CANADIAN NAVAL REVIEW

VOLUME 1, NUMBER 2 (SUMMER 2005)

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*HMCS **Chicoutimi** arrives back in Halifax Harbour*

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Editorial:
Moving on after *Chicoutimi*

The Board of Inquiry findings on the *Chicoutimi* accident are now a matter of public record and, with a few exceptions, we seem to be moving ahead again. Soon, one hopes, the accident and the media's obsession with submarine problems will be of historical interest only. Yet, we should not be too quick to commit the event to the archives – there are lessons to be learned in several areas. Of these, the purely technical lessons will become an important part of the greater professional learning experience. And this is rightly so because if we ever stop learning from our experiences we run the risk of becoming complacent and, by extension, potentially dangerous.

Are there lessons to be learned from the broader *Chicoutimi* experience? Yes there certainly are! For instance, the media coverage and commentary show very clearly that naval policy and practice (doctrine perhaps) are not well understood in Canada. The Canadian Navy in its various forms has never enjoyed wide public support, and some naval concepts, such as submarines, have always had to run a media gauntlet. This was the case in the 1960s when the *Oberons* were bought, certainly true in the late 1980s when nuclear-powered submarines were proposed, and true again in the wake of the 1994 Defence White Paper which advocated buying the four British *Upholder*-class submarines.

As many eminent people have pointed out, the Canadian maritime condition is ironic in that the country owes its existence to the sea yet views itself as a continental entity in which maritime borders are, at best, secondary considerations. Some will claim that Canadians are quick to turn their backs on the oceans once they have served their purpose. There is some truth in this. That Canada does not emphasize its maritime dimension is unfortunate, to say the least. It should; the oceans are very important factors in the overall well-being of all Canadians. Under such ambivalence – it is not a conscious or deliberate condition – it is hardly surprising that naval policies and activities don't generate much public interest unless something goes wrong.

*HMCS **Chicoutimi** arrives in Halifax on the Eide Transporter*

As many eminent people have pointed out, the Canadian maritime condition is ironic in that the country owes its existence to the sea yet views itself as a continental entity in which maritime borders are, at best, secondary considerations.

As a young academic, Samuel Huntington wrote a seminal article (published in US Naval Institute *Proceedings* in May 1954) examining the US Navy's post-war structural problems and the resultant need to re-establish itself in the public eye. He made several useful points,

some of which the Canadian Navy would be well advised to take to heart today. Huntington described a military service as "consisting of a strategic concept which defines the role of the service in national policy, public support which furnishes it with the resources to perform this role, and organizational structure which groups the resources so as to implement most effectively the strategic concept." To some that is a motherhood statement; however, when coupled with the key question that a service must be able to answer publicly – i.e., what function do you perform which obligates society to assume responsibility for your maintenance? – Huntington's definition is useful. Maybe the Canadian Navy needs to explain itself in simple terms to all Canadians because judging from the coverage of the *Chicoutimi* accident, its policies are not well understood. That is the first lesson.

The second point is somewhat troubling because it has implications broader than the navy alone. It too is a function of perspective. What became clear in the coverage of the accident was that the media, and perhaps the public, see the navy and the Canadian Forces as a whole as merely another government department. The fact that military operations are conducted according to strict professional standards and under civilian (political) control seems lost on most journalists and their editors who see the military as a completely politicized arm of government. In fact, the traditional and necessary practice of civil control of the military requires that missions and rules of engagement be approved politically but that there is no requirement to control the mechanics – professional standards provide the necessary checks and balances.

The integration of the departmental and military functions of the Department of National Defence in the 1970s created and has since perpetuated the false view of a completely politicized Canadian military structure. While that action may have made sense from a management point of view, it made little sense in terms of military command. Hence, the second lesson that can be drawn from the *Chicoutimi* accident is that the distinction between what constitutes necessary political control and those actions that are purely military and concern the safe operation of ships, aircraft and other equipment needs to be made absolutely clear to the public.

The third point that stands out is that the *Victoria*-class are good submarines with enormous potential. Under the circumstances, it made sense to buy them – the options to do otherwise were few and all would have required an even longer period of transition. As the Commons Standing Committee on Defence established, it would have been better had the replacement submarines for the *Oberons* been available sooner, but that did not happen. Political vacillation essentially wasted the time originally available to contemplate options. So, when the politicians finally decided to replace the *Oberons*, the options had expired.

The third point that stands out is that the Victoria-class are good submarines with enormous potential. Under the circumstances, it made sense to buy them – the options to do otherwise were few and all would have required an even longer period of transition.

Thus, the third lesson to draw from the *Chicoutimi* accident concerns the pace of the military procurement process – it has become too political and the point has been reached where the military's need for safe and effective equipment has become a secondary factor to the needs of domestic politics. Changing this requires a cultural rather than a procedural shift. Simply, the government needs to commit itself to its established policies. The 1994 defence policy was sound but the government's reluctance, even refusal, to commit the necessary resources made a nonsense of that policy. Now, we have a new defence policy statement that also looks ahead to the future and equally calls for considerable capital expenditure. It remains to be seen whether the government will commit the necessary funds to the new policy or if it will merely become a repeat of the 1994 fiasco.

To close, we should remember that *Chicoutimi*'s accident was neither the first nor the worst accident in the Canadian Navy. The engine room fire in HMCS *Kootenay* in 1969 was worse in terms of loss of life and actual damage. It too was a situation that could not be attributed to any individual and was quickly accepted by all, including the media, as a tragic accident. Canada moved on saddened but wiser, and having learned valuable lessons. We should now do the same in the aftermath of the *Chicoutimi* accident.

Peter T. Haydon

The *Victoria*-class Submarine Program

Commander R.E. Bush

There can be no doubt that the world has changed in the last 15 years. The end of the Cold War and the events of 11 September 2001 are the most important factors in this change. Those who sought a 'peace dividend' at the end of the Cold War have been sidelined by the regrettable manifestation of the unpredictable and unstable world that has followed the collapse of the Soviet Union. The threat – or perhaps *threats* would be more accurate – to our security is very different now, and certainly more unpredictable.

In addition to the major strategic changes caused by the end of the Cold War and the attacks of 9/11, we need to acknowledge that we now live in an environment of constant change, driven in part by the rapid pace of technological advancement, as well as the melding or removal of cultural and political boundaries brought about by the internet and other mass media.

During the Cold War, the West built up a tactical advantage. But who has it now? I think it can be argued that the advantage has swung away from us (i.e., those countries that share common values, and that act together to secure those values). Furthermore, the element of surprise (a fundamental component of tactical advantage), as well as some technical advantage (due to an ability to exploit new technologies faster than we can in the military) is on the other side.

In this world we need to improve our tactical advantage. And in this, both military operators and engineers have a part to play. Just as in the Cold War, when we were faced with achieving and then maintaining the tactical advantage, we must cooperate to meet this challenge.

Recently we were provided with a clear vision of future Canadian Forces operations . . . [which] delineates two primary areas where operations will be focused: domestic security and deployed operations in failed or failing states.

I see a concept of operations as the starting point for any combined approach to a challenge, whether it is tactical or technical. Recently we were provided with a clear vision of future Canadian Forces (CF) operations by the Chief of the Defence Staff. A broad concept of operations for the CF, the vision delineates two primary areas where operations will be focused: domestic security and deployed operations in failed or failing states.

This article looks at how submarines will be employed in "Canada Command" (CanadaCom) domestic operations, and in "Task Force Maple Leaf" deployed operations to help improve our overall tactical capability. The article is a look to the future, rather than a formal update on the *Victoria*-class program. It will provide some history and the present status of the submarines, but will more specifically focus on the aspects of submarine operations that will challenge all of us, operators and engineers alike, to ensure that Canada's submarines maintain the significant capability with which they were delivered.

Although of general interest, this discussion is particularly germane in the development and enhancement of technologies to meet the challenge of developing and maintaining an advantage against any new threat(s).

Background

The *Victoria*-class submarines were the first major naval combatant acquired by the CF after the end of the Cold War. This is significant, in particular because of the political environment that existed at the time. This was a time of serious concern about huge public debt and growing deficits. Canadians hoped that the end of the Cold War meant significant 'peace dividends' that would help to fight the deficit. Others believed that submarines were part of that dividend.

The decision to support submarine acquisition was made after thorough examination of submarine roles in the 'New World Order' by the Parliamentary Committee on Defence. The parliamentary committee heard numerous briefings from interested parties, some of which were by submariners and other naval officers from Canada and

other states. Clearly the potential for submarines to add significant value to modern operations was demonstrated and this resulted in the 1994 White Paper recommendation to pursue acquisition of the submarines.

The Victoria-class submarines were the first major naval combatant acquired by the CF after the end of the Cold War. This is significant, in particular because of the political environment that existed at the time.

The submarine's potential is even more relevant in today's world than it was during the Cold War. Its continued relevance is illustrative of the current phase in military 'transformation,' in which technological advances have enabled military forces, in general, to operate in a much broader spectrum. Submarines, in particular have become more integrated into these operations.

To provide some Canadian context to the evolution of submarine capability, we must briefly examine *Oberon*-class submarine operations. It is not in the scope of this article to provide a thorough history of *Oberon* acquisition and employment, but their operations during the Cold War and in the early 1990s provide an insight into current operations and how they will be conducted.

The Canadian Navy's primary Cold War role was protecting North America against the Soviet Union. Specifically, the navy was engaged in anti-submarine warfare (ASW) operations in the North Atlantic. The tactics used in this role are still very relevant to today's tasks. For instance, the joint and combined approach to ASW taken during the Cold War, with various naval and air forces from different countries all engaged in covertly tracking a potential adversary's submarines, is the same approach to ASW that is taken in today's littoral operations. In terms of domestic security, these tactics are also well suited to tracking, either overtly or covertly, vessels of interest that are suspected of being engaged in activities outside of our national or allied interests. Thus, the targets have changed, but the tactics remain similar, although they have been enhanced by technological advances.

Canadian submarines began the 'transformation' in the early 1990s to keep up with the changes in the new CF vision and the post-Cold War world. This transformation was apparent when they began to be employed in support of other government departments (OGDs). This was a change from the predominantly military role they had played during the Cold War. These new roles were more constabulary in nature. These types of activities have direct relation to modern domestic security operations under the CanadaCom concept.

***Oberon**-class submarine*

Regrettably, yet not unpredictably, the platforms eventually aged to the point at which they were at a disadvantage in many ways, and it was time to decide to replace them. The 1994 White Paper provided the guidance to pursue acquisition of the ex-*Upholder*-class submarines from the UK. These submarines were built for Cold War ASW roles and special operations where the smaller, more maneuverable conventional submarine provides a distinct advantage over its larger nuclear-powered cousin. These characteristics provide these submarines – now called *Victoria*-class – with a significant tactical advantage today, as delivered.

In today's world it is necessary to keep up with rapid technological change. The equipment most affected by these changes – the electronics – has had to keep up. The electronic systems are being upgraded in the *Victoria*-class to meet new Canadian specifications. This technological update provided the Canadian Navy with the opportunity to commence the transition to new operational roles more quickly. Today, from a capability perspective, the submarines are ready to conduct a number of modern tasks.

The introduction of the *Victoria*-class submarines into the fleet is occurring in concert with modernization, and the navy is using lessons learned during the introduction process to enhance its modernization activities. Although the modernization underway already supports the CF vision, there is a need to continue to enhance capabilities, and this need will drive equipment improvements.

As with any technologically sophisticated piece of machinery, the navy needs to continually address system obsolescence and supportability issues as they relate to the submarines. These issues are common to any type or class of naval vessel – as well as most other military

*A **Victoria**-class submarine*

equipment – where the hull structure, in this case, is designed to last far longer than some of the equipment that is fitted within that hull.

The challenges that the navy has encountered with the submarines – which have been widely reported in the media – as well as a thorough examination of the Royal Navy design intent and operating cycle, has caused a number of studies and staff activities intended to design a sustainable submarine capability. This has involved re-thinking how the submarines would be used and for what purposes. A new concept of operations was written to reflect Canadian requirements and the new vision, rather than the original Royal Navy (RN) design intent which of course catered to Cold War needs. Studies and planning are underway to adapt the submarine's maintenance cycles and maintenance load requirements to align with the concept of operations to provide the necessary submarine availability for both domestic and deployed operations, to respond to the new CF vision.

Submarine Roles

There are two broad and important roles for the submarines: domestic security and deployed operations. Domestic security is in turn made up of two basic elements, which are knowledge and response. Although submarines have unique characteristics that can be employed in both elements, in terms of domestic security operations they are primarily a knowledge-gathering platform. In an insecure environment – and in recognition that Canada's economic health relies on trade coming from the sea – it is imperative to know what is happening in the waters off Canada's coasts.

The intelligence gathering, surveillance and reconnaissance (ISR) capabilities of the *Victoria*-class submarines are first rate. This makes the submarine a valuable asset in gathering knowledge of our coasts. Brand new and very capable equipment has been provided as part of the Submarine Capability Life Extension (SCLE) Project, and other associated projects. More intelligence gathering equipment is coming that will support the gathering of information, and add to the country's knowledge of what is happening in our sea approaches.

There are people who argue that other assets can conduct surveillance as well as, or better than, submarines, and this is partially true.

There are people who argue that other assets can conduct surveillance as well as, or better than, submarines, and this is partially true. All assets have their limitations. It is the combination of assets that will provide the assurance necessary to state with confidence that we know what is happening in our maritime areas. The submarine's covertness, longevity on station, and highly effective sensors both above and below the surface are essential parts of this mix.

Once a vessel of interest or illegal or threatening activity is detected, response assets must be directed to the location. Many of these tasks will be support for other government departments, and in their completion can employ joint and combined methods with other assets. These tasks and missions were conducted by *Oberon*-class submarines, in addition to their other Cold War tasks, and lay the groundwork for the submarine's part in today's domestic security response tasks.

In addition to gathering information about what is happening off the coasts of North America and assisting other government departments, the submarine provides a deterrent role. It does this just by being at sea and undetected. In the last resort, submarines have a highly lethal capability in the form of the Mk 48 torpedo if needed. The combination of submarines with land or special forces, or constabulary forces, also provides a significant response option in certain situations.

In terms of deployed operations, the task group (TG) is the primary Canadian response unit for maritime operations. In the future, the TG will be joint in nature, and will necessitate support to land forces from the sea.

Submarines provide two essential elements to task group operations. First, before the group arrives, they provide battle-space preparation, particularly ISR operations, landing of special forces for advance operations, and in the future, potentially mine detection. These activities

provide the TG Commander with valuable information about the tactical and operational environment within the area of operations that other more remote or more overt assets cannot provide. This will significantly enhance the commander's planning process. During the period before the task group arrives, the submarine is also in the area to provide some response, or to initiate engagement, if necessary. Second, once the TG arrives, submarines provide protection, particularly in the realms of anti-submarine warfare and anti-surface warfare (ASuW).

Challenges and Opportunities

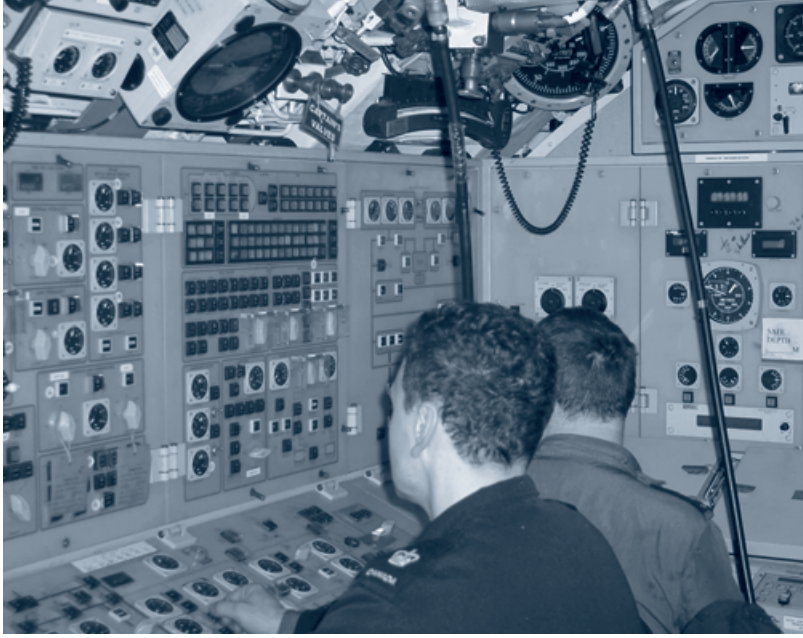
Every challenge opens up opportunities. Unfortunately, our tendency is to focus on the challenges rather than the opportunities. And so it is here.

