighters or the retrieved yachters and fishermen. The limelight seldom wanders into the great gray seas where the navy and coast guard work. The guts and seamanship it takes to achieve a rescue in the North Atlantic is really not understood.

The Canadian public bought into a myth of peacekeeping as a Canadian military tradition. Best of all, peacekeepers didn't need new artillery, new tanks and new helicopters for Canadian frigates. Peacekeeping involved being Boy Scouts with rifles and was safe and morally superior. So the Canadian Army didn't update its field guns and didn't get new tanks and the Canadian Navy didn't get new helicopters to go with its frigates. Instead the Canadian Forces made do with the platforms it received in the 1960s and modernized them as much as tight budgets and weary old frames could take.

and use intimidation to prevent bloodshed. This was a long and difficult standoff, but further bloodshed was prevented. But note that we don't have ready brigade groups of fully equipped disciplined soldiers anywhere in Canada any more. The average standards of training have fallen considerably since 1990 as most resources were spent honing the next contingent for Bosnia/Croatia or Afghanistan.

1990/91: The Gulf War: We sent three hastily retrofitted aging warships, two squadrons of CF-18s and a field hospital to the Middle East after Iraq invaded Kuwait in August 1990. The CF-18s conducted 56 bombing missions and shot up an Iraqi warship. Less glamorously, the navy did the lion's share of the searches of sea traffic heading into the Persian Gulf in the months before the war began. But in order to be prepared for the mission, we stripped anti-aircraft guns out of a museum to beef up the warships bound for the Persian Gulf in the autumn of 1990. As well, the British Armoured Division that went into Iraq was short one of its three manoeuvre brigades,



Credit: Department of National Defence

*The cruiser HMCS Quebec was a victim of fleet reductions following the end of the Second World War.*

### ***Can We Learn this Time?***

In 1991 the Soviet Union collapsed and the public's notion for the military was for peacekeeping, peacekeeping and more peacekeeping. As so often happens, reality is quite distinct from expectation. Here are a few examples of what the Canadian Forces have done in the post-Cold War years (note that I have left out many of the humanitarian operations undertaken outside Canada, such as Haiti 2010). These are not traditional peacekeeping operations, despite what Canadians think of their armed forces.

1990: Oka Crisis: An entire brigade group was called in to muscle the Mohawk Warriors away from the barricades

and had apparently hoped that Ottawa would send the Mechanized Canadian Brigade Group to make up for this shortfall. Canada had no other brigade-sized formations that were equipped with tanks and with a high readiness state. But Ottawa declined to send the brigade – the word in the CF was that Ottawa wanted to be involved without the expense and risk of ground combat.

1992-1995: Wars in Croatia and Bosnia. At first meant to establish conditions for peace talks and set up protected zones, this complex mission required a Canadian battle group which was made up of regular army units which were heavily supplemented with reserves. The United Nations



*HMCS Terra Nova's Harpoon missile launchers were installed hastily before deployment to the Persian Gulf.*

Protection Force (UNPROFOR) mission involved a lot of exposure to combat. Canadian troops were sniped at, shelled and were sometimes involved in major engagements – such as the battle of the Medak Pocket. Unfortunately, shortages of body armour and new helmets meant that rotations had to pass off their gear to the incoming troops still warm – sometimes literally.

It took the Canadian public a long time to realize that our 'peacekeepers' in the former Yugoslavia were making a lot of use of their combat skills. In the end, after five failed peace plans and a failing sixth one, it took air strikes and the muscular NATO-led Implementation Force (IFOR) to bring the belligerents to heel and then the Stabilization Force (SFOR) to keep them that way.

1992-1993: Somalia. The Airborne Regiment (which had acquitted itself very well in previous missions, such as Cyprus in 1974) went in as part of an effort to regain stability in Somalia. The investigation into the actions of this regiment in Somalia, and its eventual disbanding, was much publicized, but critics of the regiment don't seem to have looked too much at the behaviour of other contingents in the operation; and the Somalia Inquiry was stripped of funding before it became too comprehensive and went too far up the chain of command in its analysis. Nor is it remembered that non-government organizations and aid groups looked to the Airborne Regiment as the positive example in Somalia of how to deliver aid without getting into too many firefights.

1998: The Ice Storm. This was not a political crisis but rather an operation to deal with a massive ice storm that cut off the power and roads to much of Quebec and Ontario. Some communities were without power for weeks. This

resulted in a deployment of Canadian troops to aid civil authorities and served as a reminder of their utility during domestic emergencies (which occur almost every year). What has been almost completely forgotten is that stores of winter equipment, tents and the inventory of trucks and radios had been much diminished. There was some frantic scrambling to get all the military personnel the equipment they needed. One wonders if these deficiencies have been made good since.

1999: The Kosovo Crisis. When Serbian troops went into Kosovo, Canada committed 18 CF-18s and sent 1,470 troops to participate in the Kosovo Protection Force (KFOR). The Cana-

dian CF-18s delivered about 10% of the ordnance dropped in Serbia and Kosovo. We bombed factories, bridges, suspected troop concentrations, etc. But Canadians don't realize that we sent a squadron of communications troops into the region without any small arms to protect themselves and that they had to arm themselves with heavy sticks to keep wild dogs at bay. Some signalers would have leave their computers and satellite links to grab clubs and confront dangerous animals – an interesting juxtaposition. The operation in Kosovo had the result that the cynicism in the Canadian Forces about being Boy Scouts supporting innocent people, a view apparently held in the Canadian public, reached its apex as the troops in KFOR realized that the Kosovo Albanians were as bad as the Serbs.

2001-2011: Afghanistan. This mission required a rush purchase of six M777 long-range 155mm guns because we had mothballed all our old M109 self-propelled guns without upgrading them. We have now purchased a total of 37, where 30 years ago we had over 76 M109s. This mission also required a rush lease of 20 Leopard 2 Tanks – but, hey, peacekeepers don't need tanks. We have now bought 66 (plus 20 more to replace the tanks we leased, which we are keeping). These 86 tanks replace 114+ Leopard 1s. We had to lease back CH-47 helicopters from the Dutch, to whom we had sold ours earlier. Once we had the helicopters we had to improvise armament on them. In the absence of usable helicopters we made much use of American attack helicopters. While we had some drones in Afghanistan, we could have used more surveillance drones which would probably have reduced our casualties from improvised explosive devices.

2011: Libya. We dispatched a frigate and CF-18s for the





Ukrainian troops man a checkpoint near Sarajevo.

UN-mandated NATO effort in Libya. This means the navy and air force are once again involved in a shooting war. The air force has been dropping dozens of smart bombs on Libyan forces, and the navy engaged surface targets at least once.

Lest we forget, there have been all manner of civil aid operations inside Canada and interventions and humanitarian aid operations in a number of countries. Our navy has been busy chasing pirates, searching suspicious shipping, conducting counter-narcotics patrols, and otherwise keeping a hectic pace all over the world.

So based on the last 20 years, let me make three points. First, about every seven years, the air force is flying combat patrols in hostile airspace and dropping munitions on defended targets. Obviously, Canada needs effective combat aircraft. The operational demands of the army and navy also scream for more helicopters, transport aircraft, etc. Second, in 15 of the last 20 years, elements of the Canadian Army have been in combat somewhere. Next time, we might not be able to hone troops before deploying them and may have to go with what we have on hand. More resources for training more personnel more often are required. As well, all the talk about making do with light equipment was wrong – tanks, heavy guns and helicopters are needed too.

Third, our navy has been continuously busy – training, patrolling, searching and conducting operations over the past 20 years in the Atlantic, Pacific and Indian Oceans with numerous deployments in the Persian Gulf, the Adriatic, the Caribbean. It is disgraceful that it is still going out to sea with 40 year old *Iroquois*-class destroyers and *Protecteur*-class replenishment ships. It is also disgraceful

that the *Halifax*-class frigates (the first of which is nearly 20 years old) *still* have not got helicopters to replace the 50-year old Sea Kings. Sailors with ‘hearts of oak’ are ill-served by politicians with heads of particle board.

### ***In Conclusion***

The Canadian military has seen far more activity in the last 20 years than it did in any other time outside of both World Wars and Korea. The long slow decline of Canadian combat power since Prime Minister Pierre Trudeau was in power in the 1970s and early 1980s has been checked but not reversed. The sudden equipment purchases of the governments of Paul Martin and Stephen Harper have kept Canada’s overall ability to influence events and contribute to collective security from decaying any more. But, aside from purchase of the C-17 transport aircraft and the promised new logistic ships to replace the 50-year old ones we still have, everything was a minimal purchase.

For example, our Canadian Patrol Frigates are entering their mid-life refit cycles now. The first of them has been hard at work at sea for well over a decade already. However, it would be useful if the helicopter hanger actually contained a helicopter that flew occasionally and if we put the last of the 50-year old Sea Kings out to pasture. What we now have on board these frigates are empty hangers that often serve as a very expensive weight room or volleyball court.

After 30 busy years, the CF-18s might not be flying much longer either. We need something that can do the daily work of intercepting intruders and drug-runners and can fly into hostile airspace and deliver ordinance there.

Soldiers need good hard training. Once they have it, you



Credit: MCpl Angela Abbey

*An Afghan villager halts for a Leopard C2 tank as it patrols near a construction site in Panjwai District, Afghanistan.*

can ask them to do anything. They also need good equipment. Sometimes the best way to restore order is to show up with a figurative big stick – like with a 120mm tank gun or 155mm howitzer. If you send them out literally with only big sticks, even the dogs won't respect them.

For realistic, involved training you need fuel, ammunition, field rations and much else. A reconnaissance soldier, for example, cannot stay familiar on a machine gun by only firing a half-belt of ammunition once a year or be confident with hand grenades by only throwing a couple every three years.

Sailors, like soldiers, are human capital. Invest in them and you get a good return. Equip them properly and there

is less wear and tear on your human assets. Sailors can only be taught so much in a classroom, to be good sailors they need to be at sea. There is only one way to learn seamanship and only one classroom for it.

Most of all, what the Canadian Forces need are some realistic attitudes about the world and the use of force among the countrymen they serve so well. The days of UN peacekeeping are over, and it never met the popular image anyway. Our successes at peacekeeping in the Cold War era were due to having experienced logisticians and dependable combat-ready troops who could intimidate – or kill – local troublemakers when necessary.

The return for investment in the Canadian Forces is not always tangible. Respect cannot be weighed by the ton and influence cannot be measured by the metre. Militaries are in the business of 'what ifs' and contingencies. It's hard to count the people who didn't die because a warship came pounding in despite the 20 metre waves or because soldiers shot some truculent local gunman. They are hard to count, but they are nonetheless real.

So, gentle reader, the next time you hear somebody saying that Canadian soldiers are peacekeepers and don't need new weapons systems, or wondering if we really need a navy, perhaps you could gently chide and admonish them. 🍌

#### Notes

- \* This is a revised version of an article that originally appeared as Mackenzie Institute Commentary 1108.



Credit: Sgt. Craig Fiander

*Gunners from X Battery, 5<sup>e</sup> Régiment d'artillerie légère du Canada, conduct a fire mission against a Taliban position with an M777 155mm Howitzer.*

*John Thompson was a reserve gunner and reconnaissance soldier from 1977 to 1990 and has been with the Mackenzie Institute since 1990.*



# Comprehensive Undersea Domain Awareness: A Conceptual Model

Lieutenant-Commander David Finch

## Introduction

We would really like to know what is happening in the undersea realm of our maritime areas. This thirst for undersea awareness is rooted in military requirements to defend the sea lines of communication against the proliferation of submarine and mine capabilities designed to restrict control of the seas and littoral waters. The 2010 sinking of the South Korean ship *Cheonan* by a North Korean torpedo is the most striking recent illustration of this need. But knowing what is happening underwater is not just about military requirements. It is important to monitor the earth's undersea geophysical activity for tsunami early warning – a hard lesson from the December 2004 tsunami in Asia and the March 2011 tsunami that struck Japan. As well, there are commercial reasons for studying the undersea realm. There are now obligations to perform underwater sound measurement studies for regulatory compliance of seismic programs performed by most major maritime exploration companies. These studies are meant to ensure understanding of environmental and biologic habitat of marine species which form a critical node of the global food supply. The collapse of the Canadian cod fishery is a stark example of what can happen when there is inadequate understanding and imprecise measuring of the health of a marine species. The lynchpin to all of these issues is the need to know what is hidden from our sight in the world's oceans, to measure and render visible the unseen.

The systems to determine what takes place under the ocean's surface are multi-faceted and multi-tiered. They involve multiple actors including marine science institutes, defence/security organizations and corporate entities. The quest to understand the maritime environment is seen more and more as an integrated effort built upon core competency of acoustic sensing, supported by non-acoustic means to provide information to security agencies, industry, earth sciences and environmental agencies. However this tacit conceptual acknowledgement of the need for cooperation has not been codified to the degree that it has been in the maritime surface and above. Undersea awareness requires new strategic thinking that would coordinate the capabilities which are providing piecemeal visibility to what is taking place below the surface of our waters and provide a more comprehensive picture.

