From the bridge

Jim Carruthers, National President, jimc@rruthers.com

NAVAL AFFAIRS

WE ARE MAKING WAY

Some of you may remember the Venn Diagram where circles representing different variables—alumni, professional development and naval affairs in our case—are overlaid. For NAC such a diagram illustrates how our different initiatives might appeal to different members in different ways—some may be interested in only one such as alumni, others two and some members, all three.

Our recent two days of meetings in Ottawa, organized by NAC-O, covered all three. Branch President Howie Smith reports in this newsletter [*see page 16, Ed.*] on our very successful 5th annual conference which provided real value in terms of professional development and naval affairs. However, the conference was also an alumni meeting and the AGM plus receptions focussed on alumni interests. Over the space of two days we hopefully filled in all three circles and met all expectations.

On 18 October, almost coincident with our meetings, members Drew Robertson and Daniel Sing appeared before the House of Commons Standing Committee on National Defence. This was the last in a string of events running over several months where our dedicated group of volunteers worked to put forward our ideas to various groups involved with conduct of the defence review. Whether it was local meetings of the government or opposition members and ministers, Senate or House committee meetings, NAC members presented thoughtful reasoned arguments which caught the attention of the parliamentarians. From reports, NAC presentations stood out as being of the highest quality.

"…NAC presentations stood out as being of the highest quality."

Following this note you will find copies of the briefing material we presented to the House of Commons Standing Committee on National Defence. Copies of these papers were also sent to the Minister of National Defence, Chief of the Defence Staff and Commander RCN. Their publication here (*beginning on the next page*) most importantly keeps you up to date on Association positions but also provides a permanent record of our thinking that can be referenced in our ongoing work The documents are:

- Opening remarks by Vice Admiral Drew Robertson (Ret'd) dealing with the strategic question of what navy Canada will have on our present course;
- A 5-page paper by Commodore Daniel Sing (Ret'd) explains, amongst other things why Canada will continue to need a balanced, multi-purpose, flexible, combat-capable navy;
- A letter intended to respond to the request of the Chair that the NAC provide its assessment of extant maritime capability gaps.

Although the bulk of the work was done by Drew and Dan, these positions were discussed at some length by a naval affairs working group. Work continues in part inspired by the conference speakers, but also to expand this discussion. For example, I think as a next priority we should do some serious work on submarines with the result—I hope—that we submit further testimony making the case for more submarines as an example.

Please take the time to read these submissions in detail. What do you think? Is our approach on the mark? What should we pursue as a next priority? Opinions?

Contact either Dan [ddcc4@sympatico.ca], our Director, Maritime Affairs, or myself [jimc@rruthers.com].

Yours aye, Jim

HOUSE STANDING COMMITTEE ON NATIONAL DEFENCE

Notes for Opening Remarks by VAdm Drew Robertson (Ret'd), 18 October 2016

- Many thanks for the opportunity for the Naval Association of Canada to appear at the start of your consideration of the maritime defence of Canada.

- I'll deal with the strategic question of what navy Canada will have on our present course and then turn it over to my colleagues.

Defence of Canada – Introduction

- For all navies, there is no legal and little operational difference between the high seas that start just 22 km off our coastline and those same international waters thousands of kilometers away in the approaches to a foreign coastline on another continent.

- The RCN responds to and deters other powers in our home waters, but the Government has also repeatedly used the RCN to respond wherever our national interests are challenged, rather than wait for the challenge to arrive off our coasts.

- For the past few years that has meant ships, submarines and aircraft operating in the Eastern Atlantic and the Black, Mediterranean or Baltic seas to deter Russian aggression—using capabilities at sea to demonstrate the Alliance's will to defend our allies and ourselves.

- Governments have ordered such deployments because supporting the international order has produced the peace and security on which our trade and prosperity depend. Such operations have been the core business on which our Governments have dispatched the RCN abroad, amounting to dozens of deployments globally by our ships, submarines and aircraft, and task groups in the last 20 years even while the fleet at home secured our sovereignty.

- Notwithstanding an unbroken record of success on operations at home and worldwide, the RCN's capabilities and capacities have eroded steadily over the past 20 years, incrementally but increasingly compromising its ability to defend Canada or to act as a force for good abroad.

- I'd like now to describe where this could lead and the strategic risks governments and the country will face.

Policy, Resources & Strategic Risks Today

- There has been progress recently. The frigates, now well past mid-life, have been successfully modernized and our submarines are operational.

- Further, the National Shipbuilding Strategy is an important undertaking of considerable promise. The question isn't whether Canada will successfully build warships; we always have. The question is whether their numbers and capabilities will be adequate to the rising challenges.

