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CANADIAN FORCES COLLEGE / COLLÈGE DES FORCES CANADIENNES
CSC 29 / CCEM 29

EXERCISE/EXERCICE NEW HORIZONS

The Unconventional Conventional:
Should Submarines Be a Part of The Strategic Vision?

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The Unconventional Conventional:
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“Submarines, for their part, have had their day. We no longer need them, and in the context of our military situation, we can no longer afford them.”¹ Globe and Mail Editorial

“Don’t waste money on conventional submarines.”² Cdr Ed Gigg (Retd), First Commander of 1st Cdn Sub Sqn

“In a time of changing focus for the fleet, increasing complications for funding and emphasis on versatility and flexibility, there is no justification for acquiring new submarines.”³ Capt(N) R. Thomas (Retd)

“... the Navy must be able to provide a compelling explanation of why Canada needs to maintain a submarine service.”⁴ Doug Young, Minister of National Defence, 1997

anti-submarine warfare (ASW) operations.⁷ Moreover, the 11 September 2001 terrorist attacks on the continental United States has focused attention on maritime surveillance, which many critics argue can be adequately carried out by land-based radar systems, satellites, aircraft and surface ships. Another role in support of homeland defence is maritime interdiction, including boardings, a role not suitable for submarines. Additionally the ongoing war on terrorism has highlighted the trend towards expeditionary combined and joint warfare, a mission far removed from the blue-water ASW paradigm for which the boats were originally designed. All these factors beg the question: Is there still a requirement to sustain a submarine capability in Canada?

Answering this question is most certainly to become more than just an academic exercise. A submarine capability was laid down in the 1994 Defence White Paper and was most recently identified as part of the navy's strategic vision in 'Leadmark: The Navy's Strategy for 2002'. However, not only does this document pre-date the events of 11 September 2001, it is based on a defence policy which is now some nine years old. Not surprisingly then, there has been an almost universal cry for a wholesale defence review leading to a new defence policy which reflects the new strategic reality.⁸ The current government has promised a defence review and at least one of the candidates for Prime Minister has committed to producing a new foreign and defence policy, probably sometime in 2004.⁹ This will undoubtedly necessitate a review of the decision to purchase the submarines and will place a burden of proof on the navy to explain how these submarines will operate, and to what purpose, in the new world order. Given the arguments against introducing the submarines into the fleet, the navy's case for retaining a cold war relic in its 21st century strategic vision may, on first glance, seem weak at best. However, a

⁷ Ruecker, "Unneeded Submarines Resurface."

⁸ "Facing Our Responsibilities: The State of Readiness of the Canadian Forces," Report of the Standing Committee on National Defence and Veterans Affairs Ottawa, May 2002. See also: Steven Staples, Breaking Rank: A Citizens' Review of Canada's Military Spending Ottawa: Polaris Institute, 2002.

⁹ "Martin Stakes Out a Solid Global Role," Editorial. Toronto Star, 3 May 2003.

close study of the Canadian submarine capability, in light of the navy's strategic outlook, reveals that despite the paradigm shift in global naval strategy, the resulting evolution of the Canadian navy's roles and functions, and the lingering doubt surrounding the submarines' raison d'être, Canada's new submarine force is actually the navy's most effective strategic, operational and tactical fleet asset in the 21st century.

To understand the new paradigm in naval strategy in which Canadian submarines will operate, it is first necessary to understand the evolution of the current strategic environment. The current Canadian navy, including the Victoria class submarines, was built in the 1970s and 1980s, in an era dominated by the Cold War. This war took place in a bi-polar world in which the nations of the North Atlantic Treaty Organisation (NATO) and the Warsaw pact, built their opposing maritime strategies around the two superpower navies of the United States (US) and Soviet Union.¹⁰ These opposing strategies revolved around their strategic deterrent forces centred on the ballistic missile equipped submarines.¹¹ The small and medium power navies of these superpower alliances adopted supporting roles which, in Canada's case, meant supporting protection of trans-Atlantic shipping and area ASW surveillance in the Canadian area of responsibility.¹² During this time Canada, under Prime Minister Trudeau's "Foreign Policy for Canadians," also adopted a 'Canada First' policy which placed protection of Canadian sovereignty as the first priority of Canadian defence policy.¹³ These three broad responsibilities, sovereignty protection, escort, and strategic ASW, remained the driving force behind Canadian naval strategy until the end of the Cold War.¹⁴

¹⁰ John Hattendorf, *Naval History and Maritime Strategy*, Malabar: Kreiger, 2000, 230.