After the Cold War, the undersea realm was ignored by defence organizations, not by choice but based on a



US Navy and Republic of Korea Navy personnel inspect the damage to a salvaged section of the ROKS *Cheonan*. The sinking of *Cheonan* illustrates the need for undersea awareness.

number of risk assessments. These assessments indicated that undersea attack was unlikely, and thus permitted the perception that over-tasked resources could be expended elsewhere. The undersea domain, once the playground for anti-submarine warfare (ASW) and mine warfare, has rapidly evolved with new agents developing concepts and capabilities which outstrip those traditionally employed by defence departments. The result is an unusual opportunity to pull together the efforts of those conducting undersea domain sensing into a comprehensive interoperable undersea data aggregation concept. This would vastly reduce collective costs while achieving the holy grail of coherent and comprehensive undersea domain awareness (UDA).

Credit: Lt. Jared Apollo Burgamy, US Navy

As noted, defence and security concerns relating to anti-submarine and mine warfare were the catalyst for much of the initial investigation of the physics which governs undersea capability development. The earliest method was the Sound Navigation and Ranging (sonar) system. These systems were like turning on a very dim flashlight to peer into the darkness of the night or the vastness of the oceans. Sonar is a system that uses transmitted and reflected or radiated underwater sound waves to detect and locate submerged objects or measure distances underwater. It has been used for submarine and mine detection, depth detection, commercial fishing, diving safety and communication at sea. *Active* sonar devices send out a subsurface sound wave and then listen for returning echoes, the sound data is then relayed to an operator conducting acoustic analysis. *Passive* sonar systems listen for the radiated noise or signals transmitted from a maritime object. Modern systems have increased the intensity of the flashlight beam, enabling systems to peer a little further. Other technologies, which continue to employ the fundamental principles of sonar, have changed the source from a flashlight to a system of lights designed to illuminate a far larger area.

### The UDA Reality

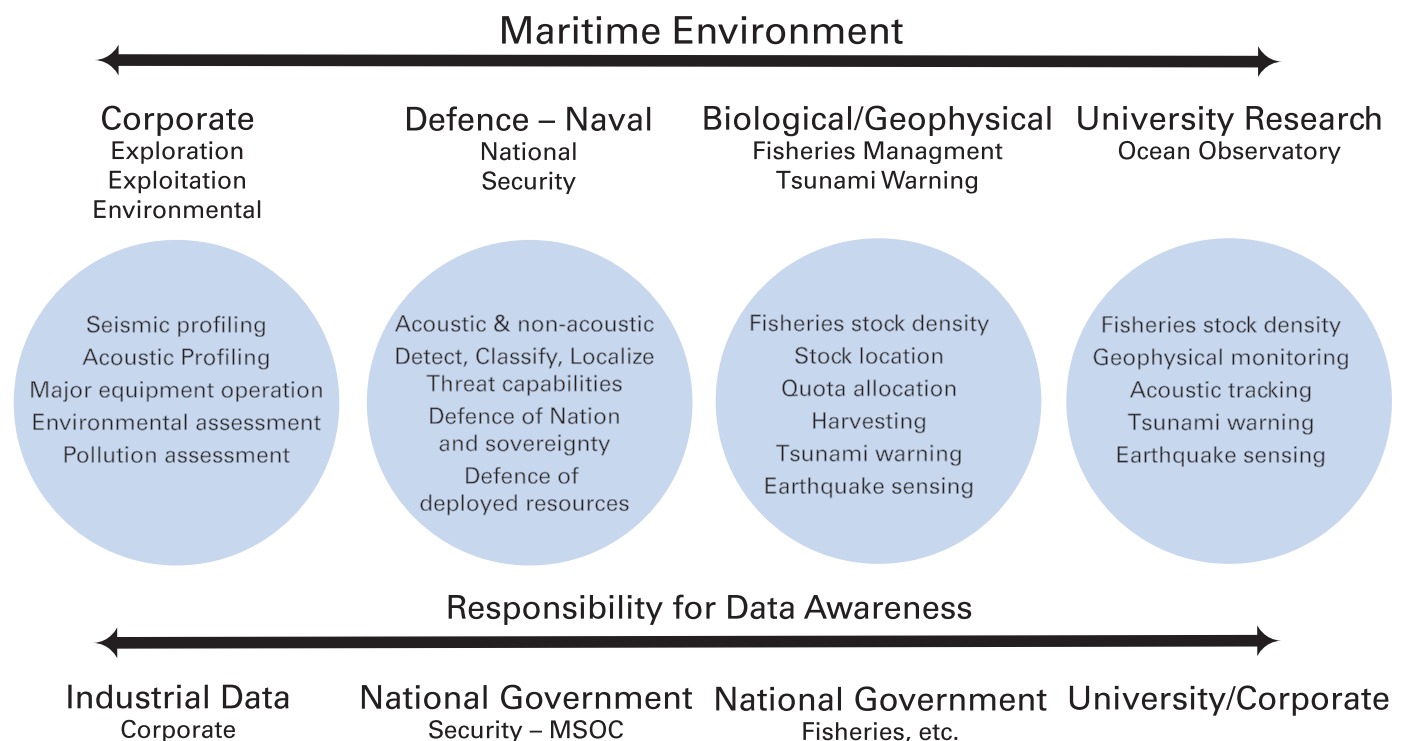
The aggregation and integration of UDA information permits the development of a comprehensive picture to

enable the understanding of everything that is occurring in the ocean from the surface through the seabed. The achievement of this objective occurs through the understanding of oceanography and other marine sciences which define the environment of the undersea domain-sensing regime. UDA is an aggregation of maritime undersea monitoring strategies, processes and data relating to the following:

- monitoring and assessments of the density of biological entities such as fish, whales, plankton or other species;
- geophysical activity of the earth's crust for tsunami warning;
- maritime industrial exploration and exploitation efforts; and,
- security/defence monitoring and assessment to track the threat posed by submarines, mines and the employment of undersea systems by transnational agents – for example criminal gangs – seeking to avoid detection.

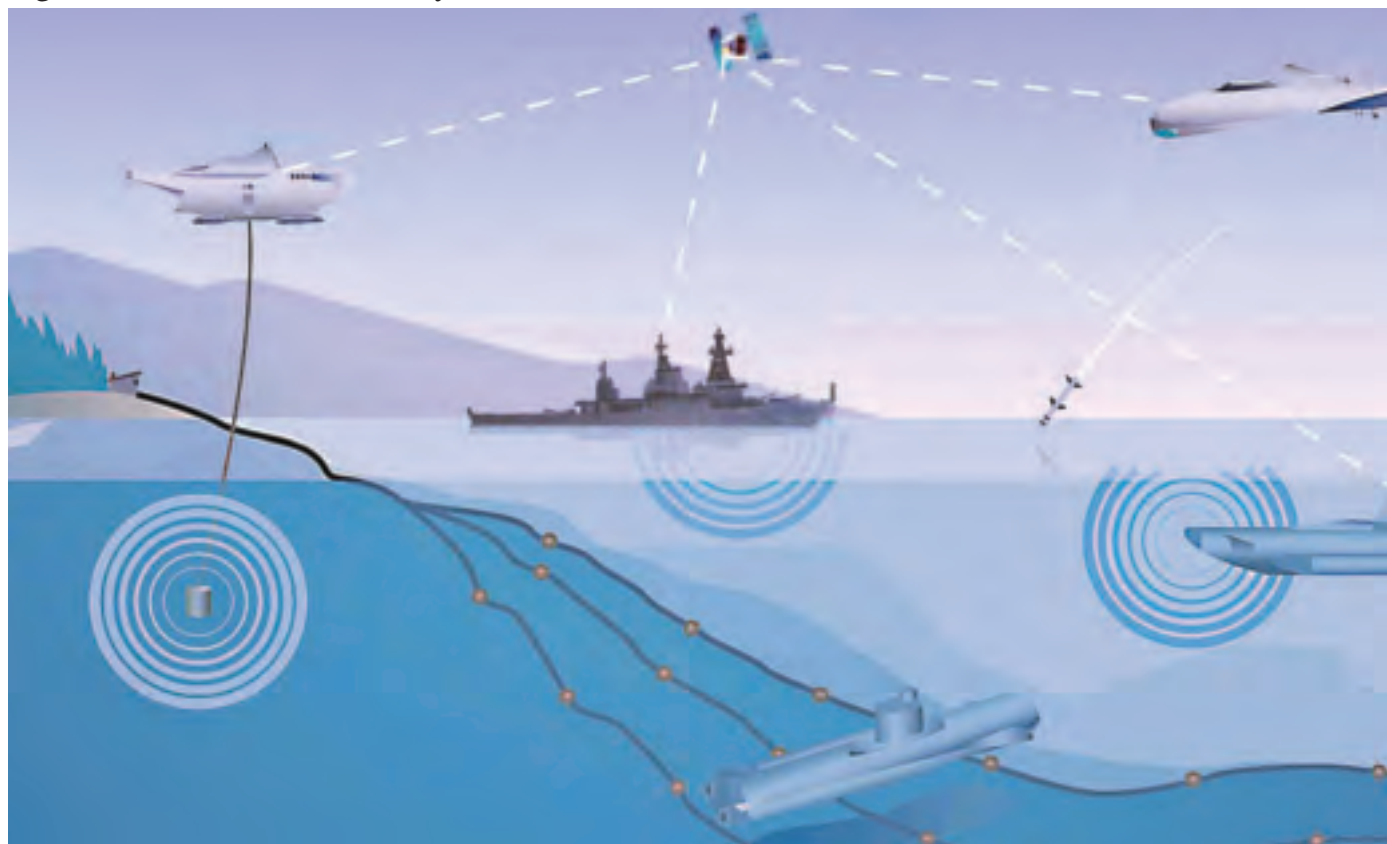
The sum of this information is a snapshot of what is taking place in the water. Or, this is what the sum of the UDA effort *should* be. Unfortunately, the reality is somewhat different. The UDA data streams have been confined within individual stovepipes and not integrated into a single cohesive model. In their effort to detect and track

**Figure 1. Stovepipe Undersea Domain Awareness**





**Figure 2. Anti-submarine Warfare**



Credit: Leadmark

*Anti-submarine warfare as illustrated in Leadmark: The Navy's Strategy for 2020.*

submarines, naval acousticians would detect and classify acoustic signals, via active, passive or a combination of the two sonar methodologies, to identify and classify an acoustic signal's identity, and in the process discard everything which was non-submarine or non-mine. All signals not of interest were considered clutter, hindering the ability to focus on only the contacts of interest. Industry has done much the same thing, restricting its classification algorithms to highly targeted data sets representing the relevant resources located on the ocean floor or in the seabed. And, organizations interested in biological density identification tend to exclude data which is not directly related to efforts to assess the health and population of a particular species. The only common attribution to all was that they operate within the same oceanographic environmental constraints – but this caused mutual interference when non-coordinated systems were operating coincidentally in the same place.

Of the four groups collecting undersea data, the most robust have been the organizations traditionally associated with national security. Much of the oceanographic knowledge developed by marine scientists was a result of the requirement to defeat the threat posed by submarines and mines during the Second World War and the Cold War. In turn, the scientific knowledge developed to support security interests has been exploited by industrial requirements to sense resource deposits suitable for exploitation, and by agents attempting to quantify and manage biologic resources. However the competing data

streams have never been unified into a single coherent UDA presentation.

The methodology employed to assess the security of the undersea arena has been codified by a search, detect, classify and localize (SDCL) to attack (when authorized) (SDCL-A) model. The SDLC process is also employed by industry and other government departments to achieve specific data sets associated with their particular area of interest. The attack portion of the model applies as well if we think of it as a data process leading to an outcome. In the case of industry the objective is the exploitation of a resource, and in the case of biologic management the objective is the allocation of fishing quotas or harvesting of an assigned quota. Thus the SDCL-A model is universal to all entities attempting to develop UDA information streams.

The physics of the maritime environment dictates the operational performance of sensing methodologies based upon the variables of water depth, salinity and temperature. The combination of these variables determines the profile of the sound speed which will further govern the transmission capability of sound at various frequencies. Sensors must be configured to deal with a wide variety of signals, and they must be able to operate in both active and passive mode. They must also be able to operate in a variety of marine environments. Thus, military systems were required to function in both deep ocean basins and shallow water environments, where submarines and other



Credit: Warrant Officer Carole Morissette, Canadian Forces Combat Camera

*Petty Officer First Class Joseph Scheubel operates the Torpedo Weapon Systems and directs all surface/air assets that defend HMCS Winnipeg against any threat of a submarine attack.*

targets could hide in a cluttered acoustic environment. Just as sonar technology has improved, so has the ability to reduce the sound output – for example, submarines are much quieter and more difficult to detect now than in the past. This has shifted the emphasis towards low-frequency sonar waves and bi-static regimes (a combination of passive and active sonar).

The early oceanographic investigations of the late 1940s and early 1950s documented the maritime undersea environment and its effects upon anti-submarine warfare (ASW). This was done in order to develop capabilities and refine tactics to counter the threat posed by submarines and mines. ASW works best as a ‘system of capabilities’ as no one system has proved decisive to the defeat of submerged threats posed by submarines and mines. This was an important lesson – more systems working together form a better picture of what’s going on.