- But for the Naval Association, the regrettable observation is that over the last 20 years, a succession of previous governments and parliaments have been unable to sustainably resource defence. The most clear sign of this has been that this G7 nation—with all its maritime interests at home and abroad—has seen its replenishment ships and its destroyers age into their mid-forties before being forced out of commission—not merely without relief, but without governments having even entered into contracts to build their replacements.

- The RCN's successes of the last 20 years were due to investments in the fighting fleets that defend Canada made decades before. Here I include our submarines, frigates, destroyers and maritime patrol aircraft—the youngest of which is already over 20 years of age. But the ability of this government and those that follow to live off these legacy investments is rapidly coming to a close, even as the strategic risks it has had to assume deepens.

- What are those risks? Beyond having fewer ships for our defence:

    - Canada no longer has the ability to independently control events at sea due to the loss of its task group air defence capability.

    - Canada no longer has the ability to independently sustain deployed task group operations and must rely on others for at-sea refuelling and logistics support, even in home waters.

    - Consequently, Canada is unlikely to be able to conduct a prolonged multi-rotation response to international events, nor is it likely to be offered the significant international leadership opportunities at sea that such a response enables, particularly in complex operations, of the kind we've undertaken repeatedly, including after 9/11 supporting our American allies for several years.

Looking Ahead

- Looking ahead, on the present course, future governments face greater reductions and rising risks.

- Today's RCN fighting fleet of submarines and surface combatants is already smaller than research has shown required to meet enduring policy outcomes—such as maintaining our sovereignty and contributing to international peace and security.

- Yet, as the PBO and others have noted, the CAF is unsustainable over the coming decade, likely to an amount in the tens of billions of dollars. So, plans aimed at restoring the fighting fleet's capacity, including those to extend the life of Canada's four highly capable Victoria-class submarines into the mid-2030s and replace them with a new submarine capability, as well as to replace our Aurora Maritime Patrol aircraft, are not just in jeopardy, they are headed hard aground.

- At current budget levels, you can anticipate the RCN's fighting fleet being further reduced over the coming 15 years.

    - Reduced eventually toward a figure in the press of just 9 surface combatants (a 40% cut from the 15 of just two years ago).

    - While the submarines and the RCAF's maritime patrol

aircraft will not likely be affordable and will not be replaced. (See "Preserve Canada's Strategic Surveillance Capability" on page 41, Ed.)

- Such changes would each compound the risks I cited earlier by significantly eroding the maritime capabilities and capacities required to contribute meaningfully to continental or international operations.
    - While for decades the government has often had major warships deployed in two separate theatres, that would no longer be sustainable with a smaller fleet.
    - But most importantly, such a force would not be suitable or adequate for the vast challenge of defending our three-ocean home waters.
- The Naval Association of Canada believes that this much smaller and unbalanced future force would consequently not be adequate to national need, especially given the rapid changes underway in the global maritime order:
    - As nations throughout the world, but especially Russia and China, continue to narrow or close the technological gaps that western navies have enjoyed for decades and make significant and disproportionate investments in maritime forces, particularly in the Asia-Pacific.
    - As great state cooperation continues to give way to competition and confrontation at the expense of the rules-based international order, especially at sea and most notably in the South and East China Seas, and finally,
    - As Canada's third and largest, but least accessible and most fragile, ocean space, opens to commercial shipping and resource extraction, and as the RCN secures our sovereignty in a time of significant nation-building in the Arctic.

Conclusions and Recommendations

- For the Naval Association, the success of the Defence Policy Review depends on bringing spending levels into balance over the medium-long term with the defence outcomes governments expect. That will require fundamental adjustments upwards or downwards to either or both. The Naval Association would argue, as I have, that the new strategic environment will require increased investment in defence to achieve what governments expect of the CAF, rather than less.
- In making such investments, the Naval Association would observe that in addition to securing Canada's defence, there is no better insurance against risk and unforeseen global shocks than a balanced, multi-purpose and combat-capable maritime force.
- But the Naval Association also believes that this Defence Policy Review presents a moment of strategic opportunity—an opportunity to not only bring defence outcomes and resources into an urgently needed balance—but to allow the CAF to be restructured for the challenges of this century. The force structure of the 20th century should be reshaped for the challenges of the decades ahead.
- Such strategy-driven measures will take vision, courage and commitment, and effort over many years. But the result will be a CAF better prepared to defend Canada at home and act as a force for good abroad.
- Thank you for your interest and support for the RCN and the CAF more broadly.