As noted, submarines can be used in various ways to enhance domestic security and deployed operations. These two roles are highly compatible and depend on many similar or even identical equipment capabilities. For instance, the ISR system, which includes electronic warfare, imagery and sonar equipment, is used in both deployed and domestic operations and the capabilities built into this equipment are designed to fulfill multiple tasks. The challenges that remain reflect the ability to maintain the tactical advantage currently resident in the submarine, and to increase this capability, where it makes sense to do so, to further support the CF vision.

Let us discuss some of the existing challenges. As noted, supportability and obsolescence issues are a common occurrence in large, complex platforms. But if we look at this as an opportunity, these provide an opportunity to enhance capability by leveraging advances made in technology over the past decade.

A serious challenge is to establish reliable supply lines. As many of the original equipment manufacturers either no longer manufacture the equipment, or have moved on to other designs, establishing supply lines for some systems is difficult. However, opportunities exist to reduce the cost of ownership by replacing some of this equipment with technology which is more economically supported.

It is also a challenge to align the maintenance schedule to required availability and resources. The submarines need to be maintained but this maintenance must not occur at the expense of availability, including deployed operations. Unfortunately, even the best-laid plans can fall apart in the event of an unforeseen crisis. Long-range deployments must also be considered. Activities such as planned maintenance must be contained, such that they do not unduly restrict the nature of the deployment.



*HMCS **Windsor**'s main control panel* *Photo: **CNR***

Another challenge is upgrading and bringing into service electronic warfare and communications systems. The use of some of these systems requires personnel and techniques that are different from those employed in the past. Particularly with regard to communications, space limitations will keep personnel numbers down, while the need for increased communications increases. Technologies that combine collaborative, online discussion with a combat system operator's prime job will be needed. Along with this goes the challenge of upgrading acoustic and imagery sensors. The potential to significantly increase acoustic capability by inter-connection of a variety of sensors underwater will require rapid, high bandwidth, covert communications. The change from optical path periscopes to photonic masts is underway, and will mean changes for operators and technology providers in the transition from one to the other.

A fundamentally important challenge is improving connectivity and interoperability. Probably the most significant single advance for submarines in the past decade has been the increase in connectivity with the supported task group/battle group. With this challenge goes opportunities. Increases in connectivity are occurring almost daily, and methods to leverage new and emerging capabilities as they come out will assist in achieving a technical and tactical advantage. With connectivity comes interoperability, and equipment designs that allow one unit to leverage another unit's sensor information, for example, will be seen as a positive step towards interoperability. Issues such as information processing (IP) are germane to this area.

In the near future it will be critical to develop an anti-

A Canadian naval surface task group in ***Operation Apollo***

mine capability. In an amphibious operation, your land forces must come ashore safely and with a tactical advantage, and they must retain the element of surprise. Today, one of the most inexpensive, and prevalent, of weapons is the mine. An area salted with mines will provide a significant challenge to the safe and timely arrival of a joint TG in the area. To locate and avoid these mines, in a manner that does not risk the tactical advantage, a covert platform is required. Submarines, likely working with autonomous underwater vehicles (AUVs), provide a potential answer to this problem.

It will also be necessary to develop and provide a littoral operations weapon system. Currently fitted with the Mk 48 torpedo, the *Victoria*-class submarine does not have the ability to support the small groups of special forces that it lands ashore. A strike weapon, such as the Harpoon Block 2 or the European TRITON, would provide the ability to provide fire support to land forces.

And finally, it is important to maintain platform tactical advantage. There are two elements to this. First, as platforms get older, they require attention to all signature sources. Also, the acquisition of new platforms by potentially threatening states – for example, submarines equipped with air independent propulsion – introduces the need to further reduce certain signature items to retain tactical advantage. Second, although a very able platform from a maneuverability perspective, there are some aspects of performance, particularly with regard to range, that would be desirable to change in the *Victoria*-class submarines. Fuel efficiency is an area that could be improved, as well as increasing battery endurance by inserting batteries of different design or material, and by increasing air quality endurance to better employ the battery endurance available.

Conclusion

The employment of submarines in the new CF vision provides a truly transformational approach to both domestic security and deployed Canadian joint task group operations. The effect gained by employing a submarine in both areas represents a proactive approach to achieving and maintaining a tactical advantage over potential adversaries or those who would use Canadian water space for illegal or offensive activities. It also provides an advantage to our own or allied TGs in deployed theatres of operation.

Tactical advantage and technical advances go hand in hand.

Tactical advantage and technical advances go hand in hand. The challenges ahead are primarily related to maintaining the current, significant tactical advantage represented by the *Victoria*-class submarine. Cooperation between operators and engineers in pursuing the opportunities that these challenges provide will see the platform maintain its tactical advantage, and thereby its value to Canada, for many years.

Until his recent retirement Commander Bob Bush was the Project Director for the Victoria-class Program at National Defence Headquarters in Ottawa.

Taking Joint Capability Seriously

Eric Lerhe

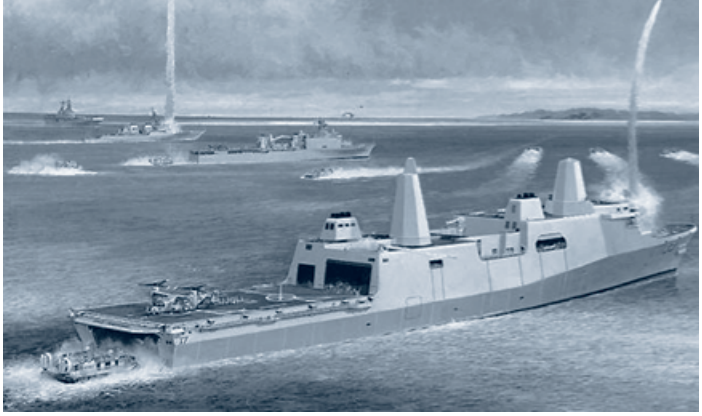
A Canadian naval amphibious task group?

The *Canadian Naval Review*, and in particular the "Making Waves" section, encourages readers to respond to whatever irks them, be it earlier *CNR* articles or some wrong-headed external document or policy. I intend to take up that opportunity and critique both Peter Haydon's "Canada's Navy: A Good, Workable Little Fleet" (*CNR*, Issue #1) and broad DND policy. I feel neither has accorded sufficient priority to joint requirements and especially those related to joint expeditionary requirements. Moreover, I sense recent events dictate that we finally start taking joint issues seriously.

I admit that Peter Haydon's essay covers much more than joint issues. He skilfully outlines the competing demands on the Canadian Navy to deliver increased levels of maritime security at home while continuing to provide Canada's first response to military crises abroad. He also makes it clear that the United States can no longer accept our traditional naval response of putting the majority of our efforts into the 'away game' at the cost of the 'home game.' Both domestic and overseas maritime security now require an equal effort, and Haydon makes it clear that the forces to do so are in decline with major surface combatants falling from a post-war high of 65, to some 15 today, with the fleet rapidly on its way to 12 by the end of the decade. Recently promised defence budget increases do not address this decline, and with no replacements for the *Tribal*-class destroyers in sight, we will have the 12 Canadian Patrol Frigates (CPFs) as our only high-speed deep-sea combatants by the end of this decade. While carefully tracing both the decline and the evolving requirements, Haydon's essay does not, however, suggest exactly how the navy will make its case for more.

Haydon makes it clear that much of the problem rests on the unwillingness of successive Canadian governments to state in clear terms what they want from their "good, workable little fleet."

Rather, Haydon makes it clear that much of the problem rests on the unwillingness of successive Canadian governments to state in clear terms what they want from their "good, workable little fleet." This was indeed the case for most of our recent history. However, when the government does mutter such direction, as it did recently through the voice of the new Chief of Defence, it seems reasonably clear that Haydon does not much like it. Perhaps to provoke, he suggests recent efforts to outline a joint, amphibious expeditionary vision will result in the navy becoming a "politically acceptable, marginally use-



Artist's impression of US Navy's ***San Antonio****-class amphibious support ship*

ful, tiny fleet" that is dedicated to providing "sea lift for peacekeeping forces." Further, he suggests that filling this requirement should be the lowest priority after filling our traditional domestic, NATO-US support and naval task group roles.

The Joint Requirements Problem

This approach is in line with the traditional weak response of government, DND and all three services to the joint requirement. The effect of this approach is ever visible. A review of major ongoing Canadian Forces (CF) capital projects on the DND website reveals only one project (CANMILSATCOM) that recognizes a joint interoperability requirement amongst the several score of projects listed. There is simply no sign of any effort to establish inter-service connectivity. Even the most obvious projects, like the army's Tactical Command, Control and Communications System (TCCCS) fail to recognize any need to communicate or share data with air or naval units. Moreover, this system appears only to be interoperable with the French Army, a force outside of our traditional peacekeeping partners and the NATO military structure.

There is simply no sign of any effort to establish inter-service connectivity.

I was part of the leadership that sustained this indifference to joint interoperability. The reasons for doing so were many and they seemed compelling at the time. First, there was no overarching joint vision that made it a government or departmental requirement. Second, there was no additional money for the increased connectivity 'jointness' demands. Services occasionally recognized a joint need but had to pay for it themselves, and the results were haphazard indeed. Thus the navy installed jam-resistant HAVEQUICK radios for fighter direction in the *Tribal*-class destroyers some 15 years before the CF-18 acquired them. Third, the acquisition process was already so convoluted and lengthy that no one in his right mind sought out additional hoops for a project to jump through. Finally, the operational posture of the three services did not call out for this joint connectivity.

In fact, our medium power status, within a Cold War alliance structure dominated by NATO and NORAD, placed a solid premium on the Canadian Air Force and Navy being able to operate with their sister services of other allies and not each other. After leaving Europe, the army's employment in successive peacekeeping operations left it with the impossible requirement of having to integrate with players that could range from high-tech US special forces to lower-tech Bangladeshi infantry. Thankfully, the tempo of traditional approaches to peacekeeping appeared to suggest the lowest common denominator was an acceptable standard.

This narrow technical focus on single service needs carried over into how our forces were employed and commanded. Canadian land, air and sea forces worked within ever larger NATO or Canada-US (CANUS) land, air and sea task forces throughout the Cold War. This approach continues today – and, thus, *Operation Apollo* saw Canadian naval forces working for the naval central commander, as our land forces worked for the land central commander, and our air forces for the air central commander. In theatre, no single Canadian was in charge of the combined thousands of Canadian Forces scattered across the Gulf Region.

As our land and air forces were deployed permanently in Europe throughout the Cold War, they were disinclined to support large expenditures for sea lift or air lift. Further, peacekeeping missions, unlike defence tasks, remain entirely optional allowing Canada to select the missions it would participate in and to dictate the timing as to when its forces might show up. The sedentary nature of our NATO commitments and the slow pace of peacekeeping also allowed both lower readiness levels and the use of the slower and less assured response rates of chartered air and sea lift.

Future Joint Requirements

This approach to joint expeditionary warfare was satisfactory for the Cold War, but I would argue it cannot and should not continue. First, with the exception of Canada, all of the G-8 states plus the Netherlands and Australia have embraced joint forces and wedded them to an amphibious capability for overseas missions. The results have been singularly successfully as the United Kingdom demonstrated in Sierra Leone, France in Cote d'Ivoire, Australia in East Timor, and the United States in Afghanistan. Moreover, the ability of US, German,

Italian and Australian forces to assist the recent tsunami victims in Asia rested almost entirely on their ability to deploy rapidly.

This approach to joint expeditionary warfare was satisfactory for the Cold War, but I would argue it cannot and should not continue.

During this same period our own shortcomings became ever more obvious. Our government's willingness to lead the world's response to the 1996 Rwanda-Zaire refugee crisis in spite of a complete lack of lift and reconnaissance assets produced what soon became accurately known internationally as the "Bungle in the Jungle." And there are other examples. The PPCLI battle group's deployment to Afghanistan was delayed by over two months as we negotiated with others to provide the air lift to get them into theatre. A chartered sea lift ship – the MV *Katie* – returning a large part of the army's mechanized equipment from Bosnia hijacked that cargo until the ship's owner was paid more for the voyage. An armed boarding sent from a Canadian naval destroyer team was needed to free the cargo after negotiations failed. Our DART deployment to tsunami relief noticeably lagged behind other states' contributions as the government dithered and the air lift assets were slowly assembled.

The only Canadian contribution to this worldwide shift towards joint expeditions can be found in the Canadian naval task group providing the sole escort to the US Peleliu and Bataan Amphibious Ready Groups in November 2001 as they made their assault on Jacobad and then Kandahar.

With this very rare exception, Canada just didn't 'get it' when it came to recognizing the need for an overseas joint capability. Yet that seems to be changing rapidly. Last year the Joint Support Ship project was approved by government and this promised a significant improvement in sea lift if not amphibious capability. This year saw both the Liberal and Conservative Parties calling for very large amphibious ships of landing platform dock (LPD) size. (For a lighthearted comparison of these and other approaches to amphibiousity see the discussion at the end of this article). Further, General Hillier has taken a leaf from the Sea Horse Project, a joint vision tabled by a collection of retired officers, and is selling a robust amphibious capability which includes:

> ... a thousand or 1,500 soldiers…. Combine that with a naval task group of between two and five ships, including a ship that can take most of those soldiers…. Combine that with variety of air-force assets, including helicopters and surveillance aircraft like the Aurora, through to tactical airlift to move the stuff in and out, through to and including a package of CF 18s that can deliver precision guided munitions and train them together to come ashore in one place.[1]

The Sea Horse Project has explained the advantages amphibious forces enjoy in a faster response, higher interoperability, and the freedom from the dangers, delays and low tooth-to-tail ratios inherent in relying on foreign basing and negotiated landing rights. General Hillier has added that such an integrated Canadian force would also enjoy a higher and distinctly Canadian international profile. To these I would include additional benefits highlighted by post-9/11 events.

Our existing practice of deploying and then parceling out the various land, sea and air elements of the Canadian contribution to any operation . . . provides few offsetting benefits to Canada.

Our existing practice of deploying and then parceling out the various land, sea and air elements of the Canadian contribution to any operation is a solid advantage for the gaining coalition joint commander, but it provides few offsetting benefits to Canada. This practice reduces Canada's ability to call for a joint command responsibility that matches the size of our contribution, and a matching Canadian command responsibility can be critical. At the most basic level, Canada has learned that entrusting Canadian lives entirely to foreign commanders is fraught with problems. Thus, for example, during the Dieppe operation the UK joint commanders inexplicably denied air and sea fire support to the predominantly Canadian landing force, and foreign commanders led isolated Canadian troops with their own to defeat at Hong Kong.

Military operations in peace and war are complex at the best of times and simple command arrangements work best. Yet during *Operation Apollo* we saw how Canadian Forces elements in the Gulf Region operated under three and often five different US commanders. With the commencement of *Operation Iraqi Freedom*, Canada had the

complex task of unhooking each of those CF elements from the US operations against Iraq while allowing them to continue to support US efforts against al Qaeda. This was successfully achieved but many in Canada were doubtful such a complex extraction ever actually occurred.

Being able to mount an all-Canadian joint effort allows us to demand the simpler, more Canadian-weighted command arrangements needed. It also gives our commander the option of asking for an entirely Canadian sector within the overall joint operational area. While I was not privy to UK-US decision making, it seems clear the UK's joint contribution to *Operation Iraqi Freedom* involved the UK commanding its own land, air and sea operations in its own area initially centred on Basra. This approach allows for more effective command of one's own troops while minimizing the need for the extensive interoperability required when one's own forces are intermixed with others.

However, even with the sophisticated interoperable equipment now shared amongst our technically advanced allies, fratricide occurs. The situation is probably much worse during those increasingly violent UN peacekeeping operations where the baseline level of technical sophistication and interoperability may be so low that geographic separation of one's forces from other coalition forces may become, quite literally, a matter of life and death. Canada would be well advised to plan, equip and train for that possibility by doing so jointly now.

In addition to being safer, such concentration of the Canadian effort is also likely to be more effective. Throughout the 1990s, the total Canadian contribution to the Former Republic of Yugoslavia was dispersed to an astonishing degree. Our land, sea and air forces were necessarily dispersed given the coastline and lack of airfields in-country. However, for most of the period our army effort remained in the southwest, while our civil police operated in Sarajevo, our Canadian support to electoral reform worked somewhere else, and our CIDA projects were scattered about the region in no discernible pattern. This compared most poorly with the German effort that focused its military, development, civil police and civic reform effort in one single German-commanded sector. One has to assume this provided them immensely more coordination and leverage in dealing with uncooperative local elements. It also probably improved the force protection prospects of exposed aid and civic workers.