### ***National Defence/Security UDA***

The concept of UDA naval defence consists of a system of capabilities layered with long-range persistent (i.e., continuous over time) sensing supported by deployable regionally-based wide-area sensors or deployable highly-focused localization sensing capabilities. Situational awareness maintained over time supported by the means to respond to any detected threat is the lynchpin to preventing submarine incursions or attacks from occurring and obtaining tactical victory if they do. Having sensors in the subsurface domain is a way to render the water column from seabed to the surface transparent and observable, illuminating the activities of potential threats and eliminating the threat of submarines and mines.

The concept, structures and processes used to integrate the defence UDA stovepipes could potentially be employed as a model to link the other maritime sensing regimes into a single unified UDA product. The data hub for this structure in Canada could be the Marine Security Operations Centres (MSOCs) or the operations centre of deployed task force commanders.

Regardless of the system capability – long-range persistent sensing, airborne wide-area search sensors, or tactic localization sensors – the critical functional element is the analytical skill of the operators. Undersea research has yet to develop the artificial intelligence algorithms which can replace the cognitive skills resident within the brain of a trained, skilled human acoustician. The acoustician’s skill and capability is increasingly in demand as more and more economic, scientific, environmental and security/defence organizations try to find out what’s under the surface of the oceans.

### ***The Civil UDA Concept***

The defence structure of layered capabilities, especially the fixed persistent sensors, to sense undersea threats has recently been adapted and substantially expanded by the scientific research community. Significant effort on a national scale has been expended to design and deploy a new 21<sup>st</sup> century capability of undersea observatories. This emergent capability has propelled oceanography to the scientific forefront and assisted in the conceptual advancement of security sensing. In Canada and indeed globally, the University of Victoria became the first to conceptualize, design and deploy two large-scale ocean observatories, named Victoria Experimental Network Under the Sea (VENUS) and North-East Pacific Time-Series Underwater Networked Experiments (NEPTUNE) operating under the administrative umbrella of Ocean Networks Canada (ONC).

The achievements of ONC are being expanded by the Ocean Observation Initiative (OOI) in the United States. Combined, the Pacific-based undersea observatories will utilize fixed undersea cables to support nodes of experiments. They will employ leading edge undersea robotics and gliders supporting fixed sensors to quantify the water column, conduct research experiments on the sea floor, measure biologic density, and potentially detect and track man-made objects moving in the water column. Although the initiatives are principally designed to support scientific advancement, the capability of the sensors could equally be employed to sense undersea threats.

### ***The Corporate UDA Concept***

Corporate advancement of undersea technologies is related to the growth of capabilities associated with maritime environmental assessments. Increasingly, environmental impact assessments must be undertaken before offshore projects can be approved, and this has meant a growth in the technology to accomplish these assessments. A field leader is JASCO Research, a Canadian company which provides consulting services to the marine industrial, oceanographic, oil and gas, fisheries, defence and information technology sectors. These type of companies



provide data acquisition services for acoustic measurements, vibration measurements and blast physics, and the underwater sound measurement studies necessary for regulatory compliance of seismic programs. They also provide support to Arctic environmental monitoring efforts.

Another example of a Canadian corporation working in UDA technology is Marport Deep Sea Technologies Inc., of St. John's, Newfoundland. The Marport Software Defined Sonar is a system in development which can be configured to enable multi-mode, multi-band and multi-functional applications for a variety of ocean users.

Commercial applications of UDA sensors have long supported underwater defence, commercial fisheries, ocean sciences and offshore energy development. The fact that private corporations, rather than just defence/security organizations, are now providing traditional security-related undersea acoustic information is significant. As well, it is permitting the expansion of concepts and systems, which vastly exceed current security sensing capabilities and methodologies.

### ***Biological UDA***

The ultimate goal of biological UDA is sustainable use of living ocean resources. To achieve this, there is a need to fill information gaps associated with, for example, the numbers and health of various species, migrations and sustainable harvesting. Developing a better understanding of the behaviour and success of species will not only help managers in determining what actions will enhance survival, but may also eventually aid governments in developing policies to increase survival in the marine habitat.

The Pacific Ocean Shelf Tracking (POST) Project is an example of an attempt to enhance biological UDA. It is a project of a Vancouver-based organization designed to develop and promote the application of acoustic tagging technology to study the life history of Pacific salmon.<sup>1</sup> A major area of focus for POST involved the development of a permanent continental-scale telemetry system. POST's array sits on the seabed of the continental shelf and upstream in several major rivers, and is used to monitor the movements of not only salmon, but many other types of marine animals along the shelf. The POST system is to fish what the Automated Identification System (AIS) is to commercial shipping. Tracking data generated from the array can be applied to the development of fishery management policies aimed at the sustainable harvest of resources and the understanding and conservation of other marine species.

### ***Convergence to Interoperable UDA***

All of these entities I've discussed here have tailored sensor development for specific requirements unique to their objective. These new technologies are much more advanced than the Sound Surveillance System (SOSUS) or the retooled Integrated Undersea Surveillance System (IUSS) technologies developed and deployed during the Cold War. UDA systems and concepts employed by research facilities, fisheries and major corporations now rival the technologies employed by security practitioners in the development of undersea sensors. UDA is – hopefully – coming to a natural convergence of data, concepts and capabilities which will rival and in some instances exceed those employed by security/defence and corporate actors in the surface domain. The growth of technological capability and actors conducting undersea research makes



Credit: Internet

Crews lower the undersea robot ROPOS to assist in the installation of Neptune Canada's Endeavour node.

it ever more necessary for UDA interoperability if not coordinated assimilation of all undersea data – perhaps through an organization similar to the Marine Security Operations Centres or IUSS Naval Ocean Processing Facility (NOPF).

If we added the various elements together, what would we have? We could imagine a model which biologically tracks marine mammals and other marine species using

interest in the Arctic – as a shortened shipping route between Asia and Europe and as a source of vast resources increasingly open to exploitation as the climate changes – means that there will be a growing need to know what is under the surface of Arctic waters. The establishment and integration of an ocean observatory, corporate exploration and government agencies ranging from national security to environment and economic development would provide a powerful tool to Canada's ability to substantiate its

territorial claims in the Arctic. It would simultaneously develop quantifiable environmental assessments to support scientific awareness and indigenous knowledge of the ecosystem. Additionally, a UDA in the Arctic would provide a robust means to monitor the maritime environment holistically from the seafloor, through the water column

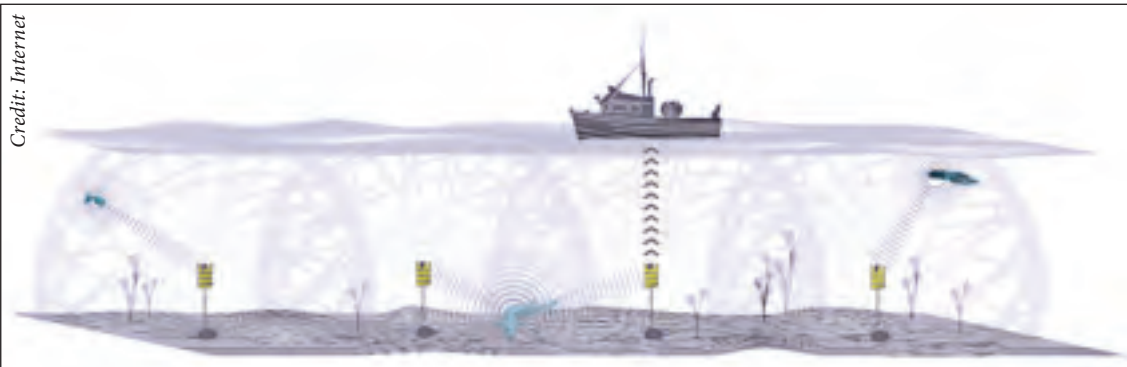
to the surface, monitoring, measuring and assessing geophysics, industrial activity, biological health while achieving security awareness required by national defence.

The sum of this aggregation of data is a snapshot of what is taking place in the water at any given time. Anti-submarine warfare and anti-mine capabilities were once the only reason defence actors were interested in what went on beneath the water's surface. Now, governments seeking to assert sovereignty and protect the state from attack, corporations seeking to exploit marine resources, groups seeking to protect the same resources and ecosystem from corporations, and scientists seeking new frontiers of knowledge all want to know the unknown. The corporatization of environmental assessment and marine species monitoring and the development of UDA infrastructures by research institutes has brought new sensors and technologies into the domain with capabilities often exceeding defence UDA sensor systems and processes. Canada possesses the individual components of a comprehensive UDA picture but has not yet formulated the strategy to produce the sum. 🍷

#### Notes

1. For more information about the Pacific-Ocean-Shelf-Tracking (POST) project see the project website at <http://www.postprogram.org>.

### Figure 3. The Pacific Ocean Shelf Tracking (POST) Project



acoustic tagging as the POST system currently attempts to achieve for Pacific fisheries. To this model we could add undersea research cable infrastructure achieved as part of the University of Victoria's NEPTUNE program, and the corporate capability of an organization like JASCO Research or Marport to conduct undersea environment assessment, modeling, technology development and data integration. Finally, all these undertakings could be collated through a central undersea information analysis centre associated with the analytical capabilities of an MSOC or NOPF. The output of such a system would provide critical quantitative data to support decision-making at multiple levels and branches of government – defence/security and environment departments in particular – corporate actors and research organizations while ensuring the health and continued viability of the marine ecosystem.

### Conclusions

Interoperable UDA information would permit the development of a comprehensive picture to enable the understanding of everything that is occurring in the ocean from the surface through the seabed at all times. The achievement of this objective is governed by the laws of physics which define the environment of the undersea domain sensing regime, and the technology that exists to overcome the difficult characteristics of an underwater marine environment.

The Canadian Arctic provides an exceptional opportunity to test the concept of an UDA MSOC or NOPF. Increased

*Lieutenant-Commander David Finch is serving at Tactical Development, Underwater Warfare Battle Space at Canadian Forces Maritime Warfare Centre in Halifax.*



# Canada-US Shiprider Operations: The Next Generation of Border Integrity

Anna Van Dusen and Tanya Miller

Canadians are well aware that the border they share with the United States is lengthy. More precisely, it spans close to 8,900 kilometres and touches most provinces. And, the terrain is remote in parts – if not downright inhospitable. A border fact that may not be as well known, however, is that more than one-third of the border cuts through water, including through the Great Lakes, the St. Lawrence River and numerous coastal inlets.

Not surprising, securing something so vast and varied is a big challenge. While the size and geography presents one hurdle to law enforcement agencies, organized crime groups continue to be the single largest threat encountered. In 2009, 125 crime groups and 94 smaller criminal entrepreneurs were identified as smuggling their wares across the Canada-US border.

No law enforcement agency in either country has the tools or and resources single-handedly to tackle cross-border criminality. Therefore, Canada's approach to border security is intelligence-driven and relies on a layered model built upon a foundation of partnership.

Enter the Royal Canadian Mounted Police (RCMP). While the RCMP has a history of working closely with domestic law enforcement agencies, border integrity requires cooperation on both sides of the border. Fortunately, Canada and the United States share a strong desire to work together to protect their shared border from potential threats.

## ***Joint Land Operations: The Precursor to Shiprider***

The maturity and depth of these cross-border relationships are unmatched. In fact, over the past two decades they have evolved from cooperation to collaboration to integration. Canada's policing partnership with its neighbour to the south is exemplified in the highly successful Integrated Border Enforcement Team (IBET) model. The original IBET partnership was formed in the mid-1990s when RCMP and US Customs and US Border Patrol officers got creative and dared to try something different in order to make more seizures and curb the growing volume of smuggling across the British Columbia-Washington State border. The agencies teamed up, shared pieces of information and prioritized operations. The smugglers never knew what hit them. Although rudimentary at the time, it was a run-away success.

Today the IBET program is still growing, and represents a binational collaboration between Canada and the United

States that recognizes the unique nature of the shared border. It wasn't until after the tragic events of 11 September 2001, however, that Canada and the United States formally committed to setting up a series of IBET teams in order to manage the border jointly. Although law enforcement agencies on both sides historically cooperated when necessary and wouldn't hesitate to help each other in times of need, there was never a formal agreement on how to work together. It was quickly realized that a more robust system of cooperation was needed to combat innovative criminals engaging in illicit activity between the ports of entry.



*Constable Stephane Boudreau of the RCMP Marine Security Enforcement Team – Great Lakes handles a mooring line onboard a US Coast Guard craft in support of the Olympic Shiprider Program.*

The core IBET partner agencies include the RCMP, US Coast Guard, US Customs and Border Protection (Border Patrol), Canada Border Services Agency and US Immigration and Customs Enforcement. The program continues to demonstrate the shared commitment of both Canada and the United States to a collaborative approach to the border and to tackle common threats that the two countries face.

Shiprider is in many way an extension of the IBET model. If the RCMP and US Coast Guard had not taken some risk and developed such a mutually respected bond over time through the IBET relationship, Shiprider might never have seen the light of day. Instead, Shiprider will likely change the course of traditional policing along the shared maritime boundary between Canada and the United States.