NAVAL ASSOCIATION OF CANADA (NAC)

Presentation to the House of Commons National Defence Committee – Tuesday 18 October 2016

Prepared by the NAC's Director of Naval Affairs, Daniel Sing

INTRODUCTION:

The Naval Association of Canada (NAC) appreciates this opportunity to discuss its perspective on the state of the Royal Canadian Navy (RCN). It is understood that this issue is being examined against the backdrop of a larger study of (Canada and) the Defence of North America and the role and readiness of the RCN in this regard. Before continuing, however, and as intimated by Vice-Admiral Robertson, the NAC feels it is important to affirm that it is very difficult to examine the state of the RCN solely from the perspective of the defence of North America, as the RCN has an important and complimentary role to play beyond the 12 nautical mile territorial seas which surround North America. The NAC also feels it is important to provide you with a quick perspective on the kind of Navy Canada needs. Like our country and its large ocean estate, the underlying issues are vast. These scene-setting remarks will only skim the surface of many considerations. In the interest of time, I will only read the grey-highlighted portions of the information provided in the paper before you.

WHY CANADA NEEDS A NAVY

The Naval Association of Canada (NAC) believes:

- The principal purpose of the Canadian Armed Forces (CAF) and the Royal Canadian Navy (RCN) is to defend Canada and its people against external military aggression; and
- The ultimate goal of the CAF and the RCN is to ensure Canadians live and prosper at home in peace and security.

To satisfy both the principal purpose and the associated ultimate goal, the NAC believes the CAF and the RCN must be combat capable. If military forces are adequately combat-capable, they normally have little difficulty performing less demanding tasks in the realms of defence, security and safety.[1]

The Naval Association of Canada believes Canada needs a combat capable and effective navy, for the following eleven reasons:

(1) Canada's national interests of peace and security and economic prosperity are intertwined;

[1] Such as sovereignty patrols, support to other government departments, peacekeeping and humanitarian assistance and disaster relief.

(2) Canada possesses a vast, resource-rich ocean estate;
(3) Canada is an increasingly global, sea trading nation;
(4) beyond its sovereign waters, Canada values and is an ardent advocate of the rule of law at sea and of international peace and security;
(5) there are threats to elements of Canada's national interests;
(6) future threats to our national interests are difficult to predict;
(7) Canada must not rely exclusively on others to protect and further its national interests;
(8) Canada's peace and security contributions to the United Nations, to the North Atlantic Treaty Organization and to other defence and security arrangements, especially those with the United States in the defence of North America,[2] must be meaningful;
(9) future Canadian governments will likely one day need to send Canadian naval and maritime air forces into harm's way;
(10) without the establishment and continuous maintenance of ready-to-deploy, ready-to-act, capable and effective Canadian naval and maritime forces which are purposely designed to operate against current and future threats in Canadian, international and far-away waters, the maritime-related elements of Canada's intertwined national interests of peace and security and economic prosperity will be at risk; and,
(11) a capable and effective Navy is ultimately all about avoiding, preventing and deterring costly conflict and war;

How Big and What Kind of Navy?

The number of naval platforms and crews (which speaks to quantity) and their characteristics (which speaks to quality) are principally a function of five factors:

(1) the threat or risk to the nation's defence, security and economic prosperity, as affected by the country's size, geography, climate, ocean estate, trade dependencies, adversaries and allies;
(2) the maritime defence and security outputs desired by the government[3], There are two key elements in this regard:
(a) the non-routine (or surge) output desired or expected in times of tension, crisis or war;[4]
(b) the routine output desired or expected in times of relative peace,[5]
(3) the maintenance requirements of the platforms and their equipment;
(4) the personnel tempo (or Quality of Life) considerations of the platforms' crews; and,
(5) the financial resources available both for acquisition and through-life operations, training and maintenance of maritime defence capabilities.

Future Threat is Difficult to Predict

A nation's defence policy should be based on a clear assessment of the threat of military aggression, at home and abroad, both present and future. The NAC agrees with the North American threat assessment which was captured in the Committee's September 2016 Report on *NORAD and Aerial Readiness*.

The most important threat to assess is the future one; unfortunately, it is the most difficult to predict. An unclear or debatable assessment of future threats does not facilitate difficult military capability and equipment choices.[6]

Optimum military forces, which take years and in some instances decades to design and procure, can only be properly identified if the future threat has been correctly predicted.

Evolving Threats

Unfortunately, there appears to be no end to mankind's motivation and ability to discover, develop and/or deploy new threat weapons and launch platforms.[7] Threat weapons are increasingly faster, stealthier, longer-range and/or more effective.