¹¹ Ibid.

¹²

Canadian submarines had a role to play in Canada's Cold War maritime strategy. Initially, that role was to support strategic ASW by providing training to surface and air ASW forces.¹⁵ The submarines themselves (British-built Oberon class) were considered almost obsolete and largely ineffective as ASW platforms, and were thus relegated to the status of 'clockwork mice.'¹⁶ However, in an effort to meet NATO ASW force goals in the late 1970s, the navy embarked on the Submarine Operational Update Program in the early 1980s, adding more modern sonars, fire control systems and, eventually, a much more effective weapon.¹⁷ This modernisation allowed Canada's three submarines to be offered up to SACLANT¹⁸ as capable ASW assets.¹⁹ Moreover, once established as a credible ASW platform, the navy was able to expand on this idea and, in so doing, form the rationale for more a complete submarine capability as part of a submarine replacement program:

Submarines make an effective contribution to the combat capabilities of a balanced maritime force because of their unique characteristics. In peacetime, as well as during periods of tension or conflict, deterrence is a very real requirement for the Canadian Forces. Due to their versatility, covertness, cost-effectiveness, and general-purpose nature, submarines are most effective deterrence assets. They are particularly effective at Anti-Submarine Warfare, Anti-Surface Ship Warfare, Covert Surveillance, Intelligence Gathering, Special Operations and Mine-laying Operations. They also provide realistic training for other ASW forces.²⁰

¹⁵ Haydon, "Canada and the RN Submarine Service," 160.

¹⁶ Ibid., 160-161.

¹⁷ Ibid., 161.

¹⁸ Supreme Allied Commander Atlantic

¹⁹ Haydon, "Canada and the RN Submarine Service," 161.

²⁰ Statement of Requirement "Canadian Submarine Acquisition Project (M1837) December 1986, para 102.1.

This 1986 statement of requirement did not mark the first, or last, attempt at a submarine replacement program, but it did indicate an acceptance by the navy of the immense potential of a capable submarine for supporting a wide variety of naval missions. It was also indicative of the navy's shift in focus away from strictly ASW and toward a more balanced fleet.²¹ This foresight was to place the navy in a good position when the Berlin Wall fell and a new world order was established.

The resulting unipolar new world order had a profound effect on the global strategic environment and brought about a paradigmatic shift in global naval strategy. NATO naval spending was cut by about 40 percent with capital programs suffering cuts of up to 70 percent.²² Even the US navy was cut back and doubt was raised that it could handle two major global crises simultaneously without forming a coalition.²³ The unravelling of the bipolar world and the perceived contraction of US global power projection left a geopolitical power vacuum in certain regions of the world, particularly East Asia, the Indian sub-continent, and the Middle East.²⁴ Many countries exploited this vacuum by attempting to position themselves as regional powers, and as such, have relied on submarines to enhance their naval power.²⁵ Submarines are the weapon of choice because, as the US office of naval Intelligence points out:

“To defend a nation's littoral areas and coastal resources, the relatively more affordable diesel-electric submarine is a practical choice. Upgraded with high-technology quieting, sensors, and weapons - readily available in today's

²¹ Leadmark, 61-62.

²² Peter Haydon, Sea Power and Maritime Strategy in the 21st Century: A 'Medium' Power Perspective, Halifax: Dalhousie University, 2000, 26.

²³ Ibid.

²⁴ Ibid.

²⁵ Nicholas Berry, “Subs for Sale: Eager Buyers in Asia and Elsewhere,” CDI Asia Forum, 31 October 2000. See also: A.D. Baker, “World Navies in Review,” United States Naval Institute Proceedings March (2003).

marketplace - even older submarines can hold enemy naval forces at risk while posing a difficult challenge for anti-submarine forces.”²⁶

These states adopted the sea power strategy of a coastal state, which revolved mainly around sea denial or limited sea control roles and missions.²⁷ Inevitably, ethnic, political, and economic rivalries, unchecked by superpower balance of power, and fuelled by regional arms races, led to several crisis in the post-Cold War era and concentrated the attention of naval planners on the littoral areas of the world’s oceans as a probable focus of future naval warfare.²⁸ The US, in particular, viewed these regional instabilities, and the increasing reliance by coastal states on submarines, with some concern:

... the worldwide submarine challenges that the United States and its allies face today are more diverse and more complex than at any time during the Cold War. They run the gamut from the highly sophisticated and predictable to the unsophisticated and irrational.²⁹

More specifically, the US believed this state of affairs “could challenge the ability of the [US] to project military power and to maintain overseas presence in littoral regions of importance to national security. The ability of the [US] to operate in the littoral areas and, in particular, to utilize sea lift assets, could be diminished.”³⁰

To met this new challenge, the US Navy developed a strategy in 1992 called ‘From the Sea’ which articulated the shift in focus from the sea to the land which it described as:

[A] fundamental shift away from open-ocean war fighting on the sea towards joint operations conducted from the sea. The Navy and Marine Corps will now respond

²⁶ Berry, “Subs for Sale...”

²⁷ Jacob Borresen, “The Seapower of the Coastal State,” *Journal of Strategic Studies* 17, no. 1, (March 1994), 164-171.

²⁸ Geoffrey Till, “Coastal Focus for Maritime Security,” *Janes’s Navy International* May (1996): 10-16.

²⁹ Richard H Shultz, ed. *The Role of Naval Forces in 21st Century Operations*, Washington: Brassey’s, 2000, 10.

³⁰ *Ibid.*, 9-10.

to crises and can provide the initial 'enabling' capability for joint operations in conflict - as well as continued participation in any sustained effort.³¹

Thus, while the US Navy, and its NATO allies, remained ready to face a challenge for command of the seas, their main focus would now be peace support and stabilization operations out of area, and, under US leadership, projection of power ashore as a means of projecting political and military stability where required.³²

The Canadian navy was ready, or just about ready, to participate in this post-Cold War evolution in naval strategic thought. The new balanced fleet, designed in the 1970s and 1980s, was not yet delivered when the Berlin Wall came down, but the Persian Gulf War of 1990-1991 showed that the strategic direction the Canadian navy was headed in, centred on task group operations and expeditionary warfare, was sound.³³ The Canadian navy's roles and missions were now more varied and demanding than they had been in the previous two decades, as illustrated by the three defence roles laid down in the 1994 Defence White Paper:

[1] The Protection of Canada, including ... the capability to monitor and control activity within Canada's territory, airspace and maritime areas of jurisdiction;

[2] Canada-United States Defence Cooperation, including ... surveillance and control of ocean areas on both coasts and in the Arctic; and

[3] Contributing to International Security, including ... participating in multilateral operations anywhere in the world by providing, along with Army and Air Force

³¹ Joel J. Sokolsky, "Sailing in Concert: The Politics and Strategy of Canada-US Naval Interoperability," *Choices* 8, no. 2 (2002), 6.

³² *Ibid.*, 7.

³³ *Leadmark*, 63.

elements, a naval task group of four combatants, a support ship and appropriate maritime air support.³⁴

While the navy's new multi-purpose frigates, modernized destroyers (re-configured for area air defence and flagship roles), and the new Maritime Coastal Defence Vessels, allowed the navy to carry out its sovereignty and North American defence missions more effectively, it was its enhanced ability to conduct out-of-area multilateral operations that began to take centre stage in response to the attitudinal shift illustrated in the 1997 'Adjusting Course: A naval Strategy for Canada':

The end of the Cold War removed the strategic certainties that had long bound our horizon. We are faced with the challenge of crafting a truly national stance on the world stage, one unencumbered by colonial baggage and less dependant on Alliance considerations...³⁵

Thus, the marriage of technologically advanced warships and a robust policy of international engagement set the stage for the transformation of Canada's Maritime Forces from a narrowly focused fleet with limited functionality into a medium global force projection navy.³⁶

In June 2001, the navy articulated its strategy for this 'New Navy' and the 'Navy After Next' with the promulgation of 'Leadmark: The Navy's Strategy for 2020.' This strategic vision is the natural result of the 1994 Defence White paper, the 1997 "Adjusting Course," and the 1999 Canadian Forces strategic vision: 'Shaping the Future of Canadian Defence: A Strategy for 2020'.³⁷ Recognizing Canada's place in the new post-Cold War strategic environment, 'Strategy 2020' calls on the Canadian Forces "to provide Canada with modern, task-tailored, and globally

³⁴ National Defence, 1994 Defence White Paper.

³⁵ Adjusting Course: A Naval Strategy for Canada (Ottawa: Canada Communications Group, 1997), p. iii.