Credit: Petty Officer 3rd Class Colin White, US Coast Guard



*RCMP Corporal Raj Sandhu and US Coast Guard Petty Officer 3<sup>rd</sup> Class Cody Ralston conduct Shiprider law enforcement operations along the Niagara River in support of the 2010 G20 Summit.*

## **Canada-US Shiprider Operations**

The formal name for Shiprider is Integrated Cross-border Maritime Law Enforcement Operations (ICMLEO). To date, there have been six Shiprider operations, ranging from the original pilot project to major security operations.

The premise of the program is this: specially trained, cross-designated RCMP and US Coast Guard officers work side by side on each other's vessels, allowing for law enforcement operations across the maritime border. The two forces assist one another in the enforcement of Canadian or American laws. This arrangement means that the crews can conduct cross-border surveillance and interdiction jointly, allowing for seamless law enforcement operations across the maritime border while under the direct supervision of the host country's officers.

Shiprider was tried for the first time in 2005, then again in early 2006. The US Coast Guard requested that the RCMP participate in an integrated marine security operation on the Detroit River – in the dead of winter – to support major security operations for Super Bowl XL. Except for the brutally cold conditions, it was the ideal event to test Shiprider. For the first time in Super Bowl history, some NFL-sponsored events were held outside the United States. In this case, the events were spread over a five-day period and held across the river in Windsor, Ontario.

It wasn't until late summer 2007 that the first major Shiprider pilot project got underway. This time, it occurred simultaneously in two locations – on the St. Lawrence Seaway, along the Cornwall (Ontario)/Massena (New York) border area, and on the West Coast in the Strait of Juan de Fuca between British Columbia and Washington State. These operations involved 50 Shiprider-trained officers from both the RCMP and the US Coast Guard. The purpose of the operation was to counter the smuggling of contraband. When the bounty from all the interdictions over the 60-day Shiprider operation was calculated, they had seized 215 pounds of marijuana, 1.2 million contraband cigarettes, 167 grams of cocaine and C\$38,000 in

illicit cash. The officers also seized six boats (value of C\$156,000), made six arrests related to smuggling and conducted 187 boardings. The total value of commodities and conveyances was C\$727,932.

Three years later, there was an opportunity to showcase the merits of the Shiprider program at a huge international sporting event. During the 2010 Olympic Winter Games in Vancouver, British Columbia, Shiprider operations helped secure the perimeter waters near and around the international maritime boundary. This time, though, the operations had increased in complexity as many other agencies were included to enhance security. The operations involved not only more actors but also a greater variety of actors and support systems. They were supported by the Border Integrity Operations Centre (BIOC) in BC. BIOC was a key contributor to the operations by enabling the RCMP to utilize the latest technology to coordinate land, sea and air investigations while housing all core IBET partner agencies.

The centre provided command, control and communications support to ensure an extra layer of oversight. It allowed liaison officers from both countries to monitor and direct their vessels. According to Sean Wheeler, with the RCMP's Federal Border Integrity Program in BC, the surveillance technologies available ensured that resources were deployed correctly and BIOC could direct resources to intercept suspicious activity along the border. With the involvement of BIOC, he stated, "a whole new level of support and integration was brought to the operation."<sup>1</sup>

In addition, tools such as camera and radar technology allowed BIOC officials to be aware of what was happening on the border and to communicate with the US Coast Guard, US Border Patrol and RCMP officers in the field to help direct them to where they needed to be. Using BIOC meant that the command and control of border integrity operations could be coordinated from one place.

The Olympics operation went extremely well. It provided an excellent example of coordination and cooperation across the border during a major event. It was so successful it led to another Shiprider operation, this time providing maritime security during the G-20 meetings in the Toronto area in the spring of 2010.

The lower Niagara River is a good example of exactly why Shiprider is necessary. The international border runs down the middle of the river. Considering that the river is only one kilometre wide, police are well aware that a suspect vessel could change from one jurisdiction to the other in seconds. Through the Shiprider model, the jurisdictional constraint is effectively eliminated. During the G-20 event, patrols of the river and in Lake Ontario



were operated 24/7, conducting regular vessel checks in both Canadian and US waters. The patrols were overseen by a temporary joint operations centre, modelled after the Vancouver BIOC that was capable of maintaining real-time communications with the primary security centres.

Approximately 48 boardings were conducted during the eight days of the run-up to the meetings and the meetings themselves. This operation played a significant role in ensuring that potential threats to the security of the G-20 meetings could not exploit the border and Lake Ontario to access the security area.

Chief Superintendent Joe Oliver, the Director General of the RCMP's Border Integrity Program, says that effective cross-border crime fighting relies on three key elements:

- information,
- integration and
- innovation.

The Shiprider program tries to do this in the marine areas. Superintendent Oliver says "Canada and the United States are working on a border-wide solution that will enable front-line officers to better maintain the security of our shared border."<sup>2</sup> The long-term goal is a secure border that allows trade to cross unimpeded but does not allow contraband and/or unwanted people to cross at will. As well, Superintendent Oliver says, "more particularly, a long-term goal is to have a program that maximizes resources and enhances the RCMP's ability to respond quickly to ongoing and emerging cross-border threats and risks."<sup>3</sup>

Increased cross-border cooperation and coordination among law enforcement agencies is occurring throughout the world today. Police both within and between countries increasingly know what their counterparts are

doing. What is different about the Canada-US Shiprider program is the comprehensive joint training program that places RCMP and US Coast Guard officers in the same classroom, learning from both Canadian and American instructors, and that on the maritime boundary, law enforcement officers from both countries work together to prevent exploitation of the shared border by those engaged in criminal activities.

In supporting the next generation of integrated cross-border law enforcement, Canada and the United States will likely continue to collaborate on the development and implementation of innovative responses to border integrity. In the future, the IBET partners plan to expand the Shiprider concept to high-risk areas, including the land environment, as well as to other Canadian, American and police agencies with maritime capacity and capabilities. This direction is consistent with the Beyond the Border declaration announced by the Prime Minister of Canada and the US President on 4 February 2011. In this declaration both countries committed to build on existing bilateral law enforcement programs to develop the next generation of operations that leverage cross-designated officers and resources jointly to identify, assess and interdict persons and organizations involved in transnational crime.

Canadian and US law enforcement partners are eagerly waiting for legislation to be re-introduced in order to implement the Framework Agreement signed by Department of Homeland Security Secretary Janet Napolitano and then Minister of Public Safety Peter Van Loan in 2009. In order for the agreement to be brought into force, both Canada and the United States must complete a number of internal processes. In Canada, this requires passing legislation by the House of Commons and the Senate and then implementing it. In the United States, no new legislation is required, but the US government has to complete its own internal procedures to incorporate the agreement into national law and to make the Shiprider program permanent.

Shiprider will only be deployed for high-level security events such as the Olympics and G-20 while the legislation is before Parliament. 🇺🇸

#### Notes

1. Email exchange between Anna Van Dusen and Sean Wheeler 15 August 2011.
2. Email from Superintendent Joe Oliver to Anna Van Dusen, 19 August 2011.
3. *Ibid.*

*Anna Van Dusen is a communications officer with the RCMP at national headquarters in Ottawa. Tanya Miller is a research analyst with the Integrated Border Enforcement Team policy centre also based at national headquarters in Ottawa.*

Credit: Petty Officer 3rd Class Colin White, US Coast Guard



*An RCMP 28-foot patrol boat crew prepares to get underway with a US Coast Guard 33-foot Special Purpose Craft Law Enforcement boat crew in support of the Olympic Shiprider Program.*

# Littoral Linkage: Near-Shore Operations, Long-Term Impact

Janet Thorsteinson

The terminology used to describe near-shore naval operations seems almost calculated to prejudice sailors against them. 'Blue' water sounds better than 'green,' and both are preferable to 'brown.' Coastal defence certainly lacks the glamour of deployments to the Persian Gulf or task group exercises off Hawaii and 'littoral' hardly generates excitement. Given the unpredictability and extremes of Canada's weather and the extent of its geography, however, operations in the littoral regions are a challenge to sailors and their equipment. Canada mounts routine operations and meets contingencies on four coasts – east, west and north, and every other coast in the world where Royal Canadian Navy vessels may be despatched.

Photo: MC2 Gary Granger Jr., Navy News Stand



The Littoral Combat Ship *Independence* approaches Naval Station Mayport for a port call in April 2010.

Although statistics about the length of Canada's coastline are frequently cited – 243,042 kilometres – Canadians are not told exactly *why* those coastlines are important.<sup>1</sup> Why are they important? As much as 97% of all goods that come to Canada from all trading partners except the United States is transported by sea, which means that maritime trade is absolutely critical to the economy. Because goods are coming by sea, Canadian ports are extremely important, and could be vulnerable to attack and/or organized crime. As Canada increases its trade with China, Vancouver in particular is becoming a more important port, and now accounts for almost half the container and cargo traffic in the country.<sup>2</sup>

On foreign shores, there will be a greatly increased need for Canadian ships and sailors. The world is becoming increasingly urban, and most of these urban centres are

near a coast. Currently, approximately 60% of the world's population lives within 100 kilometres of a sea coast, and 70% lives within 320 km.<sup>3</sup> Many of these mega-cities are in fragile states, and their rapid growth can overwhelm the ability of the state to accommodate the new residents. It is possible that these rapidly growing cities will become increasingly unstable as residents face a lack of (legal) economic opportunity, inadequate infrastructure, possible exposure to disease because of high population densities and inadequate sanitation, and high crime rates. The result may be civil unrest, or growth in criminal or terrorist groups.

Clearly, great stretches of the world's habitable coastline are going to be nasty for the people who must live there, and the waters off those coasts will likely be dangerous as criminal gangs extend their reach offshore. These cities will be the focus of international efforts – in which navies will play a huge role – to provide disaster assistance or enhance stability. In addition to the threats associated with shallow water, technologically the littoral region is a harder place to operate than the deep ocean. Where there is more traffic, it is harder to maintain situational awareness. Submarines become more difficult to detect in a noisier environment, and there are threats from shore-based forces.

The littoral region provides a challenge to defence companies to build and equip the ships navies need. In the United States the response has been revolutionary. The US Navy is building 55 Littoral Combat Ships (LCS), or about 20% of the ships in its fleet. (More ships under one program than Canada's entire National Shipbuilding Procurement Strategy.) To construct the LCS, the US Navy commissioned designs from two contractors. Rather than select one contractor and one design, the US government decided to buy both the *Freedom* variant built by Lockheed Martin and the *Independence* variant built by General Dynamics.<sup>4</sup> Apparently, the US government hopes that the same strenuous pencil-sharpening that kept prices down during the bid process will continue during production.

The LCS ships will utilize modularity to an unprecedented extent. They will be outfitted with reconfigurable payloads – called 'mission packages' – which can be changed quickly. These packages will be supported by special detachments using manned and unmanned vehicles and sensors. The US Navy intends to contract for new mission



packages as the necessity arises and to incorporate new technology into existing mission packages as it becomes available.

The openness, accessibility and extent of the LCS program – two designs, 55 ships, modularity and incremental improvement – offer an opportunity for Canadian defence contractors to pursue predictable business with innovative products. Much of the punch in these combat ships, according to current USN doctrine, will come from allied states – the other 700 ships in Admiral Mike Mullen’s ‘1,000-ship navy.’<sup>5</sup> To project influence in the world of tomorrow the way Canada has in the past, the computer and communications networks in Canadian ships must be able to keep pace.

Today’s generation of Canadian warships has held its own in the world’s littoral trouble spots. The most recent example is Libya. During the spring and summer of 2011, HMCS *Charlottetown* patrolled the coast of Libya as part of *Operation Mobile*. Employed to protect the port of Misrata, *Charlottetown* fought off forces loyal to Muammar Gaddafi in small boats and protected NATO minesweepers keeping the sea lanes clear. Perhaps most importantly, the technological capabilities and the ship’s proximity to an important region meant that *Charlottetown* could contribute information or coordination to NATO air strikes.<sup>6</sup>

Canadian companies already have excellent track records in naval electronics and are currently working on products that protect ships in the littoral region. General Dynamics Canada, with Marport, the Canadian software-defined sonar specialist, developed the TrailBlazer mine and obstacle avoidance (MOAS) sonar specifically for ships in littoral environments. Canada’s modernized *Halifax*-class ships will carry the Sirius long-range infrared detection system, a joint development of DRS Technologies Canada and Thales Nederland, as will the *De Zeven Provinciën*-class command and air defence vessels of the Netherlands. The Sirius system is already in service with Germany’s *Sachsen*-class air defence frigates. Working with Defence Research Development Canada, Valcartier, Cassidian (a division of EADS) is working on a system called Laser Optical Countermeasures and Surveillance Against Threat Environment Scenarios (LOCATES) to protect Canadian ships from laser-guided weapons that are becoming less expensive, easier to use and more available, putting ships at risk in harbours and along shorelines where warning times are greatly reduced. A prototype will undergo field tests in 2013.

Canadian companies can unlock the US defence market, and the key is the federal government’s Industrial and Regional Benefits (IRB) program. Large defence contractors



The container ship *Cosco Xiamen* departs from Burrard Inlet, British Columbia. Maritime commerce is a critical component of Canada’s economy.

that win Canadian business need to spend the dollar value of the contract, typically 100%, in Canada. Through IRB programs, small Canadian companies have an opportunity to sell goods and services developed for the National Shipbuilding Procurement Strategy around the world. Far from being a hothouse environment for delicate Canadian flowers, the IRB marketplace is tough and competitive. Companies must first qualify for business by getting the right certifications and registrations, compete for business against suppliers in Canada and around the world, and then perform to survive. For successful companies, the necessary mindset is not to lament that Canada’s market is one-tenth that of the United States, but rather to exploit the fact that the US market is 10 times bigger, and relationships founded on IRBs can open that door.