The proliferation and improvements in submarines, mines, anti-ship torpedoes, anti-ship missiles,[8] cruise and ballistic missiles, in particular, represent increasing potential to do harm, directly or indirectly to North America. Such evolving threats should not be discounted,[9] and preventive and/or protective defence measures need to be considered and implemented. The Naval Association of Canada believes the Royal Canadian Navy, subject to difficult equipment choices, has an important role to play against all these evolving threats.

Availability of Naval Ships and Submarines

Unfortunately, an individual ship or submarine is not available for use all of the time, owing principally to maintenance, planned or unplanned.[10]

When ships (and submarines) are available, they essentially do one of three activities (in order of importance):

- they conduct operations in support of defence, security and safety objectives;[11]
- they conduct individual and collective training, to get ready to conduct operations; or
- they conduct exercises, once trained and not otherwise conducting operations, in order to maintain crew proficiencies.[12]

The need to conduct maintenance, trials and individual and collective training adds sea-day requirements and non-availability

---

[2] As described at http://www.forces.gc.ca/en/news/article.page?doc=the-canada-u-s-defence-relationship/hob7hd8s (accessed 13 October 2016).
[3] Sometimes referred to as levels of ambition or levels of effort.
[4] How much of an insurance policy is desired?
[5] To conduct Sovereignty Patrols and provide Support to Other Government Departments (such as fishery patrols, drug interdictions and illegal migrant interceptions.).

[6] The government will eventually need to espouse, publicly or privately, its own assessment of future threats and weave the implications into both defence and foreign policy. Several significant and negative security environment changes have occurred since the publication of Canada's last defence policy document, the Canada First Defence Strategy in 2008. These need to be taken into account. For example, what are the Government's positions on: Russia's recent extra-territorial activities? Russia's future intentions? China's recent activities in the South China Sea? North Korea's long-range missile and nuclear weapons intentions? Can we exclude the possibility that the Canadian Armed Forces (CAF) and the Royal Canadian Navy (RCN) might one day be directed to respond to any of these, or other issues?
[7] This is a cat-and-mouse game that has been around since the beginning of time and is unlikely to disappear in the next century.
[8] It was recently reported that on Sunday 9 October 2016, shore-launched anti-ship missiles, possibly Chinese-made C802s, were fired towards United States Navy (USN) ships in international waters off Yemen's west coast; while no ships were hit, the USN apparently deployed countermeasures consisting of Standard missiles (SM-2) and Evolved Sea Sparrow Missiles (ESSM) and NULKAS off-board jammers. The 9 October incident was preceded by a successful 1 October C-802 missile attack against a United Arab Emirate high-speed catamaran which was transiting the Bab Al Mandeb Strait.
[9] Because something has yet to happen does not mean it won't. History shows we have great difficulty in correctly predicting what might happen tomorrow. Was the threat of suicide plan attacks on the World Trade Centre considered the greatest threat to the United States in 2001? Was the threat of interference by Russia in Ukraine considered the greatest threat to NATO in 2015?
[10] Such periods of unavailability also include allowances for post-maintenance set-to-work trials and crew training.
[11] In times of tension, crisis or war, this activity would override the third activity.
[12] In times of peace, this activity dwarfs the first activity.

periods to naval platforms. While these activities ensure equipment and personnel readiness for operations, they add to the overall number of platforms required to generate a given set of naval outputs, as determined by the Government.

Building and Maintaining a Navy

Given the difficulty of correctly predicting the future, acquiring and maintaining balanced, multi-purpose, flexible, combat-capable, military capabilities, on land, on and below the seas, and in the air, seems prudent.

Combat-capable naval ships and submarines and maritime aircraft and their sophisticated sensors, weapons and communications equipment are not inexpensive.

The costly nature of fully integrated, combat capable platforms is a function of several factors, the most significant of which is the platform's desired degree of survivability. Survivability speaks to the military concept of being able to go into harm's way and retaining a reasonable chance of operational success and survival; this is all about ensuring young Canadian sailors and aircrew come back from their missions safe and sound.

In the Canadian experience:

- it takes a very long time before a modern, combat-capable and effective ship, submarine or aircraft can be delivered to the CAF;
- naval platforms and equipment:
  - must take into account a varied and challenging operating and threat environment;
  - are produced in small numbers (which do not benefit from economies of scale); and,
  - are often required to perform long after their best-before date expires.

A navy cannot operate in a high threat environment if it is comprised of less capable ships. High-end warfare skill-sets take years to develop and sustain.

A capable Navy cannot be stood up quickly when a need arises. For it to be of use when needed, it must exist before a difficult-to-predict threat (or crisis) manifests itself.

At What Cost?

How much should a country spend on its defence? How much is enough? The only sure way to determine whether or not enough is being spent on defence is when the country's defence is actually put to the test. Spending on defence (and the RCN) is like buying insurance: (1) you have to pay for it up front; (2) you don't know when you will ever need to use its full capacity; and (3) you can't readily acquire some or more when a crisis suddenly emerges.

Whole-of-Government Security in the Maritime Domain

Post 9/11, the 2004 National Security Policy directed responsible departments and agencies to improve the way in which national maritime security is coordinated and delivered.

"Transport Canada (TC) was designated as the lead for coordinating marine security policy in Canada, working in collaboration with other federal government departments and agencies with marine security responsibilities."

"[The] Department of National Defence (DND) (particularly the [N]avy) was recognized as] the lead department for overall coordination of on-water response to a threat or crisis in Canada's Exclusive Economic Zone and along our coast; [and routinely] monitors and controls military activities within Canada's territory, airspace and marine areas.

"Within weeks of 11 September 2001, the Interdepartmental Marine Security Working Group (IMSWG) was established under the leadership of Transport Canada. The working group was created to coordinate federal marine security efforts by identifying requirements and coordinating initiatives across the federal government."

"The International Maritime Organization (IMO), an agency of the United Nations that sets global safety and security standards for the maritime sector, developed the International Ship and Port Facility Security (ISPS) Code in 2002."

"The IMSWG … developed the fundamental concepts under which Canada's marine security framework has developed."

"With these concepts in place and with the Marine transportation Security Act as legal authority, Canada … respond[ed] to the ISPS Code requirements. The Marine Transportation Security Regulations (MTSR) proclaimed under the MTSA came into force 1 July 2004 to meet Canada's international commitment."

"[ISPS Code' Marine security threat Levels One, Two and Three and associated responses are standard across the globe."

Other post-9/11 IMSWG-coordinated, whole-of-government initiatives include the implementation of "Marine Security Operations Centres, National Port Enforcement Teams, Marine Security Enforcement Teams, Marine Security Emergency Response Teams and the "Shiprider Project."

With significant input from the RCN and other concerned departments and agencies, the IMSWG also produced two reference documents, namely *Canada's Maritime Security Strategic Framework* and *Canada's Maritime Domain Awareness Strategy*.

Role of the RCN

The RCN is principally responsible for:

- monitoring Canada's ocean estate and approaches;
- when necessary, asserting and defending Canada's maritime sovereignty; and
- as directed by the government, contributing to international peace and security.

In a whole-of-government fashion, the RCN, as part of the CAF, collaborates with and provides support to Other Government Departments and Agencies in achieving separate but interconnected mandates and objectives.

While it provides assistance at times in the following areas, the RCN is <u>not</u> responsible for:

- law and regulation enforcement;
- safety of navigation at sea, vessel traffic management, ice breaking and marine search and rescue;
- marine transportation safety;
- pollution monitoring and control;
- border monitoring and control; and
- migrant monitoring and control.

These responsibilities belong to other government departments and agencies.

The CAF and the RCN constitute Canada's last force-of-law-resort at sea.

Maritime Domain Awareness

In order to exercise sovereignty, a nation must:

- **first, know what is going on in, near, and at times far away from its sovereign territory, be it on land, on and below the seas and in the air; this is normally achieved through surveillance; and then,**

- **be able to respond normally with mobile assets, to safety, security and defence incidents or challenges, potential or actual, in a timely fashion.**

Surveillance leads to awareness, which leads to effective whole-of-government decision making.

In Canada and the United States, there are many departments, agencies and institutions that are involved in providing various aspects of safety, security and defence in the maritime domain.

Surveillance responsibilities and contributions differ in each country, depending on the issue.

In Canada, several departments and agencies are interested in different aspects of maritime surveillance. The nature and degree of surveillance required and generated by each of Canada's federal departments and agencies varies. While Department of National Defence is interested in all elements of Maritime Domain Awareness, it focusses a significant amount of effort and resources into those which support the defence and security of Canada and North America.

Defence-oriented surveillance concepts, methods and technologies can be grouped into three types of categories:

- Strategic-level or large-area surveillance;
- Operational-level or medium-area surveillance;
- Tactical-level or small-area surveillance.

The purpose, nature (including size and mobility), cost and effectiveness of the surveillance technologies vary widely. It is not easy to optimize a single solution for multiple purposes.

At sea, above water surveillance technologies are mostly electromagnetic in nature whereas below water surveillance technologies are mostly acoustic in nature.

A comprehensive surveillance strategy is a function of several factors, including but not limited to:

- The extent and nature of the territory (land, sea [on and below the surface] air and space) to be covered;
- The meteorological conditions under which surveillance is to be carried out;
- The refresh rate of detections and subsequent tracking; and,
- The degree to which a detection is positively identified.