Finally, the ability to mount a uniquely Canadian joint contribution, operating if need be within its own sector of the larger coalition area of operations, recognizes the declining state of multilateral relations amongst the major and medium powers. Canada was always ready to turn its separate land, air and sea forces over to NATO commanders and forgo high-level operational command because NATO procedures guaranteed that we would have a voice in defining the operation and that we would be consulted automatically when major changes were later required. Common NATO rules of engagement and shared procedures ensured all participating forces opened fire using the same criteria and treated prisoners and the civilian population according to a widely held code.

The more unilateral approach favoured by the United States relies on less structured 'coalitions of the willing' and eliminates all guaranteed consultative procedures.

The more unilateral approach favoured by the United States relies on less structured 'coalitions of the willing' and eliminates all guaranteed consultative procedures. This is not to suggest that the United States does not fully consult its allies – as I know first hand that it does – but these consultations relied entirely on the personal dedication of senior US officers and not on clear written procedures that guaranteed prior consultation. This is important as such coalitions lack the daily high-level political consultation that the NATO system of permanently sitting ambassadors and senior military representatives provides.

As well, consensus within a coalition of the willing is, at best, loose. During *Operation Enduring Freedom* no attempt was made to set force-wide or common rules of engagement (ROE) as NATO does, because the coalition structure was completely incapable of supporting the extended negotiations needed to establish consensus on this complex military-political issue. As a result, rules of engagement within the coalition varied dramatically from state to state with many forces arriving in theatre without the initial ROE that would allow them to protect their allies. Other states had very robust ROE, and by their actions they were capable of provoking a significant enemy response against the coalition. Needless to say one's opponent, when striking, will not concern himself

with differentiating between those coalition forces with light ROE and those more aggressively equipped.

Given the weakness of the consultative process, the low levels of interoperability and the questionable coherence found within coalitions of the willing, an amphibious capability provides insurance. This may lie in the ability of a joint Canadian task force to reinforce each of its elements with, say the navy providing naval gunfire support to the land forces under fire, or guaranteeing a safe and rapid extraction capability. We need not repeat Hong Kong or Dieppe.

These forms of coalition operations present daunting problems which suggest that Canada should steer well clear of them. Yet this response is neither called for nor desirable. Our forces executed their missions in support of *Operation Enduring Freedom* with skill and gave our closest ally critical support in halting al Qaeda during the immediate post-9/11 period. Given current divisions within the United Nations Security Council and Africa's limited military response potential, a lasting solution to the situation in Darfur will probably lie in the actions of a similar Western-led coalition of the willing. What this movement to a less structured, less multilateral operational environment suggests is that Canada must adapt, and right now the joint amphibious approach provides the most effective contribution and the contribution best able to ensure the safety of the Canadians who participate.

There are problems with this approach and the most obvious of these centres on affordability. The vision General Hillier provided in the quotation given earlier retains most of the current CF inventory and then adds substantially to it. Yet the most recent budget, in addition to being back-end loaded, has not provided the funding needed to replace current equipment and acquire an amphibious capability. Further, this is General Hillier's vision, and we must see if the government supports the robust capabilities he calls for. This seems doubtful as the Liberal government frequently wavers between a focus on a multi-purpose, combat capability and an inclination to restrict itself to less aggressive activities that focus on reconstructing failed states.

The Naval Response

As this debate unfolds the navy, more than any other service, is well positioned for joint expeditionary operations. No other service can match its readiness to deploy, its high level of interoperability, its lean, integral and efficient logistics train, and its proven ability to maintain extremely complex weapons systems tens of thousands of miles from home support. The navy does not need to redo its doctrine or its internal processes to adapt to the Hillier vision.

The navy's problem is not one of adaptation, it is one of numbers.

The navy's problem is not one of adaptation, it is one of numbers. Unless the *Tribal*-class destroyers are replaced we will fall to 12 major surface combatants – six for each coast. As we seek replacement vessels we can credibly argue that two of the six on each coast will be in a maintenance and training cycle at any one time. Another single, high-speed, deep-sea warship need not be at sea but it must be immediately available to respond to detections raised by our surveillance systems, coastal defence vessels and submarines conducting the domestic security task as Peter Haydon argues. The remaining three ships simply cannot support NATO's standing naval force and deployed US Navy battle groups, provide the elements of a naval contingency task group, another NATO commitment, and form the escort force for General Hillier's amphibious force.

Given our declining influence world wide and our recent decision to not participate in the US missile defence program, it would not seem desirable to suddenly eliminate any of these central elements of our NATO commitment and our CANUS defence agreements. A policy that relies on sending a Canadian joint expeditionary force without escort signals that we do not expect that force to go to where even modest opposition is forecast. The force is, thus, not a serious one.

This suggests that the navy must argue its case for ship numbers based on its unique ability to satisfy every defence priority whether domestic security, CANUS regional defence, NATO commitments, or joint expeditionary operations. Privileging our naval task group over the joint requirement, as Haydon argues, seems to provide no leverage whatsoever in what will always be a contested budget battle. Rather, the navy must argue that its own projects and all other defence projects be evaluated on their ability to fill multiple priorities and, most critically, on their ability to contribute to and operate in a joint environment.

Notes

1. Paul Koring, "Combat Role of Troops is Vital, Hillier Says," *Globe and Mail*, 14 February 2005, p. A7.

Capability Levels

In an attempt to better explain the various levels of expeditionary or amphibious capability here is an analogy between the four levels of amphibious capability and a family going on vacation.

The 1st level of amphibious capability involves having the US Navy's *Wasp*-class landing ship backed up by a nuclear carrier. This combines full amphibiousity and long-range force projection. This is the family with both a Winnebago and a Hummer. The entire family, dog, cat, all needed food and toys go on vacation and no campground will refuse them.

The 2nd level is the hybrid carrier *à la* Conservative Party, the *San Antonio* LPD, or the Sea Horse Project. This is amphibiousity-lite and its 800 embarked troops will be able to access every major and minor port in Africa. This parallels the UK ability to mount operations in Sierra Leone, or the French in Cote d'Ivoire, or Australia in East Timor. Here, the family goes with a minivan and tent trailer. The family, dog and cat go but there is less food and fewer toys than level 1. Some campgrounds can turn you away by most won't.

The 3rd level is the Joint Support Ship. It is halfway between sea lift and amphibiousity. Only 200 troops and most of their equipment can go. In this case, the family goes in the car without pets, food is purchased on site and very few toys are carried. Rejection by some campsites must be accepted.

The 4th and lowest level is our current Canadian approach to expeditionary operations. This involves asking allies or commercial airlines to carry our troops and chartering commercial vessels to carry the equipment. This is the equivalent of taking the family on vacation by hitchhiking independently to the destination. The family members will get to the same campground eventually but certainly not at the same time. No dog or cat goes and the family must mooch meals from the driver. This only becomes a problem during something like the MV *Katie* incident where the driver decides to eat the family member's lunch instead.

Commodore Eric Lerhe joined the Canadian Forces in 1967 and was commissioned in 1972. He was promoted to Commodore and appointed Commander Canadian Fleet Pacific in January 2001. He was a Task Group Commander in the Persian Gulf during the War on Terror in 2002. Cmdre Lerhe retired from the CF in September 2003 and commenced his doctoral studies at Dalhousie University.

The *Margaree* Pool

Robert Thomas

HMCS *Margaree* was slated to be paid off in the summer of 1964 for conversion to a DDH. Prior to her last deployment to Central America for cadet training, the after 3"50 mounting was removed for reasons known only to the dockyard.

As we passed the Baja California, clever minds determined that, by blocking the two entrances to the zareba, all the requirements for a swimming pool could be satisfied. It was an immediate and universally popular success! As I was standing one-in-three in the boiler room as part of my First Sea Phase requirements, a quick dip after every watch was a welcome relief. A diving board was created atop the torpedo parting space, but was reserved for the personal use of the Executive Officer (Ted Francis) who, for some reason, never used it.

Success came with a price, however (apart from a variety of scrapes and bruises). We were to fuel in Manzanillo and anchored to await the pilot. The anchorage was exposed with a long ground swell that originated near Japan. We were shortening in cable as the pilot boat approached and we found ourselves somewhat abeam of the swell. The pilot, immaculate in white, had a foot on the accommodation ladder when a gentle roll to starboard drained half the contents of the pool onto him. He immediately left, refusing to take us alongside without an appropriate apology. A hasty gathering in the Wardroom with a Spanish-English dictionary ensued and (with the probable addition of something duty-free) the apology was soon accepted, fueling completed and the cruise continued.

A Conversation with Rear-Admiral Dan McNeil

On Monday, 9 May 2005, Dr. Dan Middlemiss and Mr. Peter Haydon of the ***Canadian Naval Review*** *Editorial Board talked to Rear-Admiral Dan McNeil, Commander Joint Task Force Atlantic. This is Part I of the interview. Part II will appear in the next issue of* ***CNR****.*

Admiral McNeil

HAYDON

Earlier this year, when he was in Halifax, Admiral MacLean talked about a change that was going to come about in your headquarters to give it a far-ranging "joint" capability. People are finally beginning to understand what MSOC [Marine Security Operations Centre] stands for, but this change is obviously MSOC-plus, and I think that is fascinating.

MCNEIL

I think it's fascinating too. When I came here I recognised that we needed to introduce the "J" word and make it a truly joint operations centre. On my first visit to the operations centre I saw that Land Forces Atlantic Area had its own compartment and the Joint Rescue Centre had its own compartment. So, although we were doing marine security pretty well with the air force we were still a little stove-piped in terms of operations as a whole. My experience in the Privy Council Office, working on the issue of transportation security, told me that the real model for multi-layered cooperation (federal, provincial, municipal and regional) is actually the search-and-rescue model because it's not only those layers but also the contribution of individuals as well, volunteer organizations, for example. It seemed to me that we had to develop a joint operational capability otherwise none of the rest would really work. I'm excited at the new defence policy statement because it says, right up front, that the Canadian Forces are responsible for surveillance and that Canada is an operational theatre. That allows us here in MARLANT to segue very nicely into a joint Canadian Forces' capability that has actually been told to reach out and work with not just marine security but security in its wider dimension throughout Atlantic Canada.

The interesting thing about the examples that are not traditional military security examples is, quite frankly, that you can't handle them without the military. The SwissAir disaster and its aftermath had operational consequences that involved all the capability the navy had to offer, from diving support ships, to diving operations, to organizational command and control. No other organization can be expected to do all that. They can't afford it. And then when you get into the security domain, nobody else can support it. And that security domain speaks to the North American aspect of security. You can't allow the border to prevent good, intelligent communication, so it's got to be bi-national. The Cold War caused us to work closely in a highly secure environment directly with the United States. And now there is a need to do that again throughout the broad spectrum of security. Here in Halifax we are well-placed with a wide band-width secure conduit down to the American authorities to exchange information at multiple levels, not just military.

HAYDON

Do you think the changes being implemented here in Halifax are a prototype of something similar on the West Coast, and perhaps on the Great Lakes?

MCNEIL

What we now call the Marine Security Operations Centre, which is an incremental improvement to the operations centre we already had, has been modelled from about 1996 on the West Coast and is called *ATHENA*.

They're doing a pretty good job of replicating what we had done here; leading the way in terms of the federal government and all those multiple layers of authorities with the United States. But with the new defence policy we have elevated it into an acknowledgement of Canada as a theatre and of the responsibility for surveillance and emergency response. Land Force Atlantic Area was really good at doing emergency response in its own way because there is a special role for the reserves and the militia in communities throughout Canada, for immediate response to events like Hurricane Juan.

Now, under a concept of unity of command, the Chief of Defence Staff is asking MARLANT to be the leading example of how we go one step further in integrating and unifying operations. The other terms I like are 'making plans' and 'exercising plans,' which is a step further than envisaged by the security policy. So, we are well on our way to incrementally executing the direction given to us. In the last big security budget, the federal government did fund a building, an operations centre, in about 2009 I think, for the MSOC. We are looking at this with the idea that it would become a new headquarters that would also be the headquarters of the Joint Task Force Atlantic, in cooperation with all those other government departments and agencies that have a security dimension to give them office space in addition to sharing what would be a joint marine security operation centre for all of Atlantic Canada.

HAYDON
You say, all of Atlantic Canada – that presumably is the Western boundary of the province of Nova Scotia and all the way up to the Arctic, or what…?

MCNEIL
You ask a very good question because it even surprised me to start looking at our regional footprint. We have had the CDS' 'Action Team' for command and control here exploring with my staff what we mean by Atlantic Canada and just what the operational footprint is. The Senate Committee was here looking at the same kind of thing and they were quite amazed to see that the marine security footprint actually goes to the middle of Canada and encompasses the whole Great Lakes and goes all the way up to the Arctic. So, our marine security footprint is huge. The search-and-rescue footprint is different, going to mid-Atlantic and up to the Arctic. So, the search-and-rescue footprint is different from the marine security footprint, which is different from the MARLANT-NATO responsibility footprint, which is different again from our traditional, seaward-looking footprint.

MARLANT is being seen as the lead in a new Joint Task Force Atlantic, which would include all of New Brunswick, all of PEI, all of Newfoundland and Labrador, right up to the north including Hudson Bay. I see an east, a west and a north as the maritime and air frontiers of Canada, but for command and control of emergency operations and assisting everybody else, I believe the CDS' Action Team is actually looking at six regional headquarters. This is an interesting model which apparently matches the federal government's footprint in a lot of other areas. These would be the Atlantic area, Quebec area, Central area, Western area, Pacific area and Northern area.

My plea to the Action Team looking at this is that if you're going to think of six regional plans like this please don't think of them as being equal in any way, because they can't be. For example, when I look at breaking down Joint Task Force Atlantic into its traditional components, which would be air, land and maritime, the maritime and air components are huge here because of the size of the footprint and the responsibility for surveillance. And the land footprint would be probably not much different in terms of its existing reserve structure throughout the Maritimes. Whereas, if you look at the Quebec area it's a totally different structure. The air component commander here, for example, has got to be a pretty powerful person with a really powerful staff, whereas the air component commander in Quebec needn't be that large. They are totally different structures.

HAYDON
How does the Coast Guard fit into all this?

MCNEIL
Well, the Coast Guard has to evolve, and it is evolving. It is an integral part of the joint search-and-rescue model and that's a partnership that works, and we'll make sure it keeps working. The Coast Guard has capabilities that the navy can't afford to replicate, and the navy has capabilities the Coast Guard can't afford to replicate. The beauty of the partnership is it exists with search and rescue, and it has been firmed up with the National Security Policy. As we move forward and they re-capitalize, which they have to do, I think the partnership will improve.

HAYDON
At last year's Dalhousie Sea Power conference, we had a very interesting discussion with the Commissioner of the Coast Guard about putting naval detachments onto Coast Guard vessels, particularly steaming up to the high

north. Do you see this as being part of that new cooperation?

MCNEIL
I absolutely do see that as being part of it. Much more attention needs to be paid to the Arctic, particularly surveillance and presence there as well as developing joint capabilities. Here is a perfect example. The new defence policy talks about the requirement for a Joint Task Force – the expansion of JTF2 in terms of Special Forces ready to react anywhere in Canada at several hours' notice. That capability, the way it's worded, has an embedded air transport component. It also has a maritime component that we have to explore and build upon. I can't talk about it openly because those kinds of operations will continue to be elite operations with a very high level of security, but quite clearly we in Halifax, in MARLANT, are going to have to develop capabilities to support special operations in our own area and outside our area as well. And that is not going to be done totally by the navy. It's going to be done with other federal departments, including the RCMP and this means new capabilities such as encrypted communications so that we can work together.

MIDDLEMISS
What time-line do you see, roughly speaking?

MCNEIL
The maritime part of Special Forces has been worked on since 9/11. I can't tell you what exactly they are in terms of platforms and capabilities, but we are working on it and the new mandate tells us to work harder and do more. All I can say is the Coast Guard ships have cranes and handling equipment for buoys, for example, that the navy will not replicate. The Special Forces need special capabilities and Coast Guard has some of them.

HAYDON
When will the changes be complete?

MCNEIL
The changes will never be complete. It's a work in progress with no end date, although there are milestones and benchmarks. I see the new headquarters for security, funded by the way in today's fiscal plan, and it's not DND money, it comes from outside National Defence. They are talking about building the new headquarters here in the dockyard probably. It'll be in a secure area. That will be a milestone, and right now it's going to happen.