New generations of ships will operate along the coastlines of the world, and a new generation of Canadian electronic technologies developed for littoral operations will sail with them. 🚢

#### Notes

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2. Chief of Force Development, National Defence Headquarters, “The Future Security Environment 2008-2030 Part 1: Current and Emerging Trends,” NDID #A-FD-005-001/AF-001, January 2009, available at [http://centreforforeignpolicystudies.dal.ca/pdf/CFD-The\\_Future\\_Security\\_Environment\\_2008-30.pdf](http://centreforforeignpolicystudies.dal.ca/pdf/CFD-The_Future_Security_Environment_2008-30.pdf).
3. Ibid., p. 14.
4. For more details of the ships see US Navy, Fact File, available at [www.navy.mil/navydata/fact\\_display.asp?cid=4200&tid=1650&ct=4](http://www.navy.mil/navydata/fact_display.asp?cid=4200&tid=1650&ct=4).
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After over 30 years in the public service, Janet Thorsteinson became Vice-President Government Relations at the Canadian Association of Defence and Security Industries (CADSI).



# Making Waves

## *The Cost of Absence: Canada and the Emerging Order at Sea*

Kerry Lynn Nankivell\*

It is well known that the strategic centre of gravity of the naval realm has tilted away from the Atlantic to the Pacific Ocean. The arrival of not only China's first aircraft carrier in July 2011, but its deployment of the world's first ballistic missile capable of hitting a moving ship at sea earlier this year dispelled any lingering doubts on that question. But the story of a rising maritime Asia is not the story of China's People's Liberation Army Navy (PLAN) alone. In recent decades, the evolution of the Japanese Maritime Self-Defense Force, the Republic of Korea Navy, the Royal Australian Navy, the Republic of Singapore Navy and others has remade the Asian seascape. Today, the Asia-Pacific region is characterized by a growing number of credible, capable middle power navies.

Already there have been notable strains as a result of this. Since 2009, a series of mini-crises related to the many maritime boundary disputes in East Asia captured headlines: USNS *Impeccable* incident (March 2009); ROKS *Cheonan* sinking (March 2010); US Secretary of State Hillary Clinton's ASEAN Regional Forum speech (June 2010); Japanese Coast Guard clash with a Chinese fishing trawler (September 2010); North Korean shelling of Yeongpyong Island (November 2010); and the Chinese law enforcement clash with a Vietnamese-contracted commercial survey ship (June 2011). These mini-crises varied greatly in their details, but a single reality underlies all of them – that the increasingly capable maritime players in the Asia-Pacific region do not agree about the basic rules of the maritime domain.

Such a state of affairs is disturbing because just when states are willing and able to pursue their national interests most vigorously there seems to be disagreement about basic rules of maritime jurisdiction. Not only are East Asia's strongest players in dispute about who owns which islands, but they seem to disagree with the international community about what constitutes an 'island,' an 'islet,' a 'rock' or a 'reef' under international law. As well, China, Vietnam and the Philippines disagree about where their Exclusive Economic Zone (EEZ) ends and that of their neighbours begins, and they fundamentally disagree about what sovereignty over an EEZ means in practical terms. Almost 20 years after the United Nations Convention on the Law of the Sea (UNCLOS) came into force, influential states are re-opening a conversation about the basic principles governing the maritime commons.

In this sense, the increased power of East Asia and the region's increasingly dangerous disagreements are not a regional issue alone. On the one hand, these squabbles over shoals and rocky outcrops are disputes among two, three or four parties who have limited influence on Canadian interests. But, on the other hand, these disputes are more fundamentally about the rules by which ownership of territorial features and associated maritime jurisdictions will be determined in the 21<sup>st</sup> century. The number of these disputes and the increasing strategic weight of the claimant states in these cases mean that the outcomes of East Asia's many maritime disputes will have influence not just on the region's future, but on the evolution of international legal principles more generally. They may lead to precedents regarding the application of UNCLOS principles that other states will cite in advancing their own claims. In this dimension, Canada and indeed all ocean-going states have a strong interest in not just the final outcomes, but also in shaping the processes that lead to those outcomes.

### *In Defence of UNCLOS*

In this emerging dialogue about the future of UNCLOS, key players at sea have re-evaluated their interests and begun to shift operational behaviour in support of that re-evaluation. The United States has been most prominent among them. One of the many legal principles tangled up in the South China Sea dispute is the legality of military



*The Republic of Singapore Navy's newly commissioned frigate **Tenacious** participates in the 2009 Indonesian Fleet Review.*

Photo: Singapore Government Press Centre





*HMAS Ballarat and HMCS Ottawa break from formation during exercises in the Coral Sea.*

activities inside a state's EEZ. China, Vietnam and Malaysia have, at various times, put forward the view that foreign militaries have no free access to the EEZ of a coastal state. China, with increasing capability and confidence at sea has not only made statements supporting this view, but backed them up with operations. In March 2009, five Chinese vessels harassed USNS *Impeccable* while it conducted research in China's EEZ near Hainan Island in the South China Sea. In 2010, Secretary Clinton responded with a speech at the ASEAN Regional Forum meeting in Hanoi, stating that the United States holds freedom of navigation in the South China Sea and around the world as a vital US national interest. The sub-text was that whether or not China succeeds in establishing its claim to the South China Sea, the United States will oppose China's efforts to restrict the mobility of US military forces anywhere outside of 12 nautical miles from the Chinese coast. As was expected, China reacted badly to the US statement, which Beijing characterized as 'interference.' Some of the smaller claimant states interpreted the statement as aimed primarily at containing a growing China.

Both reactions were misinterpretations of US policy and behaviour. Secretary Clinton's statement in defence of freedom of navigation was not a disguised guarantee to Vietnam or the Philippines, nor was it motivated by fear of China. It was an expression of uncompromising defence of the freedom of navigation which has been a hallmark of US maritime policy for decades, if not centuries. Ironically, since the United States is not a party to the UNCLOS regime, it was also the first clear commitment by any party to the South China Sea dispute to defend

UNCLOS in the face of questions about the interpretation of rules.

Such defence of freedom of navigation is nothing new for the US Navy (USN). Freedom of navigation operations are routinely undertaken by the USN as a continuous protest against illegal maritime claims. But the expression of an American interpretation of law will not be enough to establish a universal legal principle. Demonstrated commitment by other states will also be required to bolster rules supporting freedom of navigation in the face of dissenting views in the South China Sea.

With that in mind, in early July of this year, the USN conducted joint drills with the Japan Maritime Self-Defense Force and the Royal Australian Navy in the South China Sea for the first time. While the exercise probably didn't fall within China's claim, it took place inside the claimed EEZ of Brunei and presumably without the permission of Brunei's government. In essence, the exercise was the first of its kind: a freedom of navigation operation in which three foreign navies conducted military activities inside the EEZ of a fourth state simply to prove the legality of such an action. The fact that the exercise was conducted without diplomatic incident, just before all three navies pulled into port in Brunei to participate in an international fleet review, is a powerful signal to China that freedom of navigation is alive and well in southeast Asia, in principle and in fact.

### ***Where Was Canada?***

Where was Canada while its partners in the Asia-Pacific region were sending an important signal to an unsettled maritime region? Canada was notably and disappointingly absent. Instead, Canada opted to send HMCS *Ottawa* to the US-Australia-Canada trilateral exercise, Talisman Sabre, later in July. In fact, *Ottawa* pulled out of port in Sydney, Australia, the day that the South China Sea joint exercise began. And so just as a capable Canadian asset was heading off for the strategically unimportant waters of the Coral Sea, Canada's partners were conducting valuable multinational training in a strategically vital area and helping to bolster shared principles of international law.

There are several reasons why Canada might have been absent in this exercise. None of them speak well of the state of Canadian foreign policy in Asia. It's possible that Canada deliberately decided to stay out of sensitive disputes in Asia. Or, perhaps, the USN asked Canada to remain on the sidelines, for logistical or practical reasons. But what seems more likely is that Canada's diminishing interest in the Asia-Pacific region meant that

policy-makers in Ottawa were unaware of the opportunity to defend UNCLOS in Asia, while policy-makers in Washington, Tokyo and Canberra didn't think to call on Canada in this endeavour. Whatever the explanation, it illustrates the lack of interest of the Canadian government in this dynamic region.

The question of Canada's absence as UNCLOS is tested by Asian states is not academic. Canada has a trade-dependent economy, is attempting to increase its trade with Asia, has a commitment to humanitarian assistance and disaster response around the world, and has a geography bounded by oceans. Moreover, the current government's preference for engagement with the Americas notwithstanding, Canada's economic future lies across the maritime expanse of the Pacific Ocean. Political preferences in Ottawa cannot alter this. It is simply a fact of the modern international environment.

If the global order of the oceans is being re-written by a new configuration of power at sea, Ottawa will need to think about what this global order should look like and what role Canada will play in forging it. There is a great deal at stake, including what should be the two pre-eminent foreign policy priorities of any Canadian government – safe, reliable, well-managed sea lanes, and good relations with the United States.

As many states of the Asia-Pacific region, including the United States, undergo a process of evaluating their interests, consolidating their partnerships, and planning their supporting actions in the region, where is Canada and the Royal Canadian Navy (RCN)? It seems that the RCN is steaming in the opposite direction, nurturing missions, capabilities and partnerships that are well established but not salient to the modern strategic environment. In so doing, Canada is missing an opportunity to play a strong role in forging the norms of the new international system as it emerges. This kind of institutional leadership was once a hallmark of Canadian foreign policy, and was certainly in evidence at the negotiation and drafting of UNCLOS. Whether Canadians have the will and wherewithal to play the same role as UNCLOS is shaped by a process of claim and counter-claim in the Asia-Pacific region remains to be seen.

If current policy choices are maintained, it is likely that Canada's diplomatic future won't live up to its past. Ottawa has chosen absence over presence in the unquestioned strategic centre of gravity in the 21<sup>st</sup> century. 🍷

#### Notes

- \* The views expressed here are the views of the author alone and do not represent the official policy of the Asia Pacific Center for Security Studies, the US Department of Defense or the US government.

## French Navy Industry Day

Stephen Knowles

Principal government and industry players in the development and production of ships and systems for the French Navy staged an 'Industry Day' in Ottawa on 10 May 2011. Organized by the French Embassy with the cooperation of the Navy League of Canada and *FrontLine* magazine, the one-day event was attended by senior Canadian naval officers, officials from several government departments and industry. The event highlighted the French method of naval weapons system development and deployment through centralized agencies, principally the *Direction Générale de l'Armement* (DGA), which seems to cover the equivalent of a dozen Canadian agencies involved in defence procurement, and the recently privatized DCNS Group for naval systems.

The French Navy maintains a small but significant global presence commensurate with the security needs of a country with overseas territories and interests in every ocean. Present policy calls for an intervention capability of vessels to be on station within 72 hours at 12 knots. Since the beginning of the Cold War, French policy and design criteria have clearly and successfully targeted the export market for financing national defence requirements. If Mirage combat aircraft were the French arms export of a generation ago, ships and naval systems are surely replacing them today. DCNS gets a third of its revenue from exports and is aiming for half. Presently over a half dozen countries use state-of-the-art French-built submarines or surface ships. DCNS has opened a design facility in Brazil to provide technical assistance as that country acquires its first nuclear submarine to be delivered by 2025. Indeed



The FREMM-class frigate *Aquitaine* during fitting-out.

Credit: Internet





DCNS bills itself as the only Western company capable of producing the whole range of submarines.

The French are closely following the convoluted naval procurement process in Canada and are aware that outright offshore purchasing for Canada is not on. Nevertheless they are convinced that the design concept and systems illustrated in the new French-Italian European Multi-Mission Frigate (FREMM) have saleable potential. Much of the day was devoted to a case study of the FREMM project of which *Aquitaine*, the first of class, is undergoing sea trials and is scheduled for delivery next year. With the French ordering 11 ships, the Italians 10 and one for the Royal Moroccan Navy FREMM represents Europe's largest warship program. The 6,000-ton FREMM has a formidable armament package but its standouts are its complement of only 100. It will replace several classes of ships which will be reaching the end of their useful lives in a decade. There has been some concern expressed about the ability of such a small crew to carry out large-scale damage control and the compromise of relying on only one radar, the multi-functional Herakles. Project spokespersons for MBDA (Missile Systems) and Thales and Sagem (Electronic Systems) made presentations on the impressive array of systems their firms are contributing to the FREMM program.