Often, multiple types of surveillance methods and technologies are required to generate an actionable surveillance picture.

Beyond the increasing potential threat posed by missiles, amongst other weapons, which can be launched from submerged submarines, the need to conduct undersea surveillance must not be overlooked.

While the RCN is very much interested in strategic and operational level surveillance, on, above and below the oceans, it has focussed most of its efforts and limited resources on developing and maintaining mobile response assets, which are equipped for conducting tactical-level surveillance but are able to draw from and contribute to the surveillance picture generated by operational and strategic level systems.

Maritime Response

Once an actionable surveillance picture has been generated, a mobile response asset or assets can be deployed. If not already deployed, to further refine the picture and/or to take whatever action might be warranted.

Response assets for the maritime domain come in many types. Some are military and some are non-military.

Most of the more capable response assets are mobile, some more so than others.

Some such as military fighter and maritime patrol aircraft can travel significant distances rather quickly, can deploy with no or little support to far-away places and remain on site for significant periods of time.

In the case of mobile naval assets, response can take one or two forms. Either the assets are called into action from their home base, as in the case of the RCN's Ready Duty Ship, or they are already at sea, conducting sovereignty patrols, or conducting training or exercises, and are therefore able to respond more quickly.

Sea Control

The CAF and the RCN need to be able to exercise a reasonable degree of sea control on, above and below the ocean surface, wherever they are tasked to operate, be it in the open ocean (i.e., far from land), or in the littorals (i.e., near land), and be it near or far away from Canadian territory.

Because of the costs involved, the CAF and the RCN cannot possess all elements of modern sea power.

Ideally, the CAF and the RCN should be able to exercise sea control without the assistance of allies when operating in Canadian waters.

Because it is difficult to predict future threats and situations, care must be taken to acquire and maintain the right number, mix and quality of sea-going platforms and supporting services so as to preserve the ability to ensure adequate sea control.

An Example of the RCN at Work

The submarine threat is particularly challenging.[13] Submarines are stealthy and lethal. It is very challenging and costly to detect and track a submerged submarine. Authorities become anxious when a foreign submarine strays from its home waters and/or cannot be accounted for. When it comes to submarines, intelligence gathering and surveillance starts long before a potential incursion into sovereign waters. Allies collaborate and cooperate in developing and maintaining the best possible undersea surveillance picture. Information is shared between Allies, especially between those nations which operate submarines. As the situation dictates, allies, including Canada, deploy mobile surveillance and/or response assets to assist in developing, refining and maintaining the picture, and if necessary, stand ready to contain the situation. In the case of Canada, this may involve deploying one or more maritime patrol aircraft thousands of miles away from Canada. Subsequently, an appropriately-configured naval task group, of one or more ships and/or submarines, may be dispatched well before the foreign submarine approaches North American waters.

[13] Submarines can carry anti-ship torpedoes, mines, anti-ship missiles, cruise and ballistic missiles. While nuclear-tipped ballistic missile submarines saw their zenith during the Cold War, they still exist.

Greater than the Sum of its Parts

A naval task group "is a group of naval and air units optimally suited to the full range of expected tasks associated with their mission. It is capable of self-sustained operations for a fixed time in any accessible maritime region of the world. The number and type of units attached to a deployed Task Group would depend on the particular mission…"

In a task group, "various ships, submarines and aircraft with unique capabilities act in combination, depending upon the mission, to create a synergistic effect multiplying their individual effectiveness."

A naval task group is self-sufficient, modular, adaptable and capable of easily integrating with other national or international forces that are likely to be involved in a joint and/or combined operation.

The naval task group works well for Canada in providing adequate sea control both at home and abroad.

Looking forward, a Canadian naval task group should consist of up to five combatants (surface and sub-surface) and one combat support ship, and appropriate maritime aircraft.

Maritime Force Structure

So that future Governments will continue to be able to make the meaningful contributions expected of Canada in times of tension, crisis or war, the Naval Association of Canada believes it is in the national interest to acquire and maintain a modern, balanced, multi-purpose, flexible, combat-capable, maritime fleet consisting of, as a minimum:

- 16 surface combatants;
- 4 sub-surface combatants (i.e., submarines);
- 4 combat support ships (i.e., underway replenishment ships);
- 28 maritime helicopters;
- 16 maritime patrol aircraft;
- 12 coastal patrol ships with mine countermeasure capabilities, and,
- 6 Arctic and offshore patrol ships.

Such a force structure is predicated on numerous factors, including, but not limited to, the nature of the future security environment, which remains difficult to predict.