Quite clearly the Chief wants the Canadian Forces and Atlantic Canada to be the model for the rest of Canada to follow. He is asking me to propose to him changes I can make this year, and probably by the summer we can start changing people around to show that we're serious about Canada being an operational theatre. We will be making proposals that are incremental and meaningful. We're going to make the operations centre truly joint and embed the land forces in it. In my role as Joint Task Force Atlantic Commander I will create a J3 organization that will be integrated and unified and will include the Land Force Atlantic Area people. They will keep – they have to keep – their traditional force generation role and their administrative headquarters apart from the new organization, but for operations they will be integrated and unified, and all working for one commander. This is the principle of unity of command in operations.


The Halifax Maritime Security Operations and Coordination Centre

HAYDON
So, if I understand, this means that if there was a crisis of some magnitude you would have the ability to go to Gagetown and get land force resources if they were needed in some part of your area of responsibility?

MCNEIL
Exactly. And that requires a close examination of the *National Defence Act*, the chain of command, and the authority I would need to be given. That is being looked at. Surprisingly, that capability exists in the search-and-rescue world where there is danger of loss of life. In that case I can demand resources and get them. I have a spending authority that's actually credible given an emergency – counter-terrorism, counter-narcotics, you name it.

HAYDON
Do you think this is going to require some new thinking on organization. For instance, the army tends to lock itself into regiments, battalions, brigades, but what you're looking at here is something that might almost be described as a Rubik's Cube.

A Maritime Coastal Defense Vessel leaving Halifax

MCNEIL
Yes, and it goes past the traditional parts of the army and the traditional parts of the navy into the parts of the security structure that includes everything from CSIS to the RCMP to the Border Services Agency, Immigration Canada, and Health Canada, when the issue is a pandemic or even a terrorist act trying to propagate a pandemic. It is a cultural change, it really is.

This is the key to success, and it speaks to the absolute cultural change that you're talking about because there are real differences in attitude between force *generation* and force *employment*. And once again, I think MARLANT is the place to come to help sort this out because we all know that we force generate and force employ at the same time, at multiple layers of capability. Whether it's a low-readiness ship I send out to do a fisheries patrol or a even a counter-narcotics operation, they're in fact force generating, learning and building teams at the same time they are actually doing employment. And we do that in partnership with the air force pretty clearly, too.

The key here is integrating the land forces because their mentality is very much "Canada is the garrison." They think "we're in the garrison, we're force generating and we've got to do everything from cultural sensitivity to all the medical shots we have to get in advance before we go to a pre-ordained place at which we have done months and months of intelligence gathering." It's a totally different mind-set. They don't believe they can force deploy at the same time that they generate it. They just don't. There are examples of where they have done it, everywhere from Oka to the Red River floods to the ice storm to White Juan, but for them it's a leap into that theatre of operations. And they are fully capable of doing it, but we all have to do it together. They've done it in the North quite a bit in terms of surveillance and operations. I guess the key is us all understanding what we're doing, and doing it together.

People don't understand that in this building there is Land Force Atlantic Area headquarters, commanded by General Romses. Do you know what the relationship is between me and Ray Romses is? We're friends. And that's the only relationship. There is a complete stovepipe, nothing else between us. I can't tell him what to do and he can't tell me what to do. The only thing we can do is be friends. And if need be, we cooperate. But to get things done we've got to go through our bosses in Ottawa who have to go to the Armed Forces Council or the Chief and the Deputy Minister and fight it out to tell us what we can do together.

MIDDLEMISS
There is this idea that you will have that building now, the headquarters building, and it will be *the* building where operations are directed out. Is this going to make things better or worse?

MCNEIL
I think this is really interesting. A lot of people don't understand what a transformation we went through from the end of the Cold War to *Operation Friction*. What a lot of people don't understand is that here in Canada, there was no capacity in government or in the Canadian Forces or in the department, to command and control Canadian Forces halfway across the world. It didn't exist, because we were in NATO and every time we did something, it was under NATO headquarters, under NATO authority. We just said "here's the package of Canadian Forces you get." And then we watched and we supported logistically. We say we have the ultimate command but we didn't do anything about it.

Operation Friction, the first Gulf War, changed all that completely. It caused us to create a joint organization and a joint structure, which never existed before. We never had a joint headquarters command and control structure in Ottawa in the Canadian Forces. We created it under the DCDS [Deputy Chief of the Defence Staff] group and that evolved with all of the post-Cold War operations we were in, including Somalia, Bosnia and the Kosovo campaign. Now when I deploy ships into the Mediterranean under *Sharp Guard*, I chop them to the DCDS, and that's something that would have been unheard of 10 years ago.

We've reached a certain point where we are even saying, with Canada as an operational theatre, we are no longer a garrison. We actually have to be prepared to do operations in Canada. That DCDS structure created for overseas deployments is not capable of doing today's in-

theatre operations. So, you see in the paper that we're going to have a Canada Command, well, that's probably a replacement for the DCDS and all its appendages, which has also become ambiguous in terms of force generation and force operations and the principle of unity of command, and the relationship with heads of service, and the relationship with places like MARLANT. To put it in an interesting way, with the lessons of the post-Cold War operations, both at home, with Oka, ice storms, floods and disasters, and overseas deployments, those lessons, in conjunction with the resources taken away from defence, starting with the budgets of 1994 and 1995, we've gone to a construct that works. But you know what it is? It's a *management* construct.

*We've gone to a construct that works. But you know what it is? It's a **management** construct.*

We talk about Level Ones and Level Twos. I'm a Level Two and I have service-level agreements with the air forces over the number of flying hours. It's all really good management, but it's not military command and control. We know it works when the chips are down because we know each other and we're friends. But it's not the sensible way to move forward. That thing, that is part of the integrated Department of National Defence called DCDS, I believe, under the construct of Canada Command, will become a proper Canadian Forces Headquarters. My guess is it will be separate from the administrative bureaucracy. You know, when the chips are down and you've got to get the job done, it's not the time to go to the Ivey School of Business to see what you need to do in terms of resource management structure.

MIDDLEMISS
Do you think that's something that can be done quickly regardless of political, budgetary and other complexities and types of uncertainties?

MCNEIL
The ship of state is hard to turn, and the biggest part of the ship of state is actually the Department of National Defence with the biggest budget in government. It has been totally integrated and unified for far too long. And it's going to be difficult to deconstruct. These changes are not easy. It involves cultural change in the centre. And it's going to be *huge*. But it's got to be done because it makes so much sense.

Halifax Dockyard

HAYDON
If you don't have a centralized decision-making process, all the rest of it really has no value.

MCNEIL
Having a committee to make decisions is a great management tool, but it's not a great military tool. And that's what they do in Ottawa. I don't care if it's the Armed Forces Council or the Defence Management Committee, you cannot run operations that way and succeed.

MIDDLEMISS
One of the things we've always said we will push in the *Canadian Naval Review* is the importance of lessons learned, and it seems, from what you've been talking about, that all the lessons learned since 1990 are finally being rolled into one great big analytical process. And from this people are saying, "We have got to learn how to do this better. We got to pick up where we went wrong there."

MCNEIL
In the past there has been no top-down direction, it was all management. It was good management and I think we should get credit for that. But now we need top-down *direction*, and I think that's what the new defence policy gives us.

We've been talking for the last half hour about the domestic scene, Canada as a theatre of operations and what that means to the Canadian Forces and Atlantic Canada. The things I've been talking about are eminently sensible and do-able, and we will do them incrementally. The *real* challenge is getting this main contingency force at 10 days' notice. Wow! That's huge. How are you going to actually do that? And in the interim what are we going to do?

What exercises have we planned for next year in the context of the last major exercise we did, which I think was MARCOT '98? Well, I asked Admiral Forcier, "Should I be thinking about a MARCOT 2006?" And he said, "You might as well, Dan, because we are." But here I am into fiscal year 2005-2006 and I have no specific direction at this point to do a large joint exercise when I know in my

Base Greenwood flightline

bones it has to be done and we should get on with it.

MIDDLEMISS
What about the continuation of the *Top Off* series that affects this coast?

MCNEIL
The *Top Off* series will definitely continue and get bigger. Absolutely. But the series is related to the domestic piece, and not the deployment of that contingent at 10 days' notice, which as I say is lurking. And it's actually easy for the navy to do. We have *Preserver* and we are beginning to put her back together and set her up for trials. She'll be in a position to operate in 2006 to do the job. We'll have high-readiness frigates, destroyers – two of them – in 2006 as well. Let's not forget that we will have staff here this summer putting the NATO staff together because Canada is going to command the Standing NATO Maritime Group One. So that's six months each for the two 280s and a Canadian staff supporting this group at sea. How do we do that in terms of our command and control ships and at the same time take command of an exercise of the size that we should be doing to get ready for this contingency force? Gee, I started by saying this is going to be easy for the navy and now I just told you it's going to be difficult.

HAYDON
It seems to me that one of the major pieces of the puzzle you've got put together is that of sustainment.

MCNEIL
Yes, sustainment is huge. A lot of people have difficulty understanding what we're talking about with sustainment. It's repair and overhaul, it's logistic support for all the bits and pieces we have, and so on. The government identified the shortfall in sustainment, and because of the good work of the Vice-Chief we are now getting extra funding to help solve that problem. The problem is we are robbing Peter to pay Paul. If I'm trying to create a high-readiness ship for NATO, I actually have to steal bits and pieces from other ships and make their readiness lower. I have limited capacity in the fleet maintenance facilities to actually get the work done, and it's going to take time and money to improve the sustainment posture.

And, it's not just the navy. It's more seriously the Hercules fleet, other fleets of aircraft that support CF operations, and the army, too, with its new and modern vehicles that need support to keep them working. I actually have about 50 million more dollars in my budget this fiscal year than last year to help solve that difficulty. I know that all of the other Level Ones – including the most important one, ADM Materiel – also have a lot of extra resources this fiscal year. My job, in addition to spending the extra $50 million wisely, is to help ADM Mat spend his money wisely on my capability. Same as ADM HR-Mil and CIV.

HAYDON
As an example of that, would you see, downstream, MARLANT having its own small half squadron or squadron of Hercules to provide logistic sustainment and transportation?

MCNEIL
Well, that is *the* most difficult part of the puzzle. We are configured, as I said, on the basis of resource management. In the cutbacks of the 1990s we reduced, mandated by the 1994 White Paper, headquarter structures by half, and brought the service chiefs into Ottawa. We did all that and made big savings, which is why Land Force Atlantic Area is in the same building. But one of the more fundamental parts of the change was the creation of a single operational level for the air force, with the First Canadian Air Division in Winnipeg. If you read the sign on the building here, they are acting in this building, represented by the Maritime Air Commander Atlantic (MACA). The command and control action team is looking at this structure for army area headquarters.

We used to have a transport command. We used to have a training command. How do you create something that makes sense? And the provision of air services is one of the more difficult things. I understand, for good reason, that there is much consternation in the First Canadian Air Division about breaking off pieces of the air force and devolving them to the regions. There is great consternation because it'll cost more – it'll cost more in money, and it'll cost more in human resources. And you can't break up important pieces of the force generation responsibilities, and for the air force one of the most important things is flight safety. So what if I had command of six Hercules here in the region, who are they accountable to for their flight safety, and for their training, and for their personnel development? This is not an easy one to solve. It is *the* most difficult piece.

MIDDLEMISS
That relates to something which you have been quoted recently about, and that is the expectation of increased activity to support this Standing Contingency Task Force for the high-readiness jobs. Is this going to happen on both coasts?

MCNEIL
This is very important, and I'll go on the record saying it. If you're going to field something and put it all together with the bits and pieces of the Canadian Forces, let's start off with the easy steps. The easy steps are here in Halifax. We've got Shearwater for force generation for air capability, we've got the navy here, and we've got Land Forces Atlantic Area here. Yes, we absolutely need to replicate the West Coast model as well, but you've got to start somewhere and you've got to start where it's easiest because the challenge is *huge*. And we don't want to fail. So I suggest you start where it's most do-able, right here in Halifax. It's not a competition: it's the way it is.

And if you want to talk about where Canada has responsibilities and what you are going to do about them, let's start looking at the Caribbean and Haiti and post-Castro Cuba. Let's start looking at our own responsibilities in terms of fisheries, and the environment, and our responsibilities to NATO in terms of NATO development.

HAYDON
You could easily become swamped.

MCNEIL
The force package we're talking about, the Main Contingency Force, is the task group at high readiness. It's the naval task group with Sea King and Sea King replacement helicopters, new and medium-lift helicopters which will fly off ships, AORs, the so-called "big honking ship" which I think we're going to lease before we buy. And I think we can do that sooner rather than later. It will not be a conventional DND which says "10 years from now you might have something." We're serious, and it's going to mean a Joint Support Ship.

It's going to mean a six-pack at least of CF-18s that are optimized for air-to-ground, and supporting naval forces, and they're going to be flying around Shearwater, or their main airport. They have to be. We have to put this together as a team, Task Force Canada, and practice it. And we're going to bring in a whole bunch of soldiers from somewhere. Because you have to put it all together and you have to train it as a package and exercise it, and certify it – because we're not going to cobble together a bunch of people and fail. If you don't do it properly with all of the levels (the same as what we call 'sea training' in the navy but on a CF-wide basis with the equivalent of a certification for safety, for operations, for getting the job done), there is no point in doing it. And that's going to mean the Canadian Forces in Atlantic Canada working together for a common purpose over a period of time.

HAYDON
But you don't have the resources yet to do what seems to be expected of you.

MCNEIL
MARLANT is not expected to have the resources. It will be the Canadian Forces in Atlantic Canada. It will be what we currently have: MACA, Shearwater, 12 Wing, 14 Wing, the navy here in Halifax, the naval reserve, the militia, and the rest of the Canadian Forces. And the Main Contingency Task Force will come with resources. It has to, otherwise it won't exist.

HAYDON
How about the staff in the headquarters?

MCNEIL
We have a real conundrum. There is high demand from Ottawa to put the staff together to build the force of tomorrow – the new single class service combatant, the "big honking ship," the medium-lift helicopters, and so on. That takes a lot of staff effort, and so there's a real demand for people. At the same time, we need people if we're going to set up the Main Contingency Task Force here in Halifax. So, the biggest demand is human resources, not capital.

Part II of this conversation will appear in the Fall 2005 issue of CNR.

The Battle of Atlantic Memorial Mural

Commander Mark B. Watson

Although Canada is a maritime country, it is difficult to find many tributes to those who have served on the high seas and there are few testimonials to the wartime Canadian Navy. Fortunately, a long overdue addition to this compilation has recently been made at the Wardroom at CFB Halifax, specifically the Battle of Atlantic Memorial Mural. This is the largest mural dealing solely with the Canadian Navy and was only acquired through a series of very fortunate events that aligned perfectly as if one were constructing a nautical triangulation.

The concept behind this project started as the brainchild of RAdm Davidson in 2003. During his tenure as Commander Maritime Forces Atlantic he believed that the Wardroom, which was undergoing reconstruction, needed a painting to match the others already owned by the Wardroom. It was not to be a depiction of convoys or of smaller ships simply doing escort duties as had been typically glorified in the war art of the past. Instead, a specific naval action needed to be recreated that would exemplify the strong traditions of the Canadian Navy that had been largely overlooked on canvas. With such guidelines the mission embarked.

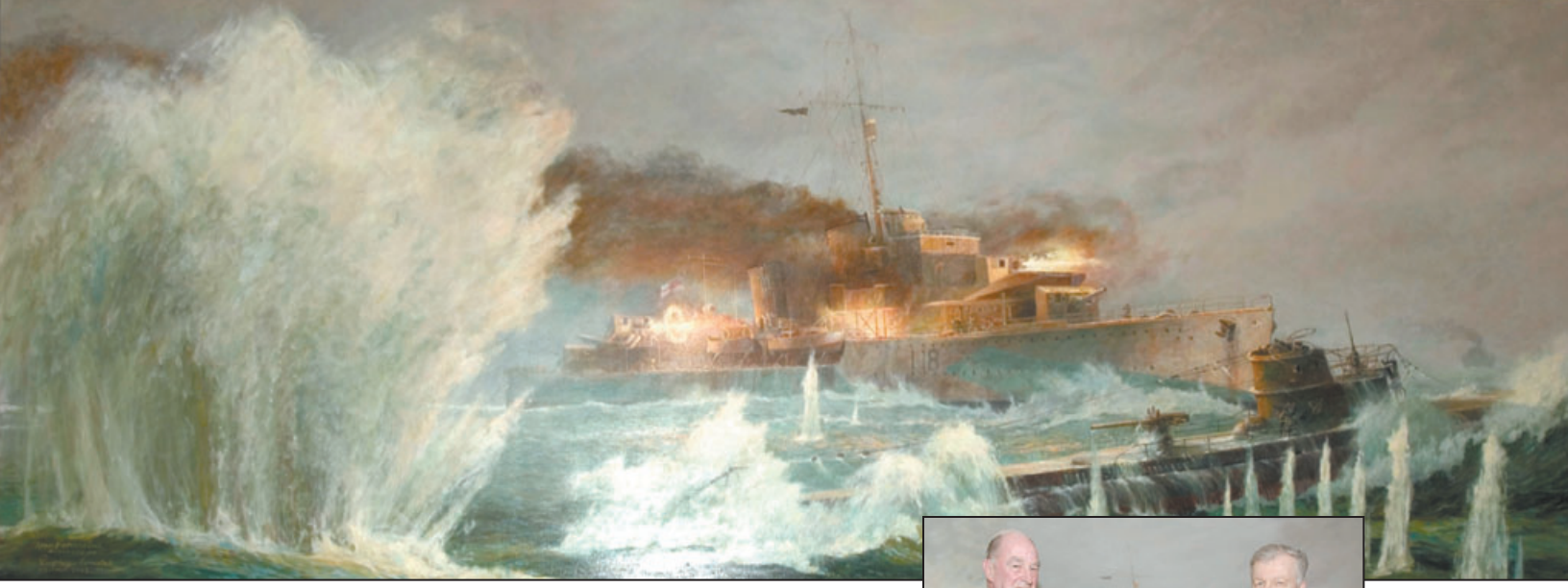
Now an artist had to be selected. Auspiciously, at a reception Admiral Davidson encountered Tom Forrestall, a renowned North American painter, a member of the Order of Canada and, fortuitously, a Halagonian. Although not intimately knowledgeable about naval matters, Mr Forrestall had served as a Sea Cadet during the Second World War and took an interest in naval activities. After a friendly discussion, he offered his services for this unique project that would become his largest production to date. Consequently, the first of three components lined up for this nautical fix.

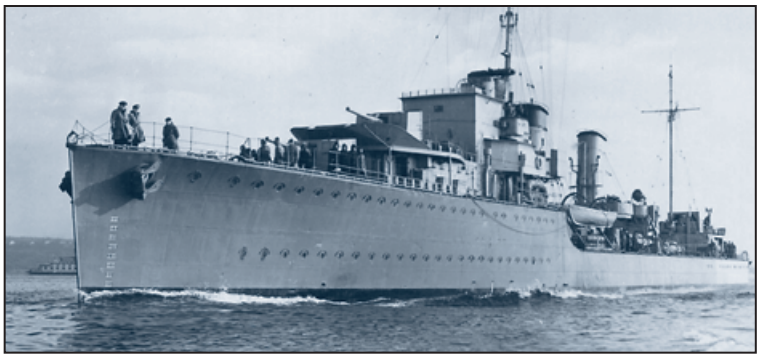
Next, it was necessary to select an engagement. Advice was sought from a variety of naval experts. The verdict quickly became apparent, as HMCS *Assiniboine*'s encounter with U-210 in 1942 was the unanimous choice of all concerned. This single engagement simply stood out from all the rest in a variety of ways including the number of commendations awarded, the length of the battle, and the personalities involved who have since become part of Canadian naval lore.

In late July 1942, HMCS *Assiniboine* was assigned to protect convoy SC-94 sailing from Sydney, Nova Scotia, to the United Kingdom. On 6 August, 'Bones' was in heavy fog and quite literarily found U-210 running on the surface off Iceland by accident.[1] The novice crew immediately threw itself into a fierce battle that saw each vessel weave into and away from one another. (Apparently this voyage was the U-boat captain's first foray as a submarine captain. He had been trained as a surface officer and, unfamiliar with submarine tactics, he had wanted to fight on the surface.) For hours the submarine continually sought a chance to dive and at one point, due to the close proximity of the combatants, *Assiniboine* could engage only with her .50 calibre machine guns. *Assiniboine* did not go unscathed, the German U-boat's gunfire touched off a serious gasoline fire below the bridge. Finally, after several hours, U-210 tried to dive again and *Assiniboine* was able to ram her just abaft the conning tower. This damage prevented her from escaping and she was rammed a second time, which sent U-210 to the bottom.

As a result of the engagement numerous commendations were awarded. These included: *Assiniboine*'s Captain, LCdr John Hamilton Stubbs who received the Distinguished Service Order, the First Lieutenant, Lt. Ralph Hennessy (who would rise to Vice-Admiral) who was awarded the Distinguished Service Cross, and the Coxswain, Acting Chief Petty Officer Max Leopold Bernays, who stayed at the helm of *Assiniboine* despite the smoke and fire aft of the bridge and received the rarely awarded Conspicuous Gallantry Medal. Additionally, there were four other medals awarded and no less than 16 Mention in Dispatches bestowed.[2] With *Assiniboine*'s heroic engagement as the unanimous choice of numerous historians and serving officers, the second important part of the triangulation was completed.

Now the most difficult part of the project had to be solved – the finances. This was not an easy task. Fortunately,





Assiniboine *Photo: The Maritime Command Museum*

Vice-Admiral Ralph Hennessy RCN (Ret'd) and the artist at the unveilling.

realizing the opportunity at hand, the Officers' Mess endorsed the opportunity to underwrite the project with the hope that corporate sponsors would donate to the project. Luckily, 2005 is a hallmark year for the Canadian Navy – the 60th anniversary of the end of the Battle of the Atlantic, the 95th anniversary of the Canadian Naval Service, and the Year of the Veteran. As such, it offered unique marketing opportunities. For the final time, the stars aligned allowing the triangulation to be completed as five companies (Raytheon, L3 Communications, General Dynamics, BAE, and the Arthritis and Injury Clinic) jumped on board. All that was left was for Mr Forrestall paint the mural.

After intense research Mr Forrestall commenced his painting at the Shearwater Air Museum so all those interested could see it unfold. Fortunately, Mr Forrestall was able to call upon a first hand specialist in his research. VAdm "Spike" Hennessy, who had been the First Officer during the action in question, was contacted and helped ensure the details of *Assiniboine*'s features were correct. LCdr (Ret'd) Doug Thomas also gave assistance in researching this battle and supporting the artist.

After four months the mural was complete. It shows 'Bones' attacking the submarine with all guns ablaze approximately 30 seconds prior to the second ramming. LCdr Stubbs can be seen from the bridge giving orders. A fire below is being attacked, depth charges are exploding in the water, and small gunfire is taking place. The damaged U-boat has one dead sailor's body dramatically hanging from the conning tower with three other sailors crouched trying to reach the upper deck gun. The final product is a stirring work of art that clearly shows the drama of a fight on the high seas.[3]

The mural was unveiled at the Annual Battle of the Atlantic Mess Dinner that took place on 28 April, the official opening of the new Wardroom. VAdm Hennessy and Mr Forrestall uncovered the 16-foot work of art to nearly 200 attendees. The mural has since become a feature of pride to all officers and has become a lasting memorial to the Canadian Navy – an appropriate tribute in this year, the Year of the Veteran.

Notes

1. HMCS *Assiniboine*'s ASDIC had not been working properly prior to the engagement.
2. There were four winners of the Distinguished Service Medal (DSM). These were CPO Venderhaegan, ERA 4 Class Donald Portree, PO Cook Claude F. Daly, and Acting LS Percy Smith.
3. Some "artistic license" occurred. Consequently, the final product depicts HMS *Dianthus* off in the distance (it did not show up until after), and the fire was actually out when the ship rammed the submarine.

Learning Amphibiosity the Hard Way: First Canadian Army Clears the Scheldt, November 1944

Angus Brown

There has been discussion lately concerning the feasibility of the Canadian Forces acquiring and using amphibious ships to employ joint brigade-level task forces worldwide for various tasks. Presumably, most of these tasks would be in a permissive, possibly underdeveloped, part of the world. It would be interesting to consider an historical example of joint, Canadian-directed, amphibious brigade-level operations.

The Scheldt Campaign took place over 60 years ago during the autumn of 1944 along the Dutch-Belgian coast. At the time, First Canadian Army consisting of I British Corps and II Canadian Corps plus attached formations at various times, was on the left flank of the advancing Allied forces in northwest Europe. First Canadian Army conducted the campaign in conjunction with air and naval forces in the theatre.

Whether the Canadian Forces in future would, or could, engage in amphibious operations against a hostile shore is very doubtful.

Obviously, both the technology and methodology of modern warfare have changed since 1944. Moreover, the Scheldt Campaign was what today would be termed "high intensity operations." Whether the Canadian Forces in future would, or could, engage in amphibious operations against a hostile shore is very doubtful. However, even a cursory examination of the campaign in Holland 60 years ago gives food for thought for anyone considering putting troops ashore from the sea, even in a benign, permissive environment.

The Tactical Situation

In September 1944, 21 Army Group HQ instructed First Canadian Army to clear the banks of the Scheldt Estuary. It was to simultaneously conduct masking operations along the channel ports and a corps-level land battle to secure its own flank and that of neighbouring armies involved in other operations. But the most pressing task was to open the port of Antwerp. Although captured earlier, the large port was useless because German forces, mainly retreating elements of the German Fifteenth Army, were holding both sides of the estuary leading to it. Allied advances were slowing due to logistic problems. As well, amphibious shipping and landing craft, busy moving supplies in smaller ports, could not be released for use elsewhere until large ships could discharge at a high-capacity continental port.

While I British Corps was guarding the flanks of the ill-fated airborne thrust east of Antwerp, II Canadian Corps had the problem of eliminating well-armed and well-supplied German garrisons along the south and north banks of the Scheldt. Coastal guns of various calibres on Walcheren Island were sited to cover the approaches to the mined estuary. In the course of its campaign, II Canadian Corps mounted one minor and three major brigade-level amphibious attacks. One of the major assaults included large naval forces while the others were conducted with integral army resources and minimal naval assets. The difficulty of operations was compounded by the fact that large parts of the coastal land area had been flooded, impeding tactical and logistical movement.

In its simplest form, the II Canadian Corps plan was to have 4 Canadian Armoured Division seize the area north of Antwerp to isolate German forces in the Beveland and Walcheren Island area. Subsequently, 2 Canadian Division advanced westward to occupy the Beveland Peninsula while 3 Canadian Division eliminated the German units in the area north of the Leopold Canal to the south bank of the Scheldt. In doing so, 3 Division mounted a flanking amphibious attack (*Operation Switchback* on 9

October 1944) from Terneuzen to the area of Breskins traversing five miles of water using amphibious vehicles. Later, in support of 2 Division, 52 (Lowland) Division mounted a brigade-level amphibious assault against Flushing on South Beveland (*Operation Infatuate I* on 26 October 44) and an assault crossing from Beveland to Walcheren (part of *Operation Vitality*, 3 November 1944). A full-scale amphibious attack with strong naval forces by 4 Special Service Brigade, Royal Marines, assaulted Walcheren Island from the sea at Westkapelle (*Operation Infatuate II*, 1 November 1944).

In coastal operations, everything is predicated on accurate information about weather, tides and shallow water obstacles. In the Scheldt, weather intelligence was available, tidal information was known and charts were accurate. From this weather intelligence, various limitations and parameters of the large Walcheren amphibious assault could be determined. Only one day of every six in October would be suitable for a landing on the northwest coast because of heavy swells. Tides were strong and, to avoid large sandbanks, landings had to be made with low and high tides in mind. The compressed training period of the Royal Marines (hastily withdrawn from their task as line infantry and given new equipment), and the complicated process of embarkation of troops and landing craft had to be done in daylight in Ostend, the nearest available large port where landing craft could be assembled. Mornings were typically foggy or, if it was calm, intense overcast made air support debatable. Thus, time and space windows were narrow.

In coastal areas it can sometimes be difficult to know where the land ends and the sea begins. For instance, in *Operation Switchback*, a brigade attack launched across five miles of the Scheldt into an area east of Breskins, the assault forces actually assembled well inland at Ghent and moved down a canal for about 20 km to approach open water. Similarly, some of the Commando assault wave at Westkapelle sailed through the gap in the sea wall and disembarked a short distance inland on the flooded island. Neither operation went exactly according to plan and local initiative often came into play.

Once on shore, landed forces immediately face mobility issues. Coastal areas or river deltas often have naturally fluctuating water levels, and may even be inundated due to natural, accidental or deliberate flooding. Even normally high water tables may pose obstacles or difficulties for army units on otherwise negotiable ground. Small craft and amphibious vehicles will often be needed for normal operations after the initial landing. All of these situations pertained in October-November 1944.

Strategic Factors

At the strategic level, combined operations can bring difficulties, as Canadians working in multinational forces in the more recent past have found. Despite the fact that this campaign was conducted at a high level, even First Canadian Army was not its own master. Unclear orders by both Field Marshal Bernard Montgomery and indecision by General Dwight Eisenhower created uncertainty surrounding the initial direction given the Canadians. General Guy Simond's unorthodox plan for destruction of dikes on Walchern Island, and the consequent flooding, was a matter of concern and review at SHAEF, the Combined Chiefs of Staff Committee, and the highest levels of the Dutch and British governments. Both the Canadian and British Armies were running low on reinforcements for infantry casualties that had been higher than expected and, in Canada at least, the political bugbear of conscription was looming again.

Despite the fact that this campaign was conducted at a high level, even First Canadian Army was not its own master.

Operations in coastal areas almost demand the use of some type of joint organization. In 1944, First Canadian Army was the "responsible planning headquarters" but there was no formal joint organization. Although 84 Group Royal Air Force (RAF) shared an operations centre with First Canadian Army, a progressive arrangement for its day, the working relationship was sometimes rocky. For close air support missions, the discretion of final target allocation was in the hands of 2 Tactical Air Force HQ, causing uncertainty among army planners about what they could actually expect to receive.

Other participating services gave varying degrees of cooperation. The Royal Navy was cooperative, and the Allied Naval Expeditionary Force's forward headquarters moved close to that of First Canadian Army. Some naval officers contributed to amphibious detailed planning by the army staff. Admiral Bertram Ramsay personally established a priority for the Scheldt operation in the allocation of amphibious shipping, especially for the assault by 4 Special Service Brigade on Westkappele.

Bomber Command HQ was reluctant to commit to a sustained heavy bomber effort for Scheldt operations. Both the RAF and the US Air Force (USAF) believed that

the proper use of strategic air forces did not include tactical support to troops on the battlefield. "Advisors" from Bomber Command attended some planning conferences and the Chief of Staff of First Canadian Army visited Bomber Command HQ in the UK. A small liaison cell was intermittently established at First Canadian Army HQ. Most communication had to go through 21 Army Group, despite some direct wireless links being provided during *Infatuate II*. The general feeling among army planners was that the bomber support was spread over too many targets to be effective and that there should have been joint planning.

After Scheldt operations were completed, the Royal Navy (RN), too, expressed its dissatisfaction with the level of air support, particularly for the Walcheren Island assault, and stated that there should have been a joint plan to confirm Bomber Command's participation more firmly. General Simonds, replying to Admiral Ramsay's report, noted that three of the four amphibious operations had been done at short notice and as part of the "run of the battle." He felt that closer work in a truly joint headquarters, with officers empowered to command naval and air forces rather than just establish liaison, would have been desirable.

Photo: NACPA 131236

A Buffalo LVT climbs the bank of the Escaut River, Belgium, 26th September, 1944

Geography and Tactics

The flat geography of the low-lying Belgian-Dutch area meant that army units often had to move under direct observation of the enemy. Consequently, Scheldt operational plans called for the use of smoke, which was successful once during *Switchback* although the variable winds nullified it at other times, and some night operations which were difficult given the state of technology of the day. Often, attacks were scheduled for dawn to take advantage of darkness in their initial stages.

On both shores of the estuary, because large areas of ground were flooded, tanks and other vehicles were channelled into defiles formed by dikes and elevated roads. Artillery was restricted in gun position selection and intimate fire support was often reduced to light, man-handled infantry weapons. Infantry attacks were limited in their choice of axis of attack. High water tables hampered units properly digging in for protection. All of this meant that on the south bank of the Scheldt, logistics had to be carefully planned – even to withdraw forward units from the line for routine replacement was difficult.

In 1944, both the seizure of ports (Flushing and Westkapelle) and over-beach assaults were executed. Specialized equipment, both naval craft and army engineer vehicles, was needed for both, and inshore naval forces such as rocket and gun-equipped landing craft and headquarters ships were needed to get forces ashore. Large and small landing craft, specialized units of amphibious LVTs (Buffaloes, Terrapins) and smaller unit-level prime movers (Weasels) were used at various times to meet different lift requirements and going conditions. It was a major staff exercise to allocate, move, deploy and then re-allocate the appropriate lift resources to meet the needs of each operation. In some cases, naval landing craft were moved by ship first to Ostend and then by truck to the banks of the Scheldt estuary, thence overland again to the northern part of Beveland.

Today many of these situations would likely be met with the use of helicopters. However, to be able to lift the required tonnage of people, ammunition and supplies from ship to shore, medium- or heavy-lift helicopters would be needed. Once on shore, troops might still have a mobility problem and helicopters could be continually in demand simply to move troops, guns and supplies. Some sort of landing craft or amphibious capability might well be needed to supplement tactical helicopter airlift.

Protection and Support

Quite apart from the joint operations with First Canadian Army, the RN deployed mainly destroyer and motor torpedo boat (MTB) forces to establish local sea control over the littoral area as part of overall channel and coastal protection operations. The main threat at this time was from German naval "small battle units" – minelayers, E-boats (the German version of the MTB), the occasional U-boat and midget submarines – not unlike today's terrorist speedboat threat. In addition to RN surface units, Fleet Air Arm and RAF Coastal Command squadrons conducted aggressive patrols, conducting 1,267 sorties in October alone. After the surrender of German forces, physically clearing the estuary eastward to Antwerp took 10 minesweeping flotillas three weeks, removing 267

mines in the process.

The size of the resource bill needed for landing troops should not be under-estimated. In *Operation Infatuate I*, the two lead battalions required 20 LCAs each. Another 20 LVTs and 26 Weasels were assigned for re-supply. *Operation Switchback* used LVTs to cross from Terneuzen to Breskins area. The naval force for *Operation Infatuate II* at Walcheren was comprised of 181 vessels to lift and properly support a single brigade. This included preliminary minesweeping on approach routes, a command ship, the support squadron of 27 rocket and gun-equipped landing craft, and various types of large and small landing craft, up to and including LCTs. There may not be enough helicopters in a modern scenario to replace surface craft for all these tasks in all types of weather.

Any military amphibious landing, even a benign one, must consider the protection of forces involved. In a worst case scenario, this includes fire support. In the Scheldt, this was problematic. Artillery was effective when it could be moved within range of targets but First Canadian Army's two corps were widely dispersed over a large geographical area. After preliminary heavy bomber sorties from the UK, 84 Group RAF provided close air support, primarily rocket-firing Typhoons for most operations in the Scheldt. The 21 Army Group Operational Research teams examining resultant damage and casualties afterwards questioned the material effectiveness of all air support used, but gave full marks for its morale value. The coordination of all these assets was a major and continuing staff operation.

Intimate support for the Royal Marine brigade-sized landing at Westkapelle (*Infatuate II*) was provided primarily from naval sources and from over 300 artillery guns located in range on the south bank of the Scheldt. Naval resources committed were considerable. The battleship HMS *Warspite* and two monitors, HMS *Erebus* and *Roberts*, directed their 15-inch guns upon German defences on Walcheren during the amphibious assault. In addition, modified landing craft of Support Squadron Eastern Flank provided inshore fire support for the attack. The RN fired rockets from five vessels. Twelve vessels carried 4.7-inch direct fire guns and others of various calibres and a further six landing craft carried anti-aircraft guns to protect the assault formation. Because other fire support failed to eliminate some emplacements, 20 of these craft were lost or damaged. Support Squadron drew defensive fire away from troop-laden landing craft but paid a heavy price for violating a cardinal rule of amphibious landings by remaining within range of shore batteries for an extended period.

Army engineer resources were vital during both the landings and subsequent fighting phases. As noted above, a complete British amphibious assault brigade (LVTs, etc) from 21 Army Group was placed under operational control of First Canadian Army. Other specialized armour (eg., mine-clearing tanks, armoured bulldozers) was assigned from the British 79 Armoured Division. Engineer work included improving egress and entrance ramps, breaching of dikes, mine clearing, control of locks and sluice gates, recovering broached or damaged vehicles and water craft, and general mobility improvement for forward troops.

As a gauge of the element of risk inherent in amphibious operations, for the Walcheren assault six separate Canadian medical units heavily reinforced the British 4 Special Service Brigade.

Conclusion

This cursory look at an historical campaign gives some small indication of the complexity involved in planning and conducting even small brigade-level amphibious operations. Amphibious operations call up a number of unique planning procedures and specialized equipment. Even without active enemy resistance, any commander must plan for force protection. This, in turn, requires specialized naval craft and vehicles (armoured or non-armoured), reliable intra- and inter-service communications, joint doctrine, planning procedures, logistic depth and capability, and the ability to interact with multinational partners.

Currently, it seems unlikely that Canada will ever want, or need, to project power across a hostile shore. Modern situations, however, may approach the level of some of the problems experienced in the Scheldt because of the difficulty of working in littoral waters in certain parts of the globe, changing threat levels, lack of defined or declared enemies, the intricacies of coalition policy or domestic political pressures. There is more involved than just packing and unpacking soldiers and their kit on and off a ship, or conducting routine flying from a floating air base. One assumes that National Defence Headquarters planning staffs are reading their history books.

Angus Brown is a retired armoured officer who does historical consultancy work and who has led battlefield tours in Europe. He is currently the director of the Canadian War Museum Oral History Program.

Making Waves

Challenging Peter Haydon's Article

Commander Bruce A. (Skip) Walker

I enjoyed the first edition of the *Canadian Naval Review* (Spring 05), but felt some amplification was required in the article by Mr. Peter Haydon "Canada's Navy: A Good, Workable Little Fleet?"

For an opening (ranging) salvo, I challenge the assertion that without policy rationalisation, the navy has changed from being "multi-purpose combat capable" to a niche role of transporting peacekeepers. First, the best instrument for a medium-sized global reach navy is exactly that – a multi-purpose ship in a task group, capable of bringing the fight to the enemy. The Defence Policy Statement of 2005 concurs, as does *Securing Canada's Ocean Frontiers* (2005), its predecessor *Leadmark* (2001), the 1994 White Paper, and many other unofficial policy papers. Second, the emotive and oft-erroneous word "peacekeepers" aside, supporting troops (and maybe transporting them in the not-too-distant future) is exactly what the navy has always done, does well now, and should always do. One can go quite far back into history to find that each and every naval action was in support of boots on the ground – maybe not instantly and tactically apparent, but strategically, every time.

While space does not permit me to go to the depth required, familiar examples abound: Nelson maintained the sea lines of communication while conducting sea control and maritime interdiction operations (MIOs) so Wellington could fight a starving French army; the Battle of the Atlantic was fought solely to keep the gravy train inbound to a beleaguered Europe; the Cold War was "fought" in the Greenland-Iceland-UK Gap solely to limit the Soviets from influencing the land battle in Europe and potentially North America; and in both Gulf War I and II, the navies of the willing provided sea power, sea control, MIO, land interdiction operations and all other influences to ensure the allied boots on the ground were supported. That each of these campaigns became a tactical "battle" unto itself is irrelevant. The navy's ultimate job is to win wars for its governments, not just individual sea battles, and wars are won by occupying dirt.

My second salvo (spotting) must be fired at the contention that for the "Home Game" Mr. Haydon assumes that only the navy can provide security and protect Canada's sovereign interests in its own waters. Aside from the charged domestic legal issues of operating within our own waters potentially against our own citizens, why assume that only the navy should do this task? Surely this is a "government" task, using the appropriate asset, be it ship, aircraft or data for the mission. The navy is a governmentally defined and budgeted fleet, as are all our "fleets," but it can be reasonably argued that a fully combat-capable warship, with 200-300 sailors is probably not the most appropriate patrol vessel in our waters. In fact, in the absence of any specific threat, it is most definitely overkill.

However, a reasonably equipped government of Canada vessel, or aircraft (or UAV), with communications connectivity and a surveillance capability can provide the right data and information to a regional operations centre, and may in fact be appropriate. They need not be armed, but much like when we embark Fisheries Officers in warships, who is to say the Canadian Coast Guard could not embark navy boarding parties, fully booted and spurred, to conduct homeland maritime operations? It would not even require a change in legislation, as it is the Crown's prerogative to execute such a plan. Just like the navy's job is to influence the land battle, it is the government's job to provide domestic security.

But, you may ask, why should the navy have to rely upon or work with, or even be subordinate to *(gasp!!)*, the RCMP, Coast Guard, Department of Fisheries and Oceans, CSIS, Canada Border Services, Justice, Immigration, etc. etc? Well, this may happen because of the "new" security environment in which we live. Surely the navy cannot do all of this "Home Game" alone. Asking for help from those who can, who are experts, and who have experience, is just smart. Supporting, but not necessarily leading, in a domestic security scenario is not a sign of weakness but an admission of reality in the post-9/11 world. And if in fact it can be successfully argued that the navy does get assigned *all* the domestic security duties, the real question is not "*why?*" but "*how?*" The navy's capacity to conduct its present missions is stretched today – adding the entire domestic area may break it or at least render it incapable of influencing the boots on the

ground in someone else's backyard. No one organisation has the capacity to do it all, so combining our strengths makes good sense. If we are not working together, then we are not working.

The navy should be *an* option to the government, not necessarily *the only* option. Yes, the six-point MARSEC plan states that the navy has the on-water lead during a crisis (the Rheostat Strategy) but until that crisis arises, or we have intelligence that it is on the rise, let's use the navy when it is appropriate to do so, when firepower is needed – that's what the navy does well above all the other government assets. If patrols for the exclusive economic zone, fisheries, pollution control, etc., are required, the navy can surely help or even lead – through its expertise in C4ISR. Let those who have the legal and dedicated expertise to do so actually conduct those appropriate domestic security "Home Game" missions, be it Atlantic, Pacific, Arctic or Great Lakes – that's what they do well.

In the "Batting Order" (has the NHL strike gone so far as to require baseball analogies?) I again assert that the task to "maintain a credible presence in all Canadian waters" can be accomplished by another of the government's fleets. While the navy is by far the most capable asset, it may not be the best in terms of cost effectiveness (or in terms of a de-escalatory perception) for a low threat environment requiring a constabulary function. Yes, the warship never does *only* patrol functions while on such a mission, as concurrent non-interfering training is the norm. The navy cannot afford to waste expensive sea days conducting only one function.

Damage control exercises, fleet exams, equipment tests, joint training, helicopter operations, gunnery, anti-submarine warfare, etc., etc., happen every day at sea, regardless of mission. These training opportunities of course include operating with other government agencies and with allies. But we, as maritime fleets, can provide better value to the Canadian taxpayer if we provide the options of all our fleets combined, to conduct the government's business, not simply the one we in the navy know best. Are the other agencies on board with this? The answer to that is well above my pay grade, but it makes good sense to me if we all take advantage of each others' expertise, to provide a whole greater than the sum of the parts.

Finally, in firing for effect, citing the national security environment of almost a century ago, with its anti-American bent, strikes me as a bit disingenuous. If in fact, "Washington expects us to take maritime security as seriously as it does," shouldn't we want the United States as a friend rather than an adversary? I am fairly certain that a terrorist or environmental threat does not respect our borders, especially our maritime frontiers. To a terrorist, our maritime approaches are probably an advantage not a hindrance.

If we should consider "ourselves as living in a maritime country and all that entails" then should we not also consider ourselves a very large continental island, and extend an invitation to the US Navy, US Coast Guard and all parts of the potential "Naval NORAD"? And if ever there was a time to extend this invitation, the post-9/11 security environment is it. Having the "Canadian Navy re-assume the traditional role of keeping the Americans out" cannot be nearly as practical and important as sharing security and surveillance duties in our maritime approaches with our greatest economic and military ally. The cost for the colour of Canada's picket fence is $2 billion per day in trade with our southern neighbour. Let's not waste the white paint.

The views presented in this paper are attributable solely to the author and are not to be construed in any way as declarations of policy by the government of Canada, DND or the Canadian Forces, the Directorate of Maritime Strategy or anyone other than the author.

*HMCS **Charlottetown** refueling from a German AOR.*

It's All One Game
Rich Gimblett

Peter Haydon's lament for "A Good Workable Little Fleet" covers much ground, but is especially useful in setting the tone for debate over the major issues confronting the Canadian Navy. While I agree with much of the substance of the article, Haydon is guilty of perpetuating use of the analogy that the current global naval situation is one of "home" and "away" games. That phraseology, borrowed from our American friends, has been enormously helpful in re-shaping the worldview of the US Navy (USN) to recognize that it has a domestic role (traditionally filled by the US Coast Guard) in addition to its own traditional expeditionary role.

The distinctions between the USN and the US Coast Guard have always been largely artificial; in the post 9/11 world they are entirely inappropriate. Just as the Coast Guard contributes a vital American constabulary presence to overseas operations, the USN can provide the needed punch to emerging aspects of homeland defence. Application of the phraseology in Canada, however, runs the danger of being counter-productive, as it infers the need for two separate fleets, one expeditionary and the other for domestic purposes. Our history has proven time and again that we barely have sufficient forces to cover our two coasts, let alone to build two specialized fleets.

Instead, we must invest carefully in an adaptable force structure that can easily provide politicians with a useful option for expeditionary deployments when there is a reduced threat to the primary responsibility for homeland defence. If we let the politicians think for one moment that they can prioritize in one narrow field, for example the current fad of homeland defence, when the situation changes and the navy is called to go overseas, it will be found wanting and left to shoulder the blame. Maybe the way to approach the problem is to recognize that it never was two separate games, but always different dimensions of the same game – "infield" and "outfield," to continue the American baseball analogy, or in more Canadian hockey terms, "offence" and "defence."

Like either hockey or baseball or practically any other real sport (i.e., not golf), both dimensions are in play at any time, and especially in hockey we see all too often there is the need for the offence to draw back near the goal while it is not uncommon for a defenceman to score the winning goal. Fundamentally, the ocean can be likened to one big sheet of ice, and everyone is on it at the same time.

Expeditionary Forces, Continental Defence and Security
Ed Tummers

At the final session of the Seapower Conference held in Halifax in early June, there was considerable discussion about the appropriate metaphor to use to describe Canada's approach to maritime operations and forces. In particular, some people objected to borrowing the US Navy concept of away team and home team. This argument was sound. Other people proposed several half-baked ideas and analogies, mostly following the sports analogy of offence and defence, or infield and outfield.

From what I heard at the conference, a more appropriate Canadian analogy would be a quilt. Purely by coincidence, some of the wives of conference participants went to Lunenburg for the final day to see a quilt show. Think of a quilt as a security blanket. And what do Canadians want? They want to replace the fireproof house, which ceased to exist a number of decades ago, with a security blanket. Canadians don't think of what the navy does as a game, or a contest between gallant warriors.

What is the Canadian Navy trying to do? To quote Brigadier General Stuart Beare (Commander, Land Force Western Area), the Canadian Forces are "integrating law enforcement, diplomatic, developmental and military operations at the lowest possible levels. The security effect we are seeking to create is one that not only supports the innocent but one that enables the development and incubation of those institutions of governance, law

enforcement, commerce and security that we are lucky enough to take for granted here at home. To do this, we will continue to operate with other agencies and in multinational partnerships."

To use the quilt analogy, Canada has a large number of quilters each working on their patch. They may not even be together in the same room. The quilters are trying to keep those people already under the quilt warm and cosy. To do that they must constantly repair and replace threadbare patches of the quilt. Canada is also trying to make the quilt bigger so that more people can find warmth and protection beneath its cover. Some patches are very detailed and intricate and take great expertise to make. Other patches are simple, some even have no decorative features but they are just as necessary to keep the quilt together. Eventually, our goal is to have a quilt big enough so that everybody in the world feels secure.

A "game" always comes to end with a winner and a loser. A quilt always needs more work to keep the frayed edges neat, to replace worn patches, to clean up stains. The quilt needs the skills and dedication of a large number of quilters, each with different expertise. And the quilters need a master plan to follow to keep the design intact.

I am sure we could develop the analogy further, but like all analogies, it has limits. For our purposes, though, I think it describes the Canadian context better than any of the sports analogies I heard at the conference.

Military Sea Lift
"Amphion"

So, General Hillier wants a "big honking ship" to transport his army (as an expeditionary force with helicopters and other things) to and from world crises. The track record isn't that good – the military couldn't deploy the DART last year and a few years ago almost lost all its equipment when the GTS *Katie* held it hostage. Getting some dedicated national heavy sea lift probably makes sense, as would some heavy lift aircraft. The problem, as others have said, lies in making all that happen.

Common sense says that this isn't going to happen quickly: a lot of related equipment (such as heavy lift helicopters and barges) has to be bought, and a lot of people have to be trained before the concept of rapid force deployment becomes a reality. Putting the problem of getting the right vessel aside for the moment, there are some questions that should be answered:

- Where will all the equipment be stored? People can be moved quite easily but moving vehicles, stores and helicopters around the country is a bit more difficult.
- Where will the ship be loaded and unloaded in Canada?
- Who will do the loading? Maybe the military needs some specialist loadmasters or uniformed stevedores, because if this is a true strategic asset one cannot afford the potential vulnerability and embarrassment of a private sector strike.
- How much practice must be done before the force is ready to be deployed and off-loaded operationally as a useful contribution to global security?

Obviously someone has thought about these, or have they? The last time the Canadian Forces set out to build a similar capability in the 1960s (it was Paul Hellyer's strategic brain child), the idea was found to be far too expensive, and take an unrealistic amount of time before it could be made to work effectively. At the time the strategic requirement was even less compelling than the latest rationale for invading failed and/or failing states.

Let's accept, for now anyway, that the strategic rationale is valid and that the army will make the necessary transformation to become rapidly deployable. The burning issue thus becomes the means of transportation. Here, there are some options – some better than others.

The option of buying or borrowing a military sea lift vessel off somebody is a non-starter because they are all in use, and those ships that declared surplus are either out of date or worn out.

Having a new ship built off-shore to an existing (and thus also foreign) design – like the Royal Navy's HMS *Albion* or the US Navy's *San Antonio*-class – makes sense provided the Canadian military resists its inveterate habit of trying to "Canadianize" everything at huge cost and with added delivery delays. But the government would have to deal with the problem of spending some $2 billion in

another country. In theory, the government could seek economic off-sets, but that is a lot of apples and cheese – the traditional barter currency for warships. Alternatively, the government could re-energize the domestic shipbuilding industry, also at a fairly high price but one that would create good jobs, to build a new ship using either an existing design or by creating a new design which would add even more delays into the process. The technical problems are not insurmountable; if we can build off-shore oil and gas platforms in a Newfoundland outport surely we can figure out how to build the modules for a big military support ship somewhere and bring them together. The problem in this, though, is that the new ship won't appear for about 10 years, probably even longer. The convoluted government contracting process alone takes 4-5 years.

Another option, and one that would also solve the problem of waiting for a new ship to be delivered, is to use an existing merchant ship. Not only are there some innovative ideas on the street on how this can be done, but there is also a considerable body of experience in actually doing it. The latest commercial concept using a mid-sized Ro/Ro container ship was proposed by one of the larger shippers, Maersk, in the January 2004 edition of *Proceedings*. The Royal Navy's experience in the 1982 Falklands War proved that merchant ships could be adapted quickly to meet a host of military tasks. Since then the shipping industry has made enormous progress in handling standard and awkward-sized cargo.

Much of that versatility exists in the container business. In fact, there is almost nothing in the Canadian land force inventory, including tanks and helicopters, that cannot be moved in a modern container ship. The main reason is the use of the standard 10 x 40 foot platform (a "flat") able to carry some 30 tonnes of cargo which can be raised to 60 tonnes by using two flats side-by-side. Irregular loads do not present a problem either. Using "headboard flats" odd-shaped items can be stacked in the same way as a "box" container.

Loading and unloading need not present a problem; dockside cranes can lift these irregular cargoes as easily as a standard box. Or, if that won't work, it is not very difficult to put a couple of cranes on a vessel. Also, by using self-propelled barges or floats, which can also be loaded on the ship, equipment can be taken ashore if the ship cannot get alongside. A little improvisation can provide simple answers to many strategic and tactical problems, as the British found out in 1982 during the Falklands War.

My point in all this is simply that if Canada is serious about creating a rapidly deployable military force, then the concept should be treated as a true national project and should draw in the technical innovators as well as the military planners. But the first question, and the one that will set the planning agenda is, "How soon do we want to be able to do that?"

In a Mess about Pollution

Heinz Gohlish

On 19 May 2005 Bill C-15 was given Royal Assent. This bill gives effect to an anti-pollution law such that a ship owner is strictly liable for any ship-source oil pollution even where there may be no causal connection and the case is unproven. The law also gives Environmental Protection Officers wide powers of enforcement. This goes beyond any agreed international convention on pollution and even perhaps the United Nations Law of the Sea (UNCLOS). Further, it undermines the recent work done by the International Maritime Organization (IMO) in drafting and steering liability conventions that are respected world wide.

The normal international procedures for apportioning blame and responsibility for oil pollution, together with levels of compensation, are well tried international agreements which are also incorporated into the *Canada Shipping Act*. There is a trade-off between strict liability and limited liability that balances a guaranteed compensation for those suffering damage with a defined maximum payout by the accidental polluter. Note use of the word "accidental" – this does not cover the criminally negligent who are still subject to the full weight of the relevant domestic laws.

Bill C-15 denies the ship owner any reasonable defences that would be available to other organisations or indi-

viduals when damage ensues consequent to an unforeseen accident. It could even implicate ship operators who had no involvement in the incident. There is no onus of proof by the Crown and no opportunity of the accused to demonstrate that due diligence was exercised. In addition, it exposes the owner and the ship's Master to criminal sanctions. This legislation even surpasses recent trends in other punitive jurisdictions, specifically France, Spain and the USA, in criminalising the responsible persons for an accident over which they may have had no control and to which they responded within the proper scope of their professional duties. It appears that politicians refuse to acknowledge the concept of "perils of the sea" and somehow believe that all accidents can be legislated out of existence.

Worse, it appears both that this legislation was rammed through with no proper discussion and that the bill was politically motivated. Any objections from Canadian shipping industry bodies were brushed aside. This was a pure concession to a single-issue environmental group. It has all the hallmarks of appeasing a politically influential lobby by ganging up on an external perceived soft target – the international ship owner.

Strangely, this legislation comes at a time when the shipping industry is making real headway in pollution avoidance. The International Tanker Owners Pollution Federation (ITOPF) reports that oil spilled into the sea in 2004 by tankers and combined carriers is about 10 per cent of the level of several decades ago and a continuing reduction from the previous two years. In addition, most seaborne oil pollution does not originate in ships. As well, Bill C-15, as presently construed, may discourage salvors from rendering assistance as they too could be caught in the net. Perversely, the law could thereby actually increase the level of pollution damage.

As a variant of Gresham's Law – bad laws drive out good citizens – and the ever-fresh Law of Unintended Consequences, this bit of politically-driven legislation is particularly malicious. Its underlying premise seems to be that all ship owners are foreign devils. This is wrong on all counts and those involved in the creation of Bill C-15 may be surprised at the extent of first-rate, responsible ship owners operating in Canada who will be firmly caught in this net, as well as top international owners who have operating offices in Canada. The Prime Minister, of all people, should have known better.

HMCS ***Fredericton***

Canadian ship operators – among the best in the world, including Teekay, Fednav, CP Ships and CSL (formerly owned by the Prime Minister) – cannot risk their balance sheets on such an arbitrary and unquantified liability. In addition, there are the highly regarded Hong Kong owners operating out of Vancouver. These are world-class ship owners who will not expose their international assets to the vagaries of misconceived Canadian legislation. They can move out just as quickly as they moved in. Other international ship owners, with reputations to defend, may simply give Canadian waters a miss and ship their cargoes to less fussy operators.

The question the Canadian government should be asking itself is this: who would they rather have at the end of a pollution liability chain – a reputable well-funded well-insured operator with proven assets in Canada, or a shadowy single-ship flag of convenience operator with no assets, dodgy insurance and a propensity to do a runner with the first sign of trouble? If C-15 is not amended, the Canadian government will soon find itself becoming intimately acquainted with persons of the latter persuasion.

A New Maritime Security Framework: Le mieux est l'ennemi du bien, non?

Peter T. Haydon

For some reason, defence and security are difficult subjects for Canadian governments unless faced with imminent disaster. Of late, the government has also found it difficult to define a realistic place for Canada in today's complex international system. Thus, it has been difficult to develop a consistent Canadian contribution to international security. At best, the contributions have been ad hoc and based on what was available rather than on the basis of any coherent plan.

As it happened, ad hocery has worked well because the military capabilities kept, albeit reluctantly, after the Cold War provided the government with a great deal of flexibility. The call for "multi-purpose, combat-capable forces" was a reality for a while. The status quo was good enough – at least in theory – and the government saw no need to invest in much new equipment. In practice, though, a military and security infrastructure needs constant attention if it is to remain effective. This requires that money be spent on its upkeep; something the Canadian government was reluctant to do throughout the 1993-2003 period. As a result, the military stagnated into a condition of "rust out" and started to be less effective and less flexible. In the prevailing world situation this is a recipe for disaster. As a result, the government is rapidly losing its ability to play a leading role on the world stage, at least through the use of the military.

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Fortunately, the damage being done to the Canadian Forces by the policy of planned neglect has been recognized, and the government has begun to engage in meaningful security planning. Some hold that this is too little, too late for the recovery to be meaningful. Others decry the pace of spending on new equipment as glacial and exacerbated by a bureaucratic process that adds years to the procurement process.

But let's be positive about it – there are now plans where no plans existed before. Yes, they are still largely theoretical concepts lacking the commitment of real money to actual contracts to acquire new equipment, but some of the necessary organizational changes are beginning to happen. So, how did this all come to be?

In the policy paper *Securing an Open Society: Canada's National Security Policy* (April 2004), the government committed itself to "a long-term path to enhancing the security of our country." It was a first step in a larger process that called for a less fragmented approach to national security. Some would see this as a grand national strategy, and it did indeed provide direction for the development of a series of subordinate plans that would break down traditional interdepartmental boundaries in implementing the new "vision." Breaking the bureaucratic rice bowls will not, however, be easy as it calls for both cultural and procedural change in the way things are done. Without specifying them, the new policy also requires new concepts of accountability and oversight. These may be even more difficult to implement – and given the already painful procurement process, may make getting military equipment take even longer.

For the military, the point of departure for the new strategy was the following statement: "Our forces must also be able to defend Canada, help secure North America, and address threats to our national security as far away from our borders as possible. Indeed, getting the right balance between domestic and international security concerns will be an important consideration in determining the roles and force structure of the Canadian Forces." That's a very sensible statement, just as good in fact as similar statements made in 1947 and in every defence policy and White Paper since then.

The problem, of course, is that it is an invitation to create innumerable new force structure models and re-define tasks in countless new ways. In other words, unless controlled it becomes an opportunity for the military to re-equip itself. And, as we have seen on other occasions, especially in the wake of the 1987 Defence White Paper, the services can seldom agree among themselves which new equipment to buy.

The idea of total service operational integration, today called "jointness," was examined in Canada in the 1960s when Paul Hellyer attempted to create a "triphibious" force of navy, army and air force capabilities to support

the UN around the world. It failed because the individual services would not embrace it and, more significantly, because it was far too expensive.

That concept has been resurrected. It began with an internal plan, *Strategy 2020*, to harmonize defence spending priorities across the services to develop a truly "joint" concept of national security. The timing was wrong, the support limited, and so the plan was shelved. The new national security policy was the catalyst for a new joint vision.

The new national security policy was the catalyst for a new joint vision.

The arrival in April 2005 of the government's International Policy Statement with a stand-alone Defence Policy Statement, *A Role of Pride and Influence in the World*, called for sweeping changes in the way Canada's military would be structured and equipped to meet national security requirements. This is truly the military's solution to the strategic problem posed a year earlier. With a budget that promises a great deal more money than available in the past 10 years, the new military strategy appears to be a step in the right direction.

However, the document is almost entirely theoretical and leaves the door open for a new round of inter-service rivalry in the quest for the new money – if indeed that money becomes a reality. There are a number of difficult issues to address before the theory can be put into practice. Foremost is the maritime security issue which involves determining the answers to the questions of what, where, with whom and with what.

The centrepiece of the new model is a new joint task force able to be deployed throughout the world to respond to regional instabilities – very much a return to the Hellyer concept. However, the implications of international terrorism and the growth of international organized crime are reflected in a greater awareness of domestic security.

The new vision, if it can be called that, has already generated new environmental concepts. For instance, the navy has just produced its latest strategic document *Securing Canada's Ocean Frontiers* in which the future role of maritime forces in domestic and international operations is discussed.[1] Picking up where its predecessor *Leadmark* left off on the eve of the September 2001 terrorist attacks, the new strategy embraces jointness, as it should, and continues to call for a "high-readiness, multi-purpose, combat capable and adaptive" fleet to meet the new mix of domestic and international requirements.

The future maritime force is seen to comprise:

- expanded Maritime Security Operations and Coordination Centres (MSOCs) that will function both with the new Canada Command concept (see the interview with Rear-Admiral McNeil in this edition) as well as internationally;
- a new generation of multi-purpose warships (called single-class surface combatants) to replace the existing destroyers and, in time, the frigates;
- new fleet support ships (the overdue Joint Support Ships) and additional ships (General Hillier's "big, honking ships") to support the new joint task force;
- better off-shore patrol capabilities which will not necessarily be manned by the navy alone; and
- upgraded submarine capabilities for surveillance, information management, force protection, and to support special operations.

The key statement in the new "vision" seems to be,

> The Canadian Navy will have combat capable forces that can control and defend Canada's ocean estate, protect Canadians and secure Canada's offshore interests. It will be fully interoperable with all Government departments to resolve any maritime domestic crisis, ready to assume a leading role in the implementation and execution of Canada's National Security Policy. It will seamlessly and jointly operate with the Army and the Air Force to bring lethal and offensive punch to a hostile shore. The Navy must be fully capable of bringing the battle to the enemy as far from Canada as necessary, assisting the Army on the ground, the Air Force in the skies, and coalition partners on the high sea or in the litoral waters of a hostile nation.

The Department of Fisheries and Oceans (DFO) is also moving ahead with its part of the national security policy. This is being done within the framework of the *Oceans Action Plan*[2] with its four pillars: sovereignty and security; integrated oceans management; health of the

oceans; and technology. The sovereignty and security roles of DFO and the Coast Guard were clearly defined by Larry Murray, the Deputy Minister for DFO, at a recent Dalhousie conference.[3] In addition to the traditional Coast Guard role of marine safety, he sees the need for independent activities in several areas including acting as transportation for the RCMP and Fisheries Protection Officers and generally contributing to the overall "maritime picture of activity" maintained by the MSOCs. Moreover, the many activities of DFO, including those of the Hydrographic Service and Arctic operations, are seen as important contributions to the maintenance of sovereignty. In some ways, this appears to be a "business as usual" approach and not specifically linked to the government's new security initiatives.

Is all this new? Not really. Interdepartmental cooperation at sea has been going on for years and continues to be an important factor in the broader aspects of national security.

Is all this new? Not really. Interdepartmental cooperation at sea has been going on for years and continues to be an important factor in the broader aspects of national security. For instance, the successful July 2004 operation to arrest a drug smuggler off the coast of Newfoundland involved HMCS *St. John's*, the RCMP and the Coast Guard vessel *Edward Cornwallis*. Nevertheless, coordination problems still exist and will for some time until the correct equipment is acquired and the necessary cross-training carried out. But it's not just the integration of ships, it requires a major cultural change as well. One cannot expect the navy to do all the things the Coast Guard does nor the Coast Guard to do the navy's work.

Progress will be made one step at a time but only when the entrenched departmental boundaries have been broken down. National security now encompasses everyone and there isn't room for turf protection.

In forthcoming editions of the *Canadian Naval Review* we will be looking at the wide range of issues facing government as a whole in implementing an effective national maritime security strategy. We will ask some tough questions and invite people to answer them. For instance,

- How can the new Joint Task Force be best transported and supported?
- What is the best fleet mix?
- What is the most efficient way of meeting the surveillance, patrol and response requirements for maritime security?
- Can all the surface fleet requirements be met from a single hull design?
- What are the implications of new hull forms and propulsion technologies?

Although the various government documents provide glowing longer-term visions of the future, . . . none address the specifics of transition from today to tomorrow.

More importantly, we intend to address the question, "How do we get to the new security structure from the present configuration?" Although the various government documents provide glowing longer-term visions of the future capability mix and the "joint" tasking requirements and talk broadly, some would say glibly, about transformation, none address the specifics of transition from today to tomorrow. This very necessary process will be costly and will likely expose the whole transformation process to further political scrutiny. And it is quite possible that when faced with the real total bill for the new maritime security framework, the politicians may once again put short-term domestic politics ahead of longer-term security commitments.

By holding a debate on the many contentious issues within the new defence and security strategy we hope to be able to impress upon Canadians that creating a sound maritime security framework serves their best interests in both the short and long term.

Peter Haydon is the Editor-in-Chief of the Canadian Naval Review

Notes

1. A downloadable copy can be obtained through the Canadian Navy's home page www.navy.forces.gc.ca/ and a summary of the document will be posted to our website www.naval.review.cfps.dal.ca.
2. Available at www.dfo-mpo.gc.ca/canwaters-eauxcan/oap-pao/index_e.asp.
3. A copy of his remarks will be posted to our website www.naval.review.cfps.dal.ca.

Report on the MARPAC Conference, "Security Challenges in the Asia-Pacific Region in the Post-9/11 Era"

Doug Thomas

Maritime Forces Pacific (MARPAC) held a conference in Victoria, BC, in early May, with a focus on the Asia-Pacific Region. The attendance reflected broad interest from many Pacific Rim states. This is a brief report on that conference.

Commodore Roger Girouard, Commander Pacific Fleet, presented the Keynote Address in which he highlighted a number of important issues. He noted the burgeoning maritime power of the world's two most populous countries, China and India, and reminded us that:

- two-thirds of the world's oil moves through the Indian Ocean;
- Indonesian, Malaysian and Singaporean naval forces are conducting cooperative patrols in the Strait of Malacca;
- China imported 120 million tons of oil in 2004, this is expected to triple in future years as China's economy continues to strengthen; and
- we should be concerned about liquid natural gas tankers as terrorist targets.

Space does not permit a detailed report on all the excellent presentations. Instead, I shall focus on several presentations.

Captain (N) Paul Maddison (Canadian Forces, Director General Maritime Force Development) provided an update on some of the force development imperatives of the Canadian Navy including: a renewed joint force focus; plans to sustain naval transformation and support the vision presented by the new Chief of Defence Staff, General Hillier; and continuing to play an integral role in providing the government with timely and flexible policy options, domestically, continentally and internationally.

The US Navy continues to be the most powerful maritime force by a huge margin, but in future years China may provide real competition, especially in Western Pacific waters. The United States is now looking at issues in the post-9/11 world, returning to the broader scope of global security challenges. There are some important factors in Asia Pacific that one should bear in mind:

- the rise of China and India as economic and political powers;
- the phenomenal rise of energy imports – as recently as 1992, China was a net oil exporter;
- the surge of historical rivalries and animosities; and
- the increasing role of Southeast Asia and Australia in countering threats to the sea lines of communication, including maritime piracy and terrorism.

Dr. Stanley Weeks (Captain, USN, Ret'd) pointed out some interesting details of recent operations in the Middle East, including the direct support to *Operation Iraqi Freedom* by other navies, principally the UK and Australian Navies, and support to *Operation Enduring Freedom* in Afghanistan from such countries as Australia, Canada, the UK, New Zealand and Singapore. In both *Iraqi Freedom* and *Enduring Freedom* non-US commanders performed very well. In the Northern Indian Ocean, there was the broadest coalition of navies since World War Two, focusing on counter-terrorism and maritime interdiction. And most recently, more than a dozen navies cooperated in the Aceh tsunami relief operation.

These multinational operations were successful because navies are the most ready of all services to implement coalition operations. There are a number of practical reasons for this:

- they operate in a common maritime environment and share many experiences;
- the maritime environment lacks many legal/sovereignty problems of the land;
- international navies have made real progress in common basic doctrine for multinational maritime operations; and
- interoperability, especially in communications and data links, is improving.

The US Navy is becoming increasingly expeditionary,

with additional strike and joint capability in concert with the other US armed services. There have been many transformational efforts to increase combat effectiveness and efficiency, and there is a re-balancing of the US fleet in numbers of large and small ships – we can expect programs of large vessels to be cut and many units to be produced of such platforms as the littoral combat ship in order to maintain significant numbers of relatively inexpensive deployable units with an ability to operate close inshore. A popular saying amongst naval planners these days is that "Quantity has a quality all its own." This may mean that 14,000-ton DDX "destroyers" will be limited to a few experimental technology-demonstrators, rather than form a significant proportion of the USN's surface combatant force as had been planned.

Cmdre Jack McCaffrie, Royal Australian Navy (RAN), made the final presentation of the first session. The RAN has always been of interest to Canada, not least because of its common traditions and similar size to Canada's Maritime Command. As Australia is so distant from North America and Europe, it has historically pursued a more independent foreign and defence policy than Canada. Its defence expenditures and force strength are comparable to Canada's, but with a population of only 60 per cent of our 33 million.

The RAN has plans well-underway for the following fleet upgrades:

- three air warfare destroyers with Aegis combat systems, the first to be in service in 2013;
- two medium-sized amphibious ships, the first to be in service in about 2010. These will be LHDs, "flat-top" ships with a dock aft, so that troops can be deployed rapidly by helicopters and re-supplied by a combination of helicopters and landing craft. These ships will also provide an incredibly flexible tool for a broad range of peace support, disaster relief and humanitarian assistance operations;
- one strategic sealift ship to be in service about 2016; and
- two new replenishment ships, the first to be in service about 2015.

Underlying this plan is an equally ambitious move towards effects-based operations and a network-enabled force. This move will need significant investment in technology and personnel development and will be complicated further by the need for greater interoperability with allies. Personnel development will be underwritten by a new initiative called "Sea Change," which is intended to change the ways in which the RAN treats its people as individuals. Some of the initiatives already under evaluation include flexible crewing and waterfront career management.

The second session also looked at regional navies, this time of India, China and Japan. These are all powerful, regional navies, forces to be reckoned with in their own waters. Amongst these countries there are commonalities in force development trends. The Indian Navy provides a good example.

The Indian Navy is not increasing greatly in numbers, but the fleet is improving in size, quality and capability. The following table depicts the probable fleet size in 2015.

SHIP	CURRENT	BUILDING	2015
Aircraft Carrier	1	1 + 1	2
Submarine	16	Up to 9	14 - 21
Destroyer	8	1 + 2	
Frigate	13	2 + 2 + (3)	12 - 15
TOTAL	38	9 + (12)	36 – (46)

Session 3 was devoted to merchant shipping in the Asia-Pacific region, and we were privileged to hear from representatives of some of the world's most important shipping lines. An important issue for all merchant shipping is the International Ship and Port Security Code (ISPS), which came into effect 1 July 2004. ISPS requires all ships in excess of 500 tonnes to have security inspections, security officers and plans. It also requires ports to do the same. If not, these ships and ports cannot be involved in trade with the United States.

TeeKay Shipping, founded in 1973 is an interesting example. It is a Tanker and liquid natural gas company, carrying more than 10 per cent of the world's sea-borne oil in 160 ships operated by 4,700 people, and it has a global organization with offices in 14 countries. All vessels were required to have an International Ship Security Certificate (ISSC) by 1 July 2004. TeeKay ensured that each vessel has an approved ship specific security plan, a ship security alarm fitted, its IMO number marked internally and externally, a security officer on each vessel, using approved computer-based training, and the company has nominated security officers based in Canada (Vancouver), Australia, Norway and Spain.

Session 4 was devoted to the topic of piracy and maritime terrorism. One of the speakers, Mr. Michael Richardson, Visiting Senior Research Fellow, Institute of Southeast Asian Studies in Singapore, noted that the International Maritime Bureau (IMB) in London compiles statistics on incidents of piracy around the world. Many of the most serious attacks are in Southeast Asia. According to Richardson, "The IMB, shipping industry and law enforcement sources confirm some disturbing trends that have intensified in the region this year. Those preying on shipping are becoming better armed and organized. They sometimes have satellite phones and can eavesdrop on the communications of ships they are targeting. Automatic assault rifles, like the M-16 and AK-47, are commonly carried and fired. Rocket-propelled grenades and hand grenades have reportedly been brandished in several attacks this year. Indonesian waters are the scene of more attacks than anywhere else. Last year, 93 incidents were reported. While this is less than the 121 in 2003, it still accounts for over a quarter of the global tally. Another 37 attacks took place in the Malacca and Singapore straits. The hijacking of vessels – mainly slow-moving tugs, barges and small tankers with low freeboards that are relatively easy to board while underway – and the kidnapping of their officers and crew for ransom, are on the rise."

Session 5 was devoted to regulatory regimes. Dr. Michael Byers, Academic Director, Liu Institute for Global Issues, University of British Columbia, Vancouver, spoke about the Proliferation Security Initiative (PSI), which was developed to respond to situations such as the following incident:

> In December 2002, Spanish marines, acting on a request from the United States, boarded the *So San*, a North Korean freighter crossing the Arabian Sea. Hidden under the bags of cement listed on the manifest were fifteen Scud missiles. However, when Yemeni officials declared that they had purchased the missiles, the Spanish and US governments allowed the delivery to proceed. White House spokesman Ari Fleischer explained, "We have looked at this matter thoroughly, and there is no provision under international law prohibiting Yemen from accepting delivery of missiles from North Korea." Stopping and searching the *So San* was probably legal, because the vessel was not flying a flag and the name and homeport on its hull had been obscured. But seizing the cargo from a properly registered vessel was an entirely different matter.

Dr Byers concluded his presentation with the following comment: "Contrary to some perceptions, the Bush administration devotes considerable attention to international law, and not just when it seeks to disentangle itself from existing obligations, or to shield itself from treaties and tribunals to which it chooses not to consent. From a global perspective, PSI as currently structured is not ideal. But given the very real problem that it seeks to address, and the alternative paths that the United States might take, this particular instance of a la carte multilateralism is worthy of support."

Session 6 was devoted to the vital subject of port security, with views from Vancouver, Los Angeles/Long Beach and Singapore. The presenters clearly indicated the scale of the security requirements for these huge and busy seaports.

Session 7 concluded the discussions, and was devoted to coast guards. Presenters discussed maritime security concerns in Australian, American and Canadian waters. Captain Gary Sidock, Director Maritime Security for the Canadian Coast Guard (CCG), summarized the evolving role of the CCG as follows: "With the approval of the joint RCMP/CCG dedicated program for the establishment of an armed, on-water federal enforcement capacity in the Great Lakes/St Lawrence Seaway system, the Coast Guard's role relative to maritime security has shifted from one of contributing by means of collateral benefits emanating from existing programs and services and general platform support, to the establishment of a dedicated on-water maritime security capacity and programs. Additionally, with the establishment of Marine Security Operations Centres (MSOC) on the East and West Coasts and in the Great Lakes/St Lawrence Seaway system and Coast Guard's integration into those Centres, CCG's role related to the provision of maritime traffic information to the enforcement community may also evolve from the dissemination of information into the more value-added provision of intelligence and analysis related to the recognized maritime picture in support of maritime domain awareness."

Rear-Admiral J.Y. Forcier, Commander Maritime Forces Pacific, returned from temporary duty in Ottawa to present closing remarks at the conference. This ended an extremely interesting conference. The conference organizer, Dr. James Boutilier, hopes to conduct a follow-up conference in 2007.

The BC Council for Innovation, a conference sponsor, will be posting all the papers and PowerPoint presentations on their website.

Book Review

Cruisers in Camera by Roger Hayward, Stroud, U.K.; Sutton Publishing Ltd., 2000. xii + 180 pp., photographs, appendix, bibliography, index. US $36.00, £19.99, cloth; ISBN 0-7509-2350-4.

Reviewed by Kenneth P. Hansen

The title "workhorse of the fleet" is most commonly associated today with the destroyer. But the size, flexibility, endurance and diversity of roles that destroyers incorporate now were once associated with the cruiser. At their zenith, cruisers were built in a myriad of sizes and types to suit a wide variety of tasks and operating environments that were truly global in nature. In *Cruisers in Camera*, Roger Hayward's predominantly pictorial treatment of British cruisers, many of which went on to serve under other national flags, a wonderful visual feast is presented, complete with many interesting details, of a truly diverse type of warship.

Hayward's treatment of the British cruiser, by his own admission, is incomplete. The emphasis of his book is clearly on visual aesthetics. Technical detail takes a distant third place in priority after the photographs and their fascinating captions. Although all of the six major sections of the book are preceded by introductory comments, the lack of insightful analysis is somewhat disappointing. Hayward clearly has a passion for his subject but the main portion of the text is of less interest than that contained in the captions to the images, which are focused on individual ships versus classes or cruiser types. While Hayward does give some explanatory comments on some categories of the cruiser, he does not clearly differentiate between all the various types nor does he give the rationale for their existence or the progression that took place within the types. This could have been better treated in relatively little additional space.

Two major omissions from the technical parameters that are given for each class are fuel capacity and endurance data. The name 'cruiser' clearly evokes one of the main tasks of the type, namely long-range independent operations. Hayward discusses the increase in size of the various cruiser classes mainly from the usual perspective of increases in armament and protection. However, modern naval warfare has consistently demanded higher speed and longer range. The cruiser was particularly affected by these trends and fuel capacity was a major design consideration throughout its history.

Hayward departs from the traditional view of cruisers in one important area. In his initial introductory remarks he writes, "In the heyday of sail there was no such type of vessel as the cruiser.… Although the sailing frigate is often regarded as the fore-runner of the modern cruiser …'[c]ruiser' was a rôle, not a ship type"(viii). This statement is clearly not supported by the vast majority of the literature on this subject and the reader should be aware that this is not a widely accepted argument. If the author's statement were correct, the same could be said of today's destroyers, many of which are significantly larger than some cruisers of the Second World War.

Cruisers in Camera is an interesting but somewhat traditional treatment of an important subject. Despite the sparseness of the text, the preservation of so many rare photographs alone makes this a very worthwhile effort.

Canadian Naval Review Competitions

The *Canadian Naval Review* would like to announce that it will be holding two competitions – an essay competition and a photo competition (amateur and professional). Winning essays and photos will be published in *CNR*. If you are interested in sponsoring either of these competitions, please contact us at naval.review@dal.ca. And stay tuned for more details.

The Company of Master Mariners of Canada will host the International Conference "Security of Ships, Ports and Coasts"

22 and 23 September 2005
Dartmouth, NS, Canada

Papers will be presented on:

- Merchant Ship and Port Facility Security – Is the International Ship and Port Facility Security Code (ISPS) a Benefit or a Burden?
- ISPS Experience of Flag States, Shipping Companies, Port Authorities, Seafarers, Port Workers and Maritime Security Agencies.
- Maritime Domain Security and Homeland Defence Strategies; Roles of the Navy, US Coast Guard, Canadian Coast Guard, Transport Canada and Canadian Border Services Agency.
- Places of Refuge for Distressed Ships, Treatment of Seafarers Detained by Foreign States; Security, Political and Legal Issues.

For a complete Conference Program, List of Speakers and Registration Information, please consult our website www.mastermariners.ca or contact

Compart Event Management, Halifax
Tel: (902) 454-4714
Email gauthier@compartevents.com

Canadian Nautical Research Society (CNRS) Announcements

CNRS (http://www.marmus.ca/cnrs/) was established to foster the multi-disciplinary study of maritime, marine and naval subjects in and about Canada. The Society is pleased to announce this year's prizewinners.

The Winner of the 2004 Keith Matthews Book Prize

The winner is Julian Gwyn for *Ashore and Afloat: The British Navy and the Halifax Naval Yard before 1820* (University of Ottawa Press). This is a work of massive scholarship from one of Canada's principal maritime historians. He carefully explores Halifax's major naval role in strengthening Britain's maritime empire in a critical period of its development and offers penetrating insights into the importance of the naval yard on the development of the city and the region. Gwyn sheds important new light on the early history of Halifax and also illuminates key aspects of the society and economy in eighteenth and nineteenth century Atlantic Canada.

The Winner of the 2004 Jacques Cartier MA Prize

The prize was won by Kenneth Hansen. His MA thesis, "Fuel, Endurance, and Replenishment at Sea in the Royal Canadian Navy, 1935-1945" (Royal Military College of Canada, War Studies) makes a significant contribution to scholarly knowledge in treating operational logistics planning and execution in the Royal Canadian Navy during the Second World War. His full and detailed treatment of this little-studied dimension of Canada's naval war improves understanding of Canada's wartime operational successes and setbacks.

The Winner of the 2004 Gerald Panting New Scholar Award

Ms Julie Redstone-Lewis is the recipient of this award. She is a native of Fredericton, New Brunswick and graduated in honours history from the University of New Brunswick. While reading in military history for the MA at Wilfrid Laurier University, she became interested in the Women's Royal Canadian Naval Service of the Second World War, and is preparing a thesis on the subject. She will be entering the PhD program in history at Wilfrid Laurier in fall 2005.

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