Whether the day can be considered a success from the presenters' point of view, only time will tell. From the point of view of the audience, the French Navy Industry Day in the capital of a country which tends to rely mainly on American sources, the exposure to what France has to offer was enlightening. Overall Canadian naval observers could not help but be impressed – and perhaps envious – of the streamlined process and apparently spectacular results attained through the DGA-DCNS approach to sustained naval renewal. 🇫🇷

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### ***A Reply to Amphion's "Of Carts and Horses"***

Brian K. Wentzell

In the Summer issue (Volume 7, No. 2) of *Canadian Naval Review*, Amphion describes Canada's foreign policy as being reactive and suggests a foreign policy review to address this. Amphion is correct to suggest that foreign policy is reactive but this is so because, amidst the unpredictable situation in the world, no government can craft a coherent set of economic, humanitarian, security and political policies. Consequently, the best policy for any government is to create a flexible whole-of-government

response capability that can protect Canada's national interests in the face of variable threats.

Canada's recent experiences relating to piracy, the Haitian earthquake and Libya show the breadth of modern military tasks. The main lesson from these events is that a general purpose combat capability is as necessary in the 21<sup>st</sup> century as it was when the 1994 defence policy was adopted. However, the 1994 policy did not contemplate involvement in Afghanistan or the increasing number of countries that lack the population, economic resources, political maturity and/or social cohesion to function in the modern world. This instability may give rise to bursts of disorder and in such situations, the response by well-meaning countries will of necessity be reactionary and ad hoc.

The war in Afghanistan has taught Canadians a number of lessons. The most obvious is never become involved in a land war if the conditions for success are not understood or achievable. A country that has no history of effective governance or cohesion amongst ethnic populations or a viable economy is not a good candidate for intervention. However, this experience should not deter Canada from assisting states that request help in solving their problems. Such assistance may be military, political, economic, social or humanitarian in nature. It must however have clear goals, understood costs and mechanisms for periodic and objective reviews. In every situation the reason for Canadian assistance must be the fulfillment of a national interest. A foreign policy review that will confirm long-standing national interests is not required.

The Canadian Forces (CF) are uniquely placed to be first responders to a broad range of situations. The tasks will range from securing access points and facilities (in conjunction with allies) to providing initial humanitarian assistance. Central to these operations is the need for quickly deployable command, control, communications, logistic and medical capabilities along with adequate force protection. If violence occurs, the ability to deliver and support a robust force that can work with coalition partners must exist. Hence the general purpose nature of the Canadian Forces must be maintained.

How can Canada become a useful general purpose first responder? There is a need for a rapid deployment capability that can provide command, control, communications, logistics and medical support as soon as the access points have been secured. If access must be achieved by air, the Royal Canadian Air Force (RCAF) could move the necessary elements into the theatre. If there is no air access, as

was the case in Haiti in 2010, the alternative is an over-the-shore entry using naval vessels. A properly equipped naval task force can provide the necessary facilities until more permanent facilities can be established ashore.

From a policy perspective, the future of the navy needs to be reconsidered. Canada's national interests demand a maritime capability for domestic and foreign operations. Naval capabilities must include command, control and communications that will facilitate combined and joint force operations. The navy must be able to provide logistic services to sustain itself and others until this is established in the theatre. The naval task force must include more than a naval command ship and a frigate. Even once established ashore, the theatre will still require fast reliable shipping to move stores and equipment from the nearest logistics base to the theatre.

For the army, there will be a requirement for more field logistic troops and equipment, more engineers, more medical resources and joint force command and communications elements. Existing light infantry, light reconnaissance and special forces must continue to be available for action where the operating environment is not permissive. Once the RCAF acquires its new Chinook helicopters it will have a tactical airlift, but it would be useful to acquire one or two more CC177 Globemaster aircraft.

The government must rethink the force requirements of the CF. There are serious questions to consider:

- Does Canada Expeditionary Forces Command (CEFCOM) require an on-call command ship capable of hosting it on a rapidly deployable basis?
- Should CEFCOM require the navy to share a roll-on/roll-off container ship with, for example, Marine Atlantic, a federal Crown corporation, for rapid logistic needs?
- Does the Disaster Assistance Recovery Team need to be enlarged and capable of deploying by naval ship?
- Can the army preposition sufficient equipment and stores at Shearwater and Esquimalt or overseas for rapid deployment?
- Can the navy procure a Joint Support Ship that has joint and combined command and communications facilities along with a roll-on/roll-off logistic capability and extensive helicopter landing and maintenance features?
- Can the navy's sovereignty mission be shared with other government departments in a way that the Arctic/Offshore Patrol Vessels are operated by the Canadian Coast Guard with crews and equipment

embarked, as required, from other departments (fisheries, police, border, immigration or CF)?

- Does the navy need to own its own submarines or can it share boats with an ally, and thereby free up resources to allow other ships to be built?
- Can the CF create a joint force that is deployable as a Canadian formation that is self-sustaining within a larger multinational undertaking?

Creative thinking, operational experience and cooperation will provide the answers. Canadian taxpayers want Canada to fulfil its national interests in an effective and inexpensive manner. To do this, the CF must remove inefficiencies from structure and processes. The CF must also get rid of unneeded bases and equipment to focus its resources on capabilities that are relevant to the future. 🍷

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### ***Comment on Summer 2011 Editorial***

**Fraser McKee**

It may have been part obituary for Admiral Sir Henry Leach, but I thought that Peter Haydon's Editorial, "The Falklands War: Lessons Learned and Not Learned," in the Summer issue of *Canadian Naval Review* (Volume 7, No. 2) was one of the best summaries of *why* and *what* for a navy I've seen. In particular I liked the four points Peter Haydon made in quoting Leach's approach. I had read somewhere that Mrs. Thatcher was a bit dubious when Leach made his forceful presentation of 'we can do it,' as a result of Defence Minister John Nott's attitude, but was won over in minutes.

As I have written in the latest *Starshell*, it's too bad that such clear and forceful arguments reach less than 0.1% of the voting population. Even the most obtuse of them would understand Haydon's points. Bravo Zulu.

It's really quite fascinating to see the Brits getting out of the naval business to a large extent, after 300 or 400 years. There have been ups and downs but their current attitude is unprecedented since about the Dutch Wars of the 1600s. Having one or two huge new nuclear 'A' boats and no carriers really doesn't provide any flexibility of options, and cutting out more destroyers/frigates moves in the same direction. Canada should dash over and offer to buy a couple of the newer ones! But that's politically impossible here – the navy is part of the dockyard unemployment insurance program, and our (publicized) experience with the submarines would give the opposition a field day. Silly, but I know that's how it breaks.

A very good issue, with several well made points. 🍷



# Plain Talk: A Royal Distraction?

Sharon Hobson

The Harper government has launched a load of chaff which it probably hopes will distract critics from their main target – budget cuts. With much fanfare, the government announced in mid-August 2011 that it was stepping back in time and restoring to the navy and air force their old names, the Royal Canadian Navy and the Royal Canadian Air Force. The decision to return to the pre-unification names was apparently prompted by various veterans' groups and by the Prime Minister's desire to pay tribute to Canada's history of military valour. But it also has an added benefit: by pandering to the sentimental side of our society, the Harper government can appear to be supporting the military while quietly removing some of its resources.

The cost of rebranding the navy and the air force has not been announced, but it will not be insignificant. Everything that has had the names Maritime Command or Air Command on it will have to be reprinted. That includes all signage, banners, brochures, letterhead and badges, from every level of headquarters down through every unit, sailor, air crew and technician. Not everyone is happy about the rebranding. Even the Royal Canadian Legion has said that the money could “be better used to equip our sailors, soldiers and airmen”<sup>1</sup> and historian Jack Granatstein thinks the decision to revert to the pre-1968 names is nonsensical. As he said, “I think this is appalling ... it's abject colonialism.”<sup>2</sup>

The impact of the return to the royalist tradition with its attendant service loyalties can reach beyond the ceremonial. Doug Bland, chair of Defence Management Studies at Queen's University, worries that future Defence Ministers could find themselves facing off against divided navy, air force and army commanders all of whom are “trying to exert their influence on defence policy in the interest of their service.”<sup>3</sup>

Even before rebranding, the three services were moving away from the concept of a unified Canadian Forces (CF) and reverting to traditional army, navy and air force norms. For example, early on in the Afghanistan deployment the army recognized the need for an unmanned air vehicle (UAV) to provide intelligence to the ground forces. But getting approval for that capital program was difficult because the air force – drenched as it is in fighter pilot machismo – was apparently reluctant to spend its resources supporting a UAV fleet. Ultimately the army got the UAVs it needed, leased from MacDonald Dettwiler and operated by the air force. However, now that the combat



*Crews prepare a Heron UAV for take-off at Kandahar Airfield in February 2009. The army's lease for the Heron fleet has come to an end, and replacements are not forthcoming.*

mission is over, the lease of the Heron UAV fleet has come to an end, and there appears to be little enthusiasm within the air establishment to become responsible for a new fleet. Thus the capital plan to acquire a medium-altitude long-endurance UAV such as the General Atomics Predator has stalled, and the CF is facing at least a four-year gap in UAV capability.

That the squabbling over resources happened when the money was relatively free-flowing from government because of the Afghanistan mission can only indicate that inter-service rivalry will get worse as the budgets get tighter.

The government has already cut the planned growth in the defence budget. In the 2008 Canada First Defence Strategy (CFDS) the military was told to expect annual budget increases of 2.7% starting this year, but last year the government announced that the 2012-13 budget would be cut by \$525 million, and there would be a subsequent cut of \$1.0 billion in 2013-14. Admittedly, these cuts coincide with the end of the combat mission in Afghanistan, but during the course of that mission the CF acquired a larger equipment inventory which now requires substantial repair and overhaul, as well as an increase in the size of the armed forces which must now be supported.

At the same time, government departments have been told to conduct a Strategic and Operating Review in order to identify the bottom 5% of their spending priorities so that the money can be redirected to paying down the government debt. Some observers, however, expect that



Tugboats ease the soon to be 45-year old HMCS *Algonquin* towards the dockyard into Esquimalt following a refit in 2009.

the actual cuts will be higher than 5%, possibly more than 10%. And this comes at a time when the navy is already facing a shortage of personnel and ships.

In line with government cutbacks, the Department of National Defence (DND) is looking at 'transformation' as a way to prepare the military for a leaner and more efficient future. As Chief of Transformation, Lieutenant-General Andrew Leslie was tasked with finding ways to cut overhead so that money and personnel could be redirected to the frontline forces. In his address to the annual Conference on Defence and Security in February 2011, General Leslie expressed his frustration with the bureaucracy and the various headquarters of the CF, as he tried to find ways to move resources from administration to operations. He said, "nothing will defend itself so vigorously ... as a headquarters which is threatened with being shut down." In his report, which he submitted to Defence Minister Peter MacKay and Chief of the Defence Staff General Walter Natynczyk in early July, he said, "[m]ost subordinate organizations have done their very best to preserve their structures, their internal funding and their process ... which usually result[s] in overhead staying much the same while support to the front-line deployable unit is cut far more than originally forecasted."<sup>4</sup>

Although General Leslie's report has not, at time of writing in August 2011, been made public, his findings were echoed in an article by Bruce Campion-Smith in *The Toronto Star*. Campion-Smith noted that while the number of civilian employees in DND has grown by 31% since 2004, the navy has lost 1,100 full-time sailors.<sup>5</sup> Vice-Admiral Dean MacFadden told an audience in February 2011 that when he took over as Chief of the Maritime Staff in 2009, the navy was 1,600 people short of its establishment of 8,500. While the navy has worked hard to fix that, he said it will be 2018 before the navy has filled the gap.

MacFadden also pointed out that the navy modernization plans were going to leave him with much fewer ships for operations over the next five years. While managing the *Halifax*-class fleet during its extensive modernization in a way that leaves the navy with some capability, MacFadden pointed out that the *Iroquois*-class destroyers and the auxiliary-oiler-replenishment ships will reach 45 years of age, and "there is nothing I can do to address that." "When [a ship is] 45 it's not as reliable as it was when it was 15. So there is a period of substantial risk that is still ahead of us" as the navy operates with older and fewer ships. According to MacFadden, "there is an immense amount of money that needs to be committed [to the navy] to get us beyond that [period of risk] and into a recapitalized fleet."<sup>6</sup>

But that recapitalized fleet is competing for resources against other programs such as the fixed-wing search and rescue aircraft, the close combat vehicle, the tactical armoured patrol vehicle, the Joint Strike Fighter and a new maritime patrol aircraft. When the government published CFDS in 2008, most analysts pointed out that the 20-year funding plan was not sufficient to pay for all the equipment programs. Now, with the government's new cutbacks, there will be even less money and even more competition for the limited funds.

In August the government gave the navy a brand new (old) name and lots of laudatory speeches. Now what about those ships? 🇨🇦

#### Notes

1. Gloria Galloway, "Navy, Air Force will become 'Royal' Again," *The Globe and Mail*, 16 August 2011.
2. Tristin Hopper, "Forces' 'Royal' Return," *The National Post*, 16 August 2011.
3. *Ibid.*
4. As quoted by John Ibbitson, in "General's Report Calls for 'Dramatic' Cuts to Military," *The Globe and Mail*, 19 August 2011.
5. Bruce Campion-Smith, "Defence Growth Happened Far from Front Lines, Analysis Shows," *The Toronto Star*, 15 August 2011.
6. Speech made by Vice-Admiral Dean MacFadden at the Conference on Defence and Security, 25 February 2011.

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# An Arms Race in the South China Sea

Christian Bedford

Actions, as they say, speak louder than words. Nowhere is this adage more true than in the South China Sea, where recent conciliatory words by all Spratly and/or Paracel Island claimants do not match their actions, at least in terms of their recent arms acquisitions.

All claimants to the South China Sea's coveted real estate – including China, Vietnam, the Philippines, Taiwan, Malaysia and Brunei – have spoken at various times of the need to resolve their dispute through dialogue. Diplomats and military officers regularly hold bilateral and multilateral meetings throughout the region, and profess a dedication to resolving their differences through discussion and negotiation. While it is certainly true that this would be the preferred course of action for all claimants, the countries of the region have been hedging against more assertive action, and have been tooling up their armed forces to this effect.

Chinese naval watchers are also interested in the other less headline-grabbing naval platforms that the People's Liberation Army Navy (PLAN) has put to sea. Among these is the Type-071 *Yuzhao*-class landing platform dock (LPD), of which the PLAN has built three and is preparing to launch a fourth by the end of 2011. These vessels would be extremely useful to Beijing in any future action against islands in the South China Sea, as each 18,000-ton vessel can carry between 600 and 800 troops, plus landing craft and support vehicles. A larger Type-081 LPD, said to be as big as a French *Mistral*-class helicopter carrier, is also being constructed with a view to having a 12-vessel fleet of amphibious assault vessels – protected by submarines and surface combatants – capable of landing a 5,000-strong force on islands in the South China Sea. It is clear that no other claimant can match this capability.

Vietnam has arguably been the next most active in its naval acquisition plans, however it remains a long way off from matching China's capabilities. Nevertheless, Hanoi has worked steadily over the past few years to upgrade its maritime forces, and to this end made headlines in 2009 when the government signed a deal with Russia for six Project-636 *Kilo*-class conventional submarines. It is believed that by the summer of 2011, construction on these boats was well underway, and Defence Minister Phung Quang Thanh said in August 2011 that Hanoi would have its six *Kilos* in Vietnamese waters by 2016-17. The addition of these submarines will provide the antiquated Vietnamese Navy with much-needed punch, and will bring a new capability to bear if disputes with China – in particular over the Paracel Islands where several clashes between Chinese and Vietnamese fishermen have occurred over the past year – turn hot once again.

Vietnam also took possession of its second Russian-built *Gepard*-class light frigate in early August 2011 which significantly boosts its surface capabilities. Hanoi ordered two of the vessels from Russia's Zelenodolsk shipyard in December 2006, and it is believed they will place an order for a further two ships by the end of the year. These vessels, with their advanced combat systems and stealthy superstructure, will support Vietnamese fishing vessels around the Paracel Islands which until now have been at the mercy of Chinese maritime agencies that have a robust presence in the region. From the air, Vietnam has also added new maritime patrol aircraft, including new Twin Otters from Victoria-based Viking Air adapted for military use, as well as one billion dollars worth of advanced



The aircraft carrier ex-*Varyag* during its refit in China.

A quick tour of the South China Sea bears this out. The People's Republic of China, clearly the largest and most powerful littoral state, continues its impressive military modernization, particularly in the naval realm. By far the biggest headline during the summer of 2011, at least from a military point of view, was the long-awaited launch of China's first aircraft carrier, the former Soviet carrier *Varyag*. The ship, one of the worst-kept secrets in China, made its maiden voyage in mid-August, a five-day sail to test its propulsion and navigation systems. Although the *Varyag* won't be conducting full-spectrum carrier operations for years, its appearance at sea was a reminder of China's power in the region.



Vietnamese People's Navy sailors stand in formation during an inspection by US Chief of Naval Operations Admiral Mike Mullen during his visit to Hai Phong, Vietnam, in June 2007.

Russian Su-30MK2 fighters armed with modern anti-ship missiles.

Struggling to catch up in this arms race is the Philippines, which has the oldest and worst-equipped navy in the region, a product of years of land-centric defence planning and miniscule military budgets. As a measure of its maritime forces, the Philippine Navy has what is thought to be the world's last World War II-era destroyer escort/frigate in active service, its former flagship BRP *Humabon*. Manila has started to turn things around, however, and in August 2011 the government took possession of its largest and most modern warship, BRP *Gregorio del Pilar*. This 3,000-ton vessel was transferred to the Philippine Navy from the US Coast Guard under an agreement that may eventually see eight former *Hamilton*-class coast guard cutters transferred over the next five years. There is little doubt that these additions will represent a major boost for the Philippines, which has to date been limited to strong words – with little to back them up – when dealing with the Chinese over disputed islands in the South China Sea, particularly Scarborough Shoal which China claims and which Manila has tenuously held since the 1960s.

The other South China Sea claimants have been less active in recent months, but are clearly seeking to bulk up their forces for fear of being left behind as others procure new naval systems. Malaysia just incorporated two state-of-the-art *Scorpena*-class conventional submarines into its navy and has based them at Sepangar Bay naval base in Malaysian Borneo, a decision that clearly indicates that Kuala Lumpur too wants to be seen as a serious Spratly Island claimant. Tiny Brunei has also kept pace, with the introduction of new German-built offshore patrol craft and corvettes to boost the capabilities of this small but competent naval force.

So why the rush to build and buy new naval platforms in

such a short time? No country in the region wants to admit it, but all clearly have their eyes fixed on future potential conflict in the South China Sea. In a recent *Foreign Policy* article titled “The South China Sea is the Future of Conflict,” security expert Robert Kaplan outlines the stakes. Two-thirds of South Korea's energy imports, more than 60% of Japan and Taiwan's oil and gas, and over 80% of China's total oil imports pass through the South China Sea. And beyond its value as an energy superhighway, the sea is believed to contain about seven billion barrels of oil, and over 900 trillion cubic feet of natural gas.<sup>1</sup>

When such bounty is claimed by such a large number of countries in such close proximity, conflict may become inevitable. The South China Sea is ringed with countries with differing national aspirations. Vietnam seeks to be the next China, Taiwan seeks security and recognition of its independence, Indonesia seeks to be a flourishing and prosperous Muslim state, and China seeks to become the region's dominant political and economic entity. All these aspirations intersect in the South China Sea, and the fulfillment of each country's goals is inescapably linked to the outcome of disputes over ownership of the sea's islands and shoals. Diplomats from littoral states regularly crisscross the region seeking peaceful political settlements to the ongoing claims, but it is clear, based on the arms buildup that is underway around the South China Sea, that actions already speak louder than words. 🇵🇵

#### Notes

1. Robert Kaplan, “The South China Sea is the Future of Conflict,” *Foreign Policy*, September/October 2011, available at [www.foreignpolicy.com/articles/2011/08/15/the\\_south\\_china\\_sea\\_is\\_the\\_future\\_of\\_conflict](http://www.foreignpolicy.com/articles/2011/08/15/the_south_china_sea_is_the_future_of_conflict).

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# Warship Developments: A Balanced Fleet for the 21<sup>st</sup> Century?

Doug Thomas

What should be the composition of the Royal Canadian Navy (RCN) in the coming years? Should it look like an updated version of the current fleet, or should the trends in geopolitics be driving Canada in a different direction? In this article I will propose a 'strawman' – a balanced fleet for 2030, which could be delivered by the new National Shipbuilding Procurement Strategy.

*Four Submarines.* Submarines should continue to be part of a balanced fleet, as Canada will want to be able to use them as a deterrent, as it did during the 'Turbot War' in the 1990s, and to train anti-submarine warfare forces in the specialized skills necessary to counter enemy submarines. During the Cold War, Canada's *Oberon*-class diesel-electric submarines and Maritime Patrol Aircraft were the only Canadian strategic assets, as they had the capability to engage and destroy Soviet ballistic missile submarines. By 2030 a new program should be well underway to replace the current *Victoria*-class boats with highly-automated hybrid submarines with air-independent propulsion systems, perhaps a development of the very impressive German U-212. A force of four submarines makes sense to me, as is now the case. Of the two based on each coast, one should be available for operations at all times.

*12 Destroyers/Frigates.* In order to sustain the deployment of a Canadian naval task group (composed of one command and control/area-air defence destroyer, two multi-role frigates, accompanying underway replenishment vessel, and embarked maritime helicopter detachments), I suggest a minimum of 12 surface combatants are required. This number would permit a rotation of ships as was done so effectively for *Operation Apollo* in the two years following the attacks of 11 September 2001. A good choice for this core component of the new surface fleet is the Canadian Surface Combatant, a concept employing a common hull and propulsion plant but with a different mix of sensors and weapons for two batches of ships. Of the 12 ships at least four should be guided-missile destroyers with a state-of-the-art area-air defence and command and control capability, and the remainder would be frigates with a lesser capability in those areas to keep costs in check. These ships should be interoperable with those of Canada's principal allies in order to conduct effective multinational operations.

Maximum use of automation, modularization and fitted 'for-but-not-with' certain equipment would help constrain construction and operating costs while permitting mission fits for specific operations and future upgrades. Another

feature of this design should be provision of extra accommodation for a significant number of personnel – the Royal Navy's Type 45 *Daring*-class destroyers, for example, have space for 60 additional people. The extra personnel could be trainees in peacetime, supplementary manning in time of crisis or war, additional boarding parties, Special Forces teams, etc. The US Navy's large *Spruance*-class destroyers of the 1970s and 1980s were criticized at first for being too big while possessing too small a 'punch' but later in their service lives this additional volume and deck space was filled with new weapons, sensors and people!

*Four Offshore Patrol Vessels.* As has been mentioned in previous issues of *CNR*, there are many constabulary duties that do not require a 5,000-tonne ship with area defence weapons. An Offshore Patrol Vessel (OPV) of perhaps 2,500 tonnes, with a speed of some 22-24 knots, a single automated medium calibre 57mm or 76mm gun, a single light maritime helicopter, and a ship's company of 50-60, would be an excellent platform for patrolling off Canada's shores, or far afield. All four OPVs could be constructed and operated for approximately the cost of one large frigate, and could take on some of the duties now performed by them. Other navies, such as the French, have traditionally employed such ships for sovereignty and anti-piracy missions to good effect.

*Four Arctic Offshore Patrol Ships.* The Arctic Offshore Patrol Ship (AOPS) design, expected to be ordered in the next few years, has become a very specialized rather



Is the U-212-class submarine U-32 a possible future template for a *Victoria*-class replacement?



The Spanish amphibious ship *Juan Carlos I*, upon which *Canberra* is based.

than general-purpose vessel. Most months of the year AOPS will not be able to operate in the Arctic because of ice build-up. (They are not *icebreakers*, they will be *ice-strengthened* to operate in waters with ice up to one metre thick.) They are Arctic *and* offshore ships, but their shape and low speed mean that they will be limited in their ability to do the offshore two-thirds of their task for the eight months when they won't be able to operate in the Arctic. As well, the ship will be too slow for the general purpose duties that the OPVs could perform, and there is little need of ice-breaking off the Somali coast! Certainly the navy should be involved in the Arctic, but maybe it doesn't need all of the proposed six: perhaps the other two could be incorporated into the coast guard's fleet.

*Two Amphibious Ships.* Canada will need the capabilities offered by such designs as the Australian *Canberra*-class Landing Helicopter Dock (LHD) ship. This type of flexible ship, with docking for landing craft, flight deck for a range of helicopters (and some aircraft) and huge internal volume for transporting goods or people for short or long distances, is a huge force multiplier. These ships would be an incredible resource, whether providing offshore support to operations in failed states, disaster relief, or as a very efficient CH-148 Cyclone platform for anti-submarine warfare operations.

*Three Replenishment Vessels.* Replacement of *Provider*, *Protecteur* and *Preserver* is long overdue. Canada should have at least three replenishment vessels so that one would always be available for operations on each coast even during periods when the third is in refit or otherwise unavailable. Although recent specifications for the Joint Support Ship have emphasized fleet support rather than joint operations in order to minimize cost, I anticipate a large capability boost for the fleet compared to the current ships dating from 1969 and 1970. Modern propulsion plants and automation of much equipment would mean that three ships could be operated with fewer people than the two current replenishment ships require.

*Six to Eight Coastal Patrol Vessels.* I believe that the 2030 navy should have at least one class of medium-size patrol ship, smaller than the OPV, that could make its presence known in coastal and inland waters. The Mid-Shore Patrol Vessels being built for the Canadian Coast Guard would make an excellent sovereignty patrol and junior officer training vessel. One of the issues with the current small number of surface combatants is the lack of platforms for the profes-

sional development of naval officers. Frigate Commanding Officers of the next decade will likely have one posting in command (due to the Frigate Life Extension (FELEX) Program and probable paying-off of the *Tribal*-class destroyers before they are replaced) and perhaps in that time only one year of actual operational sea-time. This is not a lot of professional seasoning for those aspiring to the senior ranks of the navy. When I joined the navy in 1965, it was common for MARS officers to have experience as Executive Officers and Commanding Officers of *Bay*-class minesweepers and *Prestonian*-class frigates before being appointed to those positions in destroyers. It is expensive to train Commanding Officers – surely they should be employed at sea for more than one short posting. I also believe command experience in small ships would greatly improve the quality of future commanders of major surface combatants and support ships, and indeed the leadership of the navy.