Operating at Home versus Operating Abroad

Previous Canadian defence policies have generally espoused three recurring objectives: (1) Defend Canada; (2) Defend North America; and, (3) Contribute to international peace and security.

For decades, pundits and observers have debated the degree to which the Canadian Armed Forces should focus its efforts and resources on staying at home in the defence of Canada or going abroad to contribute to international peace and security.

Most previous policies have generally avoided the temptation to weigh or prioritize these objectives. This is wise in the NAC's opinion. Not weighing or prioritizing these objectives, which flows from the fact that it is extremely difficult to predict the future, allows for policy flexibility.

In the case of operations in the maritime domain:

- there will be times when surveillance and response to potential threats to sovereignty will need to take place beyond Canadian waters.

- there are few differences in naval doctrine, support, platforms and equipment between operating in Canadian waters and operating abroad; and

- the only differences concern the degree of support to be provided to operations ashore when called upon to operate in the littorals of foreign lands.

Unless a nation is engaged in an existential conflict, its military forces can and should be used in pursuit of peace and security and prosperity interests away from national territory. In the case of the Royal Canadian Navy, these away-from-home interests begin in international waters, just beyond Canada's 12 nautical mile territorial sea.

Conclusion

Oceans and navies have played key roles in the prosperity, security and defence of most, if not all, states, especially coastal ones. Looking forward, the oceans will likely continue to play an important role in Canada's prosperity, security and defence. Canada will continue to need a balanced, multi-purpose, flexible, combat-capable navy. A capable and effective navy cannot be easily and quickly created when a need arises. For it to be of use when needed, it must exist before difficult situations manifest themselves.

NAVAL ASSOCIATION OF CANADA (NAC)

Follow-up Letter to the Standing Committee on National Defence of 24 October 2015

By the President of NAC, Jim Carruthers

24 October 2016

Standing Committee on National Defence
House of Commons
Ottawa, Ontario, K1A 0A4

Re: Naval Association of Canada Supplemental Input to the House of Commons Standing Committee on National Defence.

The following input is submitted as a follow-up to the Naval Association of Canada's presentations by Vice-Admiral (Retired) Robertson and Commodore (Retired) Sing to the Committee's hearing of Tuesday, 18 October 2016.

Maritime Capability Gaps

At the conclusion of the 18 October session, the Committee Chair asked the NAC to provide its assessment of extant maritime capability gaps. While a seemingly simple request, a response is not at all simple.

There are numerous factors to consider. Only four will be mentioned here. Firstly, there is a doctrinal distinction in the military between capability (or the ability to perform a particular task) and capacity (the number of capabilities in question). In the case of navies and air forces, insufficient numbers of platforms can constitute a capability gap. Secondly, the concept of balance has many aspects. Balance is required on one hand between capability, quality and capacity and numbers. In the case of naval forces, balance is on another hand, required on, below and above the seas. In the case of the defence of Canada and North America, balance is also required between surveillance and response. Balance does not mean equal, and is as much about professional judgement as it is about science. Thirdly, the likelihood and the impact or consequence of a potential threat and the amount of funding likely to be available to insure against such threats, colour the identification, categorization, prioritization and weighting of capability gaps and their possible solutions. Fourthly, it is important to distinguish between needs and desires, especially in regards to distinct defence, security and safety tasks and associated gaps, and their relative importance in a resource-limited world.

As set out in Admiral Robertson's opening statement, the NAC assesses that the maritime capability gaps that exist today will only be compounded by the significant capabilities that are likely to be gapped or lost in the decade to come at current Defence funding. The inadequate state of the expected future maritime force, as described in the next section, must be combined with the gaps of the current force in order to provide a complete view of the challenge facing Defence today.

The present capability gaps, the bulk of which relate, directly or indirectly, to the defence of Canada, include, but are not limited to the following (*list is not prioritized*):

- no ability to generate remote, wide-area, persistent, real-time undersea surveillance of Canadian waters and approaches;
- waning ability to generate focussed, local-area, 24/7, real-time undersea surveillance, at home and abroad;
- no ability to exercise sea control under the ice;
- waning ability of surface combatants to conduct effective undersea control;
- lost ability to independently provide adequate local air-defence of naval ships deployed near or into harm's way, owing to the forced de-commissioning of old air-defence destroyers;
- waning ability to be a meaningful NATO and US partner in a tense or crisis situation at sea;
- waning ability to provide meaningful leadership of allied naval operations in a tense or crisis situation;
- lost ability to independently support naval combatants deployed far from home base, be it in Canadian, international or far-away waters, owing to the forced de-commissioning of old underway replenishment ships;
- no ability to defend against ballistic missiles which could target North America, especially those which might be fired from submarines;
- lack of capacity to survey and/or clear port approaches if threatened by mines;
- lost ability to conduct deep sea-bed diving and recovery operations (HMCS *Cormorant* was retired in 1997);
- lost ability to conduct forward-looking, at-sea, defence-related research and experimentation (defence research vessel *Endeavour* was retired in 1999 and the last research vessel, *Quest*, has just recently been retired. [*See page 26, Ed.*]
- inadequate ability to operate in the littorals, especially in a threat environment abroad; and
- little ability to support operations ashore from the sea.

Strategic Assessment in Support of the Defence Policy Review

It is clear from Admiral Robertson's opening statement that there are significant capability gaps still to come, since the Naval Association of Canada assesses that at current budget levels and without significant restructuring overall, the Canadian Armed Forces (CAF) are unsustainable and that the maritime fighting fleets of surface combatants, submarines and maritime patrol aircraft, will continue to decline over the coming 15 years to leave the country without submarines or patrol aircraft and fewer surface combatants than we have today. Any force that sees the termination of submarines or patrol aircraft, both of which provide crucial capabilities, capabilities that are more important than those on the list of gaps above, while also reducing overall capacity would be smaller and unbalanced to a degree that it would not be able to defend Canada at home or defend our interests abroad.

The NAC argues that the evolving strategic environment requires

increased investment in defence to secure governments' enduring expectations of defence outcomes, rather than less. In addition to securing Canada's defence, the NAC believes there is no better insurance against strategic risk and unforeseeable global shocks than modern, balanced, multi-purpose, flexible and combat-capable maritime forces.

The NAC assesses that the priority for any Defence policy must be to maintain the confidence of Canadians in the protection of the country, and the confidence of our American allies in our contribution to continental defence. Consequently, maintaining the naval and air forces that safeguard our continental approaches above, on and under our three surrounding oceans is crucial.

The NAC consequently recommends that, while there needs to be an increase in defence spending, if the defence budget does not increase there must be a transfer of resources within Defence to fund the capital acquisitions necessary to recapitalize the naval and air force fighting fleets that defend Canada and contribute to North American defence, especially the surface combatants, submarines and patrol aircraft. The Naval Association of Canada further notes that what must be spent to defend Canada and contribute to the defence of North America will also serve the country well abroad, since for maritime forces there is little difference—strategically, operationally or tactically—between operating at home or on the far side of the world.

Fleet Renewal

Fleet renewal will not be possible without the measures set out above. Those measures, coupled with pursuance of the National Shipbuilding Strategy (NSS) as the most assured 21st century approach for recapitalizing the fleet on a sustainable, ongoing basis, would enable the Government to:

- Continue to maintain the combat capabilities of the modernized fleet, especially, but not exclusively, in undersea warfare;
- Continue the procurement of the Queenston-class Joint Support Ships; the Harry DeWolf-class Arctic and Offshore Patrol Ships and the Canadian Surface Combatants;
- Extend the life of the Victoria-class submarines into the mid-2030s as a bridge toward an eventual submarine replacement.
- Extend the life of the Kingston-class Coastal Defence Ships so as to retain much needed fleet capacity for domestic and continental security missions, especially when the RCN undergoes the transition from the modernized Halifax-class frigates to the Canadian Surface Combatants from the mid-2020s through the mid-2030s; and
- Fund the recapitalization of the Aurora Maritime Patrol Aircraft, the Kingston-class coastal defence vessels and the Victoria-class submarines.

Maritime Force Structure

Governments have repeatedly responded to international events by ordering a naval task group to deploy and contribute to international peace and security missions, while the fleet at home secured our sovereignty. Looking forward, a naval task group should consist of up to five combatants (surface and sub-surface), one combat support ship, and requisite maritime aircraft.

So that future Governments will continue to be able to make the meaningful contributions expected of Canada in times of tension, crises or war, the Naval Association of Canada believes it is in the national interest to acquire and maintain a modern, balanced, multi-purpose, flexible, combat-capable, maritime fleet consisting of, as a minimum:

- 16 surface combatants;
- 4 sub-surface combatants (i.e., submarines);
- 4 combat support ships (i.e., underway replenishment ships);
- 28 maritime helicopters;
- 16 maritime patrol aircraft;
- 12 coastal patrol ships, with mine countermeasures capabilities; and
- 6 Arctic and offshore patrol ships.

Such a force structure is predicated on numerous factors, including, but not limited to, the nature of the future security environment, which remains difficult to predict.

The NAC appreciates once again, the opportunity it was afforded by the Committee to contribute to this most important review of defence policy.

Yours aye

Jim Carruthers
President
Naval Association of Canada