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AN AMPHIBIOUS CAPABILITY FOR CANADA

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AN AMPHIBIOUS CAPABILITY FOR CANADA

AIM

1. The aim of this paper is to identify the benefits to the Royal Canadian Navy (RCN) of establishing an amphibious capability, and to demonstrate how it could facilitate some of the potential operations arising from the government's defence priorities. It will look at the benefits such a capability will bring to the Canadian Armed Forces (CAF) and the Government of Canada (GoC) as a whole. Identification of specific vessel/s is beyond the scope of this paper. However, the paper will address some considerations that should be taken into account if the recommendations are to be taken forward.

INTRODUCTION

2. When the new government came to power in October last year they made a commitment to invest in the armed forces. They also expressed a desire to renew Canada's commitment to United Nations (UN) peace operations.¹ The RCN is currently progressing with a number of enhancements to improve the capability of the fleet such as: the Halifax Class Modernization (HCM) project, the introduction of the new Arctic/Offshore Patrol Ships (AOPS) and the replacement for the Auxiliary Oiler Replenishment ships, the Joint Support Ships (JSS).

3. One of the maritime capability gaps that currently exists within the RCN is the ability to conduct amphibious operations. As stipulated in the North Atlantic Treaty Organization (NATO) Maritime Strategy, "[t]he maritime component must be capable of . . . delivering

¹ Amanda Shendruk, John Geddes and Nick Taylor-Vaisey. "The annotated Throne Speech," Macleans, accessed 1 Feb 2016, <http://www.macleans-annotates-the-2015-speech-from-the-throne/>

interoperable maritime and amphibious strike.”² This paper will consider some of the attributes of an amphibious capability and how they can be adapted to not only support the projection of power ashore but also in the conduct of operations other than war (OOTW), such as Peace Keeping Operations (PKO), humanitarian or disaster relief and Non-combatant Evacuation operations (NEO).

AMPHIBIOUS OPERATIONS

4. The NATO definition of Amphibious Operations is: A military operation launched from the sea by a naval and landing force embarked in ships or craft, with the principle purpose of projecting the landing force ashore tactically into an environment ranging from permissive to hostile.³

5. Since the end of the cold war the world has seen an unpredictable change with the escalation in terrorist organizations, asymmetric threats and irregular warfare. It is currently unlikely that Canada will be called upon to conduct or support a traditional amphibious operation against an occupied hostile beach, due to its lack of specialist shipping, lack of suitably qualified troops, and minimal knowledge and experience of such operations. The GoC is however committed to ensuring the CAF are equipped and prepared to renew their participation in United Nations PKOs and to provide disaster relief when required, both domestically and internationally.⁴ Although there are distinct differences between amphibious operations and

² North Atlantic Treaty Organization. *Alliance Maritime Strategy*. last modified 17 June 2011, http://www.nato.int/cps/en/natohq/official_texts_75615.htm?selectedLocale=en

³ North Atlantic Treaty Organization. AAP-06 (2015), *NATO Glossary of Terms and Definitions*. NSO: 2015, 2-A-14.

⁴ Rt. Hon. Justin Trudeau. “Minister of National Defence Mandate Letter.” Accessed 29 Jan 2016, <http://www.pm.gc.ca/eng/minister-national-defence-mandate-letter>

PKOs, much of the specialist equipment and skills are interchangeable. If one looks back over some of the recent missions that the CAF and/or NATO have participated in such as Haiti, Somalia, Sierra Leone, the Sri Lankan tsunami etc., they would all have benefited from an amphibious capable force.

Canadian Amphibious Capability

6. The make up of a country's amphibious capability consists of the hardware: ships, small craft, vehicles etc., and trained personnel to plan, conduct and command such operations. Of the approximately 80 countries across the globe whom claim to have an amphibious capability, only half have dedicated Marines or Naval Infantry. The remainder rely on regular forces with some degree of amphibious training.⁵

7. There has been much discussion within the CAF over the last 20 years about adopting an amphibious capability, with it gaining momentum in 2005 with the release of the Defence Policy Statement (DPS). The DPS stipulated the requirement to create a Standing Contingency Task Force (SCTF). Endorsed by the Chief of Defence Staff (CDS), this was to be a fully joint, highly mobile, rapid response force, deployed by sea with the ability to project landing forces ashore.⁶ This had the potential of developing into an amphibious force however it lost traction within two years. The principle was resurrected with joint support from the RCN and the Canadian Army (CA) under the guise of the Amphibious Warfare Development Program (AWDP). The Canadian Army Advanced Warfare Centre (CAAWC) then assumed the lead in early 2015. It

⁵ Ann Lynn Griffiths and Kenneth Peder Hansen. *Marines: Is an Amphibious Capability Relevant for Canada?* (Dalhousie University, Centre for Foreign Policy Studies, 2008), 9-10.