There has been discussion in CNR regarding the composition of the Canadian fleet, with some people arguing that frigates and destroyers are too big and expensive for the constabulary and peace-support operations they are assigned so Canada needs something 'cheap and nasty' instead. Proponents of a primarily multi-purpose navy would say that we need to hedge our bets; that a fleet composed of 5,000 tonne vessels is able to meet any operational tasking and that such ships can be modified for new roles over their life-span. I suggest that Canada needs a high-low mix in the future, and that this must be recognized by politicians and members of the defence community. I think there is a concern among naval planners that to many decision-makers a ship is a ship and that accepting less capable warships as part of the fleet mix is the slippery slope toward the entire fleet becoming 'cheap and nasty,' and thus incapable of participating in high-end naval combat in concert with allies.

Well, that's my strawman. I hope to hear what you think. 🍷



# Book Reviews

*Keystone Doctrine Development in Five Commonwealth Navies: A Comparative Perspective*, by Aaron P. Jackson, Canberra: Sea Power Centre - Australia, 2010, 81 pages, ISBN 978-0-642-29730-3

Reviewed by Matt Gillis

The impending release of the successor to *Leadmark: The Navy's Strategy for 2020* offers opportunity for reflection and comparison. Many other navies periodically produce important points of reference like *Leadmark*, and in doing so articulate their relevance in their state's security environments, rationalize force structures and present visions for the future. What lessons, then, can be learned from the 'leadmarks' of other navies?

In *Keystone Doctrine Development in Five Commonwealth Navies*, Aaron P. Jackson provides a comparative analysis of 'keystone doctrine manuals' in the navies of five Commonwealth states: Canada, India, New Zealand, Australia and South Africa. Citing the first edition of *Australian Maritime Doctrine: RAN Doctrine I* in his introductory chapters, Jackson notes that keystone doctrine "serves to educate and motivate personnel and improve their understanding of the rules and functions of their services," and is also "used to inform those within government and the wider community of the ways in which military force can be applied by the nation in exercising its national power" (p. 5).

Subsequent chapters discuss conceptual foundations common to each manual, such as the utilization of Ken Booth's Triangle, and present a case-by-case analysis of each navy's doctrine development. The cases are tackled in a generally chronological fashion. In discussing the Canadian Navy, for instance, Jackson first builds context with the navy's post-Cold War circumstances before discussing *The Naval Vision: Charting the Course for Canada's Maritime Forces* (1994) and subsequently charting the evolution through *Adjusting Course: A Naval Strategy for Canada* (1997) and *Leadmark* (2001).

Jackson's discussion of keystone doctrine development is fair and well-written. He succeeds in broadly outlining the manuals through his three lines of analysis: the circumstances that shaped the manuals; the content of the manuals themselves; and the resulting impact, praises, or criticisms. Unfortunately, given the small size of the book, such a broad approach necessitates a very brief treatment of the material – the chapter on South Africa, for example, is a mere four pages, one of which contains a large figure.

Critical analysis is the greatest victim of Jackson's hasty

treatment, as his discussion tends to be descriptive in nature, offering excellent explanations of the content of the manuals and how they were produced, yet ultimately leaving the reader wondering 'so what?' Comparative discussions are particularly unsatisfying. For example, the reason behind the focus on Commonwealth navies is never made clear, beyond occasional influence by Royal Navy doctrine or personnel in preparing the manuals.

Jackson's conclusion does generate some interesting, if somewhat superficial, observations. For example, he notes that keystone doctrine manuals frequently focus on justifying and attempting to secure new platforms, and are used by navies to promote their interests (p. 70). Statements like these are interesting and it would be helpful to hear more about the use of these manuals as public relations tools rather than purveyors of actual 'doctrine,' but readers are left hanging as the book ends rather abruptly.

Does Jackson succeed in illuminating the experiences of navies in developing keystone doctrine manuals? I know of no other attempts to conduct comparative analyses into keystone doctrine development, so I suppose this book sets the bar. At the same time, it lacks in-depth critical and comparative analysis, really raising more questions than it answers. Still, *Keystone Doctrine Development in Five Commonwealth Navies* is a good reference guide to illustrate attempts by navies to connect with policymakers and the public. Hopefully, it will spur further critical analysis in this neglected area of study. 🍷

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*Monsoon: The Indian Ocean and the Future of American Power*, by Robert D. Kaplan, New York: Random House, 2010, maps, index, glossary, 368 pages, ISBN 978-0-679-60405-1

Reviewed by Tim Lynch

From time immemorial the monsoon winds of the Indian Ocean provided energy that predictably moved sailing craft across vast distances in record time. The sea does not record marks of what transpired on its surface, but the places these ships visited were moulded by the cargo they carried and the people they transported. The opportunity for trade, adventure and reward motivated persons of all backgrounds to travel with the monsoons. The development of the railroads and the steam engine made monsoon winds and ports less important, but the desire to control maritime passageways and littoral communities has not diminished. It is an appreciation of how these trends have influenced the 20<sup>th</sup> century maritime world, and how they will affect maritime relationships in the 21<sup>st</sup> century that a reader will gain from Robert Kaplan's book *Monsoon: The Indian Ocean and the Future of American Power*.

Kaplan conveys a historical, socio-geopolitical view of the region between the Cape of Good Hope and the Indonesian archipelago. Anyone unfamiliar with this region is in for a treasure of discovery. The book provides a prologue to the diminishing role of the United States in the world as a global maritime warrior. The strategic question posed is who will take its place – China or India? Both states are establishing relationships around the world in particular to ensure supplies of energy.

Among other things, the reader is treated to a discussion of how different forms of Islam evolved around the world over the years. As well Kaplan discusses Portuguese exploration of the Indian Ocean, pointing out that 23 years after rounding the Cape at the turn of the 15<sup>th</sup> century they had built some 40 outposts in the region. He uses the word ‘crusade’ to describe their efforts, acknowledging that their faith gave them strength. The Portuguese were medieval Europeans not having benefited from the period of secular enlightenment. They believed that defence of their religion – their prophet was the Virgin Mary – through the slaughter of non-believers, mostly Muslims, assured them glory in heaven. This reader couldn’t help but get the impression that history repeats itself when the author referred to 9/11 and current geopolitical imbroglios of the region.

The first major lesson to take from the book is that the Atlantic Ocean is very 20<sup>th</sup> century. The second lesson is that Kaplan predicts that in the 21<sup>st</sup> century fiscal pressures will force the United States to reduce its obligations in the Atlantic but its strategic interests will focus it on the Indian Ocean.

Kaplan provides an interesting account of piracy in the region but does not discuss Canada’s involvement in countering such activities. He reports that Canadian interests lost out to the Chinese in developing the port at Hambantota in Sri Lanka but this is his only mention of Canada’s involvement in the Indian Ocean.

National awareness around naval matters in Canada is focused on the Atlantic port of Halifax with its ties to ‘old Europe’ and NATO. Few Canadians could point to Esquimalt – the home of West Coast part of the Canadian Navy – on a map. Canada could enhance its European ties by substituting for the US Navy in the Atlantic theatre and trust the USN to protect Canadian interests in the Indo-Pacific region. But as we think more about Canada’s Arctic coastline, it may be a good time to encourage Canadians to define the country as a global maritime state. To accomplish this, Canada has to think about having a naval presence in the Indo-Pacific region. This means a balancing of Canada’s naval culture between its East and West Coasts.

Kaplan’s book provides valuable insights of past and present maritime trends on the other side of the globe. The book contributes to understanding strategic maritime alliances in a region where many new Canadians originate and where most of Canada’s future trade will focus. Its bibliography offers a range of references that could be interpreted from a Canadian perspective. Most enjoyably, Kaplan also provides a glossary of terms that will enhance the lexicons of all mariners. 📖

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*The Evolution of Strategy – Thinking War from Antiquity to the Present*, by Beatrice Hauser, Cambridge University Press, 2010, \$37.99, 578 pages, paperback ISBN 978-0-521-15524-3

Reviewed by Dave Mugridge

One might be forgiven for thinking that covering this topic is a tall order for any author, but Beatrice Hauser’s deeply intellectual analysis of the history of military strategy achieves its aim and achieves it with style. It is comprehensive without being dry, it is intellectual without being geekish and it is authoritative without being academically arrogant. For those who need to think in a strategic manner this book is essential and will provide a sound foundation upon which to base a career as a military staff officer. The book is a well-considered canter through military and social history; but it also provides readers with all they need to know to grasp the evolution of strategy from the earliest times to today.

Where *The Evolution of Strategy* really succeeds is in illustrating the connection between strategy and the manner in which war has been waged. For me this raises some troubling questions about the manner in which the West has waged its war against Islamic terrorists and suggests the answers were there in history but we chose to ignore them. Hauser’s knowledge is such that the reader is almost seduced into unthinking agreement with her description of the future of warfare – but we must remember that few academics are credible prophets.

Hauser also succeeds in her chapters which review the modern domains of warfare and the types of warfare used by today’s practitioners. For this alone I would recommend the book for future attendees of a Joint Staff College where to have an appreciation of your colleagues’ heritage, foibles and background is a huge advantage. This is not a book to gather dust on a shelf or to read on the beach. It should be read, digested, considered and appreciated like one would approach a Cuban cigar and cognac in the study. The author is to be congratulated for a fine piece of work and a major contribution to the study of strategy. 📖



# HMCS *Sackville*: Past and Present

Doug Thomas



Credit: author

HMCS *Sackville*.

HMCS *Sackville*, our National Naval Memorial, had a very active war and was in action in two of the largest convoy battles of the Battle of the Atlantic. A. William 'Bill' Murray, *Sackville*'s First Lieutenant late in the war, has written a book of some of his memories called *Naval Nuggets*. Bill Murray is still affiliated with *Sackville* as a very active Canadian Naval Memorial Trust Trustee, and his 91<sup>st</sup> birthday will be celebrated in the ship in October! Here is an excerpt from his reminiscences.

As of April 18 [1944] I was appointed to join the veteran corvette HMCS *Sackville*: I was elated over this as the ship had a fine record; and was highly regarded by those sailors serving in the North Atlantic theatre. I reported to the Manning Commander and he said to me 'you're joining a fine ship and she's almost completed her refit.' I said 'that's great Sir, what jetty will I find her?' His reply really startled me, 'she's not here; she is in Galveston, Texas.' *Sackville* was [being refitted] in Todd Shipyards and would be completed in a couple of weeks. The hope was that she would be ready for the Normandy Invasion, along with many other Canadian ships undergoing refits in American shipyards along the Atlantic seaboard.

En route to the ship, Murray met *Sackville*'s Captain, Lieutenant-Commander Angus Rankin, also joining the ship.

They talked of many things, including convoy and U-boat actions that took place in September 1943. Murray tells the story of Convoy ONS 202 that joined a slower east-bound convoy, ONS-18, and made up a group of 63 merchant ships. A swarm of U-boats (a 'wolf pack') attacked over a few days and sank four escort ships and seven merchantmen. The Canadian destroyer HMCS *St. Croix* was a victim, 81 of the survivors were in the freezing water for 13 hours. The rescuing vessel was the British frigate HMS *Itchen*; which was later torpedoed and sunk with the corvette HMS *Polyanthus*. The RN frigate HMS *Lagan* had 39 feet of her stern blown away by a torpedo. Murray tells of the night of 21 September when there were nine attacks on the convoy. There were three survivors from *Itchen* – one from *Polyanthus* and one from *St. Croix* and one from *Itchen* herself.

This was the introduction of the acoustic-homing 'Gnat' torpedo into U-boat warfare. Aircraft from Newfoundland finally drove off the wolf pack and the convoy arrived at its destination after the loss of seven merchant ships. The Allies came up with

effective counter-measures within weeks so the night of 21 September – 'the Battle of Battles' – was not repeated.

Now the last remaining ship of her kind, 67 years later HMCS *Sackville* spends the summer near the Maritime Museum of the Atlantic in Halifax. A steady flow of visitors have seen a living historical artefact manned by knowledgeable guides, imparting an appreciation of the importance of *Sackville* and her sister escorts that shepherded thousands of freighters and tankers across the North Atlantic, keeping the lifeline to Britain open during World War II.

There were several notable events in August 2011. His Excellency Governor-General David Johnston visited *Sackville* for the first time, touring the ship and meeting several veterans. When he departed, the Governor-General remarked that he found the ship in very good shape – to serve Canada in the years to come. Several days later, *Sackville* participated in a ceremony announcing the re-naming of Maritime Command to its traditional designation, the Royal Canadian Navy, a big day for serving members and veterans alike. 🇨🇦

Doug Thomas is the Executive Director of the Canadian Naval Memorial Trust.



## 2011 Great Lakes Deployment

The 2011 Great Lakes Deployment included a navy frigate and two maritime coastal defence vessels. The ships visited ports along the shorelines of Quebec, Ontario and Newfoundland in August and September.

The deployment provided an opportunity for Canadians in cities along the route to tour Her Majesty's Canadian Ships *Montréal*, *Shawinigan* and *Summerside*. Ports of call included Trois-Rivières, Toronto, Port Weller, Hamilton, Montréal, Pointe Au Pic/La Malbaie, Gaspé and Corner Brook.

*All photos by Corporal Martin Roy, Formation Imaging Services, Halifax, Nova Scotia.*