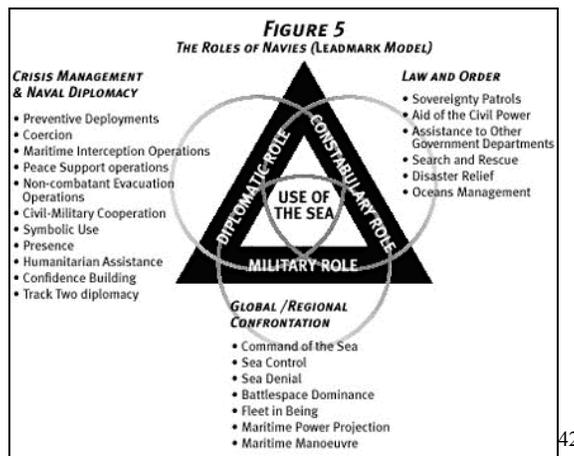
³⁶ See Leadmark, 44 for definition.

³⁷ Shaping the Future of Canadian Defence: A Strategy for 2020(Ottawa: National Defence, 1999).

deployable combat-capable forces that can respond quickly to crisis at home and abroad.”³⁸

Acknowledging the profound effect this defence strategy will have on the navy, ‘Leadmark’ indicates that “pursuing this direction will complete the transformation of Canada’s navy from a Cold War service specialising in anti-submarine warfare to a balanced, agile and highly adaptable force, capable of providing government with a wide range of crisis response options.”³⁹ The navy’s expeditionary operations over the last twelve years and its response to the ongoing War on Terrorism has certainly borne this out.

To understand how this evolution of the strategic environment, and global and Canadian naval strategy, will affect the roles and functions of the Canadian fleet, including submarines, both at home and abroad, it is necessary to review the “potential roles and subsidiary functions of 21st century navies” to which Canada’s navy and ‘Navy After Next’ will be tailored.⁴⁰ To do this, ‘Leadmark’ uses a modified version of Ken Booth’s trinity of roles for use of the sea,⁴¹ as shown below:



³⁸ Strategy 2020.

³⁹ Leadmark, 93.

⁴⁰ Ibid.

⁴¹ K. Booth, *Navies and Foreign Policy* (London: Croom Helm, 1977), 15-16.

⁴² A definition of these roles and functions may be intuitively obvious to most but a precise description of each is provided in pages 35 - 41 of Leadmark.

'Leadmark' states that Canada's navy will carry out all these roles and functions with the exception of maritime manoeuvre, battle space dominance and command of the sea, which must be left to major global force projection navies.⁴³ Thus, Canada's 21st century navy will have to serve the maritime dimensions of both its foreign and domestic policies, by maintaining the security of Canada's ocean domain, and supporting multilateral engagement by contributing to collective security in both continental North American and overseas areas.⁴⁴

Since the current surface fleet came into being in the last decade of the 20th century, it has been able to meet both these tenets of foreign and domestic policies. However, the lions share of Canada's critical naval missions have been overseas, concentrated on coalition or expeditionary operations abroad, and none of these missions have included Canadian submarines.⁴⁵ In fact, throughout the 1990s (before the last Oberon submarine was paid off) Canadian submarines have been employed mainly in the constabulary role in Canadian waters, and in their original 1960s mission of providing ASW training to maritime air and surface forces.⁴⁶ This was even though the unique contributions of conventional submarines in littoral warfare, particularly in the roles of surveillance, reconnaissance, special forces operations and offensive operations close inshore, were recognized very early on in the decade. In one example British special forces deployed from a Royal Navy Oberon class submarine during the 1990-1991 Gulf War.⁴⁷ Moreover, it had already been acknowledged that Canadian submarines, at the time, were quite capable of carrying out these roles as part of their responsibilities to the balanced fleet.⁴⁸ The fact that Canadian submarines in the post-Cold War era had not been used in anything but a very limited set of roles

⁴³ Leadmark, 95.

⁴⁴ Commander Peter Haydon, (Retd), "Canadian Naval Requirements for the 21st Century," Council for Canadian Security in the 21st Century. Research Paper, 13 December 2002, 1.

⁴⁵ Leadmark, C5-C7.

⁴⁶ Ibid.

⁴⁷ David Miller, "The Silent Menace," *International Defence Review* 8, (1993): 613.

⁴⁸ Rear-Admiral L.G Mason, "Why Submarines?" *Canadian Defence Quarterly* June (1992): 22-23.

and functions has cast doubt upon their utility and raises the question of whether ‘Leadmark’ adequately legitimises a continued submarine capability in Canada.

The need to address whether conventional submarines are a legitimate element of Canadian naval strategy is absolutely critical for the credibility of the strategy itself. As Commander Peter Haydon (retired) points out: “A maritime or naval strategy... must meet certain criteria if it is to be effective. Not only must it be the basic plan for the development, maintenance and general employment of the fleet, it must also explain the reason why a fleet of that type is needed.”⁴⁹ The requirement for the ‘why’ was laid out by Samuel P. Huntington, who wrote in 1954:

... a military service may be viewed 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.⁵⁰

In the case of submarines then, the public (and arguably the government and military establishment) must see what function they perform as a contributing part of naval strategy in order to believe in their legitimacy.⁵¹ If a satisfactory case is not made then public support may be withdrawn. Unfortunately, many in the public, as well as in political and military circles, do

sub-committee which first called for more balanced forces stated in its final report that submarines "...are quintessentially weapons of war and would be able to contribute little to the accomplishment of the ancillary duties assigned to MARCOM in peacetime."⁵² This theme has been picked up many times since, especially by those ill-disposed towards submarines, such as the Canada 21 Council and Ploughshares, who have repeatedly stated: "We should not maintain forces that have comparatively little utility in non-war-fighting roles."⁵³ Another argument used against maintaining a submarine capability has been that conventional submarines are just not up to the job, or that their job can be more effectively carried out by other existing platforms. 'Leadmark' has been unhelpful in this matter. As an example, in discussing the principles of a Canadian naval strategy, 'Leadmark' states simply, and with some vagueness, that: "A single submarine patrolling with a fitted towed-array can detect surface and sub-surface activity over an extensive area of ocean."⁵⁴ Immediately thereafter it goes into much more specific detail in describing a similar mission for a surface task group by quoting from Rear Admiral Crickard (retired) and Commander Peter Haydon (retired):

A naval surface task group of four modern frigates or destroyers and an operational support ship (AOR), with a combined helicopter capacity of eight, has a continuous surveillance coverage of some 192,000 square kilometres (an area equivalent to nearly half the Baltic Sea or roughly the total area of the five Great Lakes).⁵⁵

This subtle lack of a forceful endorsement of submarine capabilities is found throughout 'Leadmark' and tends to underline other naval critics, such as Captain (N) R.H. Thomas (retired),

⁵² "Canada's Maritime Defence," Report of the Sub-Committee on National Defence of the Standing Committee on Foreign Affairs, Canada's Maritime Defence (Ottawa, May 1983), 49.

⁵³ "Don't Waste Money on Submarines," 20-Minute Peace Workout: Ploughshares, December 1997.

⁵⁴ Leadmark, 107.

⁵⁵ Ibid.

who made a more forceful case that the surveillance capability of a conventional submarine is quite limited.⁵⁶ Even with the facts before them, critics will simply point out, using the navy's own evidence, that submarines simply duplicate existing capabilities.⁵⁷

Another longstanding source of weakness in the navy's argument for submarines, and one that goes right to the heart of the credibility of a strategy partly built on four conventional submarines, is the navy's apparent confusion over what type and number of submarines was desirable for Canada. Canada had tried to procure nuclear submarines on several occasions in its almost 90 year history⁵⁸ and the 1987 Defence White paper, 'Challenge and Commitment: A Defence Policy for Canada' revived this requirement when it called for a fleet of ten to twelve nuclear powered submarines.⁵⁹ The rationale was that nuclear submarines were uniquely capable ASW platforms, had unlimited endurance and flexibility, and were the only platform capable of sustained under ice operations.⁶⁰ This was in line with American thinking, which had dismissed the conventional submarine as a World War II relic, and no good for modern naval missions.⁶¹ After the latest nuclear revival ran its course, the navy returned to the idea of conventional submarines (and at the same time reduced the number to ...'up to six...') in the 1993 naval vision, 'The maritime Command Vision: Charting the course to Navy 2008'.⁶² By the time the 1994 Defence White Paper had been produced, the requirement had been further refined as 'three to six modern diesel-electric submarines' and it alluded to the only option being

⁵⁶ Thomas, "The Canadian Navy: Options for the Future," 38. See also: Captain J. Moore, RN, Submarine Warfare Today and Tomorrow, London: Michael Joseph, 1986, 120.

⁵⁷ Steven Staples, "Three Ways to Improve the Canadian Forces Without Increasing Military Spending," Corporate Security State Project, Polaris Institute, 18 February 2003.

⁵⁸ Haydon, "Canada and the RN Submarine Service."

⁵⁹ Canada, Department of National Defence, Challenge and Commitment: A Defence Policy for Canada, (Ottawa: Supply and Services Canada, 1987), 49-52.

⁶⁰ *Ibid*, 53.

⁶¹ Commander John Byron, USN, "Diesel Boats Forever?" United States Naval Institute Proceedings December (1982): 35-43.

⁶² Vice Admiral P. Cairns, The Maritime Command Vision: Charting the Course to Navy 2008, 2-xxvi.

to acquire four 'Upholder' submarines.⁶³ Naturally this would appear as a volte-face. Some pointed to the fact that this smaller number would be unable to carry out the missions the navy had fashioned to procure the submarines in the first place: "If Canada is to operate submarines for any other purpose than anti-submarine training a minimum of nine boats is required, with a sensible total of 12."⁶⁴ These inconsistencies lead some to charge that the navy had been less than forthright in defining the actual requirements for submarines. As one writer argued, the navy wanted "... to stay in the 'submarine game' regardless of what types or quantities of submarines they possess. Submarines for submarines' sake is hardly a compelling argument for a requirement."⁶⁵ Thus, despite the concerted and ongoing effort by both the navy and other interested parties in supporting a submarine force within Canada's navy,⁶⁶ the inconsistent, and at times weak, official arguments in favour of submarines allowed some commentators to claim that: "Canada's need for sophisticated hunter-killer submarines - developed during the Cold War to stalk and destroy Soviet missile firing boats, remains unclear, and the navy flatly refuses to explain why it wants them."⁶⁷

Notwithstanding the changing strategic environment, the resultant shift in strategic focus of global naval forces including Canada's, and the above arguments against submarines, there remains a compelling case for a continued submarine capability in Canada, even a modest one. At the strategic level the Victoria class submarines allow the navy to implement domestic and foreign policies in a way that is often ignored or overlooked. This strategic effectiveness is

⁶³ 1994 Defence White Paper, 47.

⁶⁴ Moore, Submarine Warfare Today and Tomorrow, 120.

⁶⁵ Major Ian Poulter, "'Dead Oktober': Does Canada Need a Submarine Force?" Exercise New Horizons, Department of National Defence: Canadian Forces College, 1994,10.

⁶⁶ Commander Peter Haydon, (Retd), "Canadian Naval Requirements for the 21st Century," Council for Canadian Security in the 21st Century. Research Paper. 13 December 2002, 11. See also: A/Slt Mike McKinley, "The Upholder Acquisition: Why it was a Deal of a Lifetime," Third Annual Graduate Student Symposium, Conference of Defence Associations Institute, 3-4 November 2000.

⁶⁷ "UK Submarines on Horizon, The Globe and Mail, 22 January 1996, A1.

shown mostly clearly in missions supporting homeland defence, not only in sovereign waters but in collective defence of continental seaward approaches. Submarines accomplish this by carrying out the three key elements of sea control (surveillance, patrol, and response).⁶⁸ The ability of conventional submarines to carry out surveillance is well documented. A single Victoria class submarine can conduct effective surveillance over an area of 125,000 km for about 50 days.⁶⁹ This is approximately twice the area and five times the duration of a surveillance patrol carried out by a Canadian Patrol Frigate.⁷⁰ In addition, unlike the surveillance and intelligence gathering products produced by non-national sources, such as satellites or mobile acoustic surveillance platforms, that produced by Canadian submarines would be unsanitized.⁷¹ Moreover, a study by the British ministry of Defence shows that the submarine could carry out this mission at one-seventh the cost of the frigate. In the area of response, Canadian submarines have been deployed against vessels of interest, including, during the Cold War, Soviet vessels.⁷² In the post-Cold War era, Canadian submarines conducted surveillance missions in support of RCMP counter-narcotics operations. One such operation in 1992 required the submarine to conduct close surveillance of a target vessel for two months, and resulted in one of the largest drug busts in Canadian history to that date.⁷³ Another covert surveillance operation off the Grand Banks in 1995 in support of the Department of Fisheries and Oceans, saw a Canadian submarine get as close as 300 metres to the Spanish fishing trawler 'Ria de Ponte Verde' in order to conduct photographic surveillance.⁷⁴ The submarine surfaced shortly thereafter to demonstrate presence,

⁶⁸ Haydon, "Canadian Naval Requirements for the 21st Century," 4.

⁶⁹ Crickard, "Submarines for Canada."

⁷⁰ Ibid.

⁷¹ Ibid.

⁷² Ibid.

⁷³ Major A.J Howard, "Submarines for Canada's Maritime Forces: A Requirement For the 21st Century," Exercise New Horizons, Department of National Defence: Canadian Forces College, 1996, 10.

⁷⁴ McKinley, "The Upholder Acquisition."

thereby achieving a deterrent value that proved decisive in the 1995 Turbot War with Spain.⁷⁵ The deterrent value of submarines however, goes far beyond this example. As Commander Bob Bush wrote: "...the use of military force in any dispute represents a last resort. The submarine, in its offensive role, exemplifies this last resort in the extreme. As such, submarine ownership demonstrates a degree of national resolve not portrayed by any other vessel."⁷⁶ At the national level then, it can be argued that submarines represent a significant strategic deterrent in support of national defence.

The ability to conduct effective sea control missions is also important in the submarine's strategic role of supporting foreign policy, as it relates to continental defence. The US is increasingly concerned with Homeland Defence⁷⁷ and Canadian submarines are well placed to contribute to the collective defence of continental North America. For example, while most people assume that the Russian submarine threat has evaporated, the fact is that it still exists, only to a lesser degree. In 1995 Russian Akula class submarines were known to have conducted exercises near the US strategic nuclear submarine base of Kings Bay, Georgia.⁷⁸ Later that same year another Akula submarine was operating off the US west coast strategic nuclear submarine base of Bangor, Washington.⁷⁹ Moreover, the increased asymmetric threat from the sea necessitates a greater role for response to other types of vessels of interest. Given Canada's longstanding submarine experience in ocean surveillance, patrol and strategic ASW, the Victoria class submarines are ideally suited to take a leading role in support of the necessary bilateral maritime collaboration required by these new threats.⁸⁰

⁷⁵ Mason, "Why Submarines?" See also: McKinley, "The Upholder Acquisition."

⁷⁶ Commander R.E. Bush, "Submarines: An Evolving Capability For an Unpredictable World," Exercise New Horizons, Department of National Defence: Canadian Forces College, 1994, 18.

⁷⁷ Shultz, The Role of Naval Forces, 29. See also: Sokolsky, "Sailing in Concert," 21.

⁷⁸ "World Submarine Challenges," US Office of Naval Intelligence, Washington: USN, September 1996.

⁷⁹ George Kolisnek, "The Russian Navy: Still an enigma after all these years," Maritime Affairs (April 1997): 9.

⁸⁰ Sokolsky, "Sailing in Concert," 17.

Whether or not Canadian submarines participate in this manner is of vital strategic significance. Contributing a capable and credible naval asset like a submarine to continental defence would demonstrate to the US the seriousness with which Canada views maritime defence, and this would do much to foster political relations with our closest ally.⁸¹ This is particularly so given that increased forward deployments by US submarines has left them very thin on the ground for patrolling their own waters and, in a situation seen before during the Cuban missile crisis and Vietnam war, they would inevitably like to fill that gap with assets provided by their geographically closest ally.⁸² Conversely, failure to do so may, it is argued, result in the US navy extending its presence into Canadian sovereign waters in order to enhance its ability to detect and monitor Russian submarine intrusions and other vessels of interest.⁸³ Finally, because of the requirement for prevention of mutual interference between submarines, Canadian submarines operating in US waters would necessitate a 'seat at the table' of US submarine operating authorities, thereby assuring Canadian access to US submarine operating doctrine and procedures that would otherwise not be made available. Strategically then, Canadian submarines have a role to play in support of Canadian foreign and defence policies that, even with their smaller number, is significant.

At the operational level, Canadian submarines can play a major role in support of Coalition operations overseas. As the US Chief of naval Operations stated back in 1994, one of the cornerstones of American sea power would be 'forward presence' 'near land and over land'.⁸⁴ As it has since demonstrated, this means that the US Navy must work increasingly in the littoral

⁸¹ Sheldon Alberts, "Cellucci Applauds Martin," *National Post*, 3 May 2003.

⁸² Crickard, "Submarines for Canada."

⁸³ Gordon Davis, *The Contribution of Aviation to Canadian Maritime Security and the Requirements for the Future*, Halifax: Dalhousie University, 1998, 33.

⁸⁴ Sokolsky, "Sailing in Concert," 6.

environment, an area which they believe they are not well prepared for.⁸⁵ The challenges associated with warfare in the littorals, characterized by shallow water, high traffic density and high ambient noise, lends itself to the use of capable conventional submarines for surveillance, reconnaissance, special forces warfare and offensive operations close inshore.⁸⁶ These are roles which Canada, until now, has been unable to offer to a coalition Task Force Commander in theatre.

Another factor to be considered at the operational level is one of interoperability. 'Leadmark' has recognized the requirement for the Canadian navy to become more interoperable with US naval forces so that they may continue to contribute in a meaningful way in US-led coalition warfare.⁸⁷ However the high level of interoperability called for by 'Strategy 2020' and 'Leadmark' is creating unease on the part of some in the public and amongst some political leaders, particularly in view of its potential consequences for Canadian sovereignty issues and national command autonomy.⁸⁸ One alarmist puts it like this:

The fact that a US commander can aim and pull the trigger of a Canadian missile aboard a Canadian ship is staggering in its implications for Canadian sovereignty and defence policy. Considering Canada's only casualties in Afghanistan were at the hands of the US military in a notorious 'friendly fire' incident, military integration and interoperability with the US military have become a distinct liability.⁸⁹

Interoperability, while still important, is not as critical for a submarine which is not employed in direct support. Since a submarine is not integrated into a US battle group but is able to support

⁸⁵ "Achieving Future Naval Capabilities," Office of Naval Research, 29 February 2000.

⁸⁶ Miller, "The Silent Menace," 613.

⁸⁷ Leadmark, 112. See also: Commodore Drew Robertson, "The Canadian Naval Task Group in Operation Apollo," *Maritime Affairs* Autumn 2002/Winter 2003: 5.

⁸⁸ Sokolsky, "Sailing in Concert," 11.

⁸⁹ Staples, *Breaking Rank*, 30.

them nonetheless, it allows Canada to contribute to coalition warfare without suffering the burden of political sensitivities. Moreover, Canadian submarines operating independently in support of task force operational objectives, would maintain a level of autonomous command and control with US submarine operating authorities, thus assuring a place in the decision-making process.⁹⁰

Finally, submarines offer a superb tactical asset to the navy. This is true not just for Canada but for many small to medium maritime powers. In some regions of the world “an adequate submarine force is the prime sea going naval deterrent and the mainstay of maritime sovereignty enforcement.”⁹¹ The main characteristic of a submarine, that allows it to play such an important part in naval strategy, is that it is “extremely difficult to detect and, if detected, is difficult to attack.”⁹² Even with advances in acoustic detection today, submarines still retain the advantage in stealth technology, both acoustically and non-acoustically.⁹³ Canadian submarines are also one of the most lethal weapons platforms in the Canadian Forces, due to the very capable and powerful MK48 Mod 4 ASW/ASUW torpedo.⁹⁴ This combination of stealth and lethality enable the Victoria class to operate confidently in the most dangerous areas where other forces would be at risk.⁹⁵ And while littoral warfare presents significant threats to surface and air forces⁹⁶ the natural characteristics of a conventional submarine allow it to operate in this vital zone safely and effectively.⁹⁷

It can be argued then, that despite the profound strategic changes that have occurred since the end of the Cold War submarines are now more important than ever to a sound Canadian naval

⁹⁰ Haydon, “Canadian Naval Requirements,” 7.

⁹¹ Mason, “Why Submarines?” 22.

⁹² *Ibid.*, 23.

⁹³ “Technology Issues,” An Assessment of Naval Hydromechanics Science and Technology, The National Academy of Sciences, 2000, 12-13.

⁹⁴ “Submarine Roles and Missions,” Online Posting. 1 April 2003 <http://www.sublant.navy.mil/roles.htm>

⁹⁵ Mason, “Why Submarines?” 23.

⁹⁶ Davis, The Contribution of Aviation, 39.

⁹⁷ Miller, “The Silent Menace,” 613-614.

strategy. Their tactical characteristics make them one of the most capable sea control and sea denial assets in littoral warfare, and their strategic and operational impact is out of proportion to their numbers. If Canada's calling in the new world order is to 'punch above its weight' then its new submarine force can certainly provide the navy's best means to do so into the foreseeable future. The challenge for the navy will be to recognise the potential of this potent asset and employ it in a credible manner in the furtherance of a sound naval strategy.

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