⁶ *Ibid.*, 58-59.

now appears as though the program will be scaled back to low level TTP(Tactics, Techniques and Procedures) development. It is not suggested that the CAF should establish a Marine Corp such as the US or UK, however in order to improve the flexibility and versatility of the RCN, amphibious hardware would prove indispensable.

Amphibious Shipping

8. The guiding principle when establishing an amphibious capability is the ability to move equipment and personnel from sea to land, known as trans-littoral manoeuvre (TLM). The design of an amphibious ship, and any supporting landing craft, should facilitate this movement from the ship to the beach, taking into account the limitations of the personnel and vehicles involved, the profile of the beach and the sea conditions. Typically an amphibious ship will remain in deep water, whilst landing craft (LC) and/or helicopters are used for the transfers. Most amphibious ships are designed with a docking facility to enable them to carry and deploy large LC for heavy lift transport. Smaller LC can be carried and launched from davits. Depending on the gradient of the beach, LC will typically ground in a depth of water between 0.5-1.25m, with vehicles appropriately modified to wade through any remaining water. There are a number of unique characteristics of amphibious shipping which exemplify their versatility and flexibility for OOTW:

- a. *Capacity for Embarked Forces.* The size of the ship will clearly depend on a number of factors, based around the intended size of the embarked force and their associated equipment and vehicles. This will typically be two to three times the size of the ship's company. With the corresponding capacity to feed and support this large number of people the ship becomes ideally suited to NEOs when embarked troops are not

onboard⁷. Enhanced medical facilities to support embarked personnel are also available. Capacity can usually be increased for a limited time utilizing austere accommodation.

b. *Sealift*. In addition to personnel capacity, the size of amphibious ships allows for the transportation of heavy equipment and vehicles, deemed inappropriate for airlift.

With the addition of suitable LC, this equipment can be landed in areas that do not have access to a port/harbor facility. LC offer increased flexibility and choice of options for the TLM of personnel and equipment for both amphibious operations and OOTW.⁸ LC are normally categorized as:

i. *Landing Craft Utility (LCU)*. Heavy lift capacity (Company size), self-supporting craft with extended range and sustainability. Launch and recovery from ship dock.

ii. *Landing Craft Vehicle/Personnel (LCVP)*. Medium lift capacity (Platoon size), reduced range and sustainability, faster speed. Davit launch and recovery system.

iii. *Landing Craft Air Cushion (LCAC)*. Medium lift *hovercraft* (Platoon size), fast speed over calm seas and flatlands. Launch and recovery from ship dock.

⁷ HMS *Bulwark* was used to evacuate 1300 British nationals from Beirut in 2006.

⁸ HMAS *Tobruck* along with 2 heavy lift Landing Craft provided support to East Timor in 1999.

- c. *Docking Facility.* Facility for ship to dock down at sea creating secure berthing for landing craft and boats, enabling safe loading and unloading of personnel and equipment. Berthing area utilized for storage of LC when not in use.
 - d. *Airlift.* Multiple helicopter platform to provide additional TLM and reconnaissance.
 - e. *Command Capability.* Improved command capability and enhanced communications provide Headquarters (HQ) functionality.
 - f. *Reach.* Use of littoral area to reach objective or population centres.
 - g. *Additional Facilities.* Increased space onboard allows for marshaling areas and overflow accommodation. Additional storage space for supplies, vehicles, and specialist equipment for disaster relief operations.
9. Examples of amphibious ships within coalition navies can be found at annex A to enable comparisons to be made against possible Canadian requirements. Any new ship should complement existing shipping, with compatibility across functions and equipment. An amphibious ship would be seen to complement the capabilities of the RCN's new Joint Support Ships, due to enter service in 2020, as it would enable TLM to be conducted. Commonality between the two vessels could be achieved in areas such as the embarked LC/boats to ease transfer of stores and personnel.

10. Having the functionality of an amphibious ship within the CAF would give the GoC a huge range of options when considering how to respond to a crisis. Currently the CAF Disaster Assistance Response Team (DART) acts as the *first response* unit, which has demonstrated its utility in areas such as Haiti, Honduras and the Philippines. The DART is limited in its ability by being constrained by the capacity of airlift. An amphibious capability would complement and enhance the role of the DART by increasing its capacity within a coastal region (typically up to 200 miles inland⁹). Additionally an amphibious ship is able to act as a logistics staging post and a Command and Control centre, without having to rely on host nation support, or congest a weakened infrastructure within the area of concern.

SUPPORT TO CANADIAN CORE MISSIONS

11. In addition to providing the capability to project power ashore, an amphibious capability would also enhance the support available to meet the government's six core missions at home and abroad, detailed in the *Canada First Defence Strategy*:¹⁰

- a. *Conduct daily domestic and continental operations, including in the Arctic and through NORAD* - Facilitate operations off the coast of Canada, including the Arctic, by acting as a secure staging base with logistics support, command facility and ability to influence and project ashore.
- b. *Support a major international event in Canada, such as the 2010 Olympics* – Secure base for operations with ability to command and control other maritime assets.

⁹ According to UN figures, in 2010 approximately 80% of the world's population lived within 60 miles of the coast.

¹⁰ Department of National Defence. *Canada First Defence Strategy*. (Ottawa: DND Canada, 2008),10.

(HMS *Albion* was used by the Royal Navy and civilian authorities as a command platform for security during the 2012 London Olympics.)

- c. *Respond to a major terrorist attack* – Deployable and secure base for operations with ability to project ashore.
 - d. *Support civilian authorities during a crisis in Canada such as a natural disaster* – Deployable and secure base for operations with ability to provide support ashore and evacuate personnel if required.
 - e. *Lead and/or conduct a major international operation for an extended period* – Conduct global amphibious operations and operate alongside other RCN assets in support of missions. Improved Command and Control infrastructure.
 - f. *Deploy forces in response to crises elsewhere in the world for shorter periods* – Deploy independently, with other RCN assets, or as part of a coalition Task Force to conduct operations.
12. An amphibious capability within CAF would create a truly joint asset due to its interaction and functionality across all services. Although effectively *owned* by the RCN, much of the equipment and vehicles onboard would be provided by the CA and likewise any air assets would come from the RCAF. It would also prove to be a force multiplier in *expeditionary*

operations which require a rapidly deployable, self supporting, multi-functional force in a foreign country.¹¹

13. With a new government in power it is likely that a revised defence strategy will be drafted, however they have already stated their priorities. These include strengthening the Navy, renewing Canada's commitment to PKOs, being able to provide disaster relief, and respond more quickly to emerging conflicts by providing suitably qualified manpower and HQ units. Although there may be some changes to the core missions detailed above, it does illustrate how versatile and flexible an amphibious capability can be in support of OOTW as well as more traditional power projection ashore.

CONCLUSIONS

14. Despite much debate within the RCN and CA over the establishment of an amphibious capability there has been limited progress to date. With the current uncertainty in the world, the rise in conflicts involving non-state and failed-state actors, asymmetric threats and irregular warfare, now more than ever Canada needs to have flexible and adaptable forces, the ability to deliver the military to the right place at the right time with the assets required to deliver effect. An amphibious capability is able to deliver that effect as well as facilitate all the core missions of the government. It will also complement the existing fleet and enhance the functionality of the new Joint Support Ships by enabling trans-littoral manoeuvre.

15. The GoC has expressed a desire to renew Canada's commitment to United Nations Peace Keeping Operations and provide disaster relief support. An amphibious ship, along with its

¹¹ Directorate of Maritime Strategy. *Leadmark, The Navy's Strategy for 2020*. (Ottawa: DND Canada, 2001),13.

embarked landing craft, helicopters, and vehicles has proved to be the ideal platform for disaster relief and PKOs due to its logistics capacity, Command and Control, and TLM capability, in an area with no useable port facilities. Likewise, in the event that Canadians living abroad require evacuating the additional capacity of an amphibious ship proves indispensable.

16. With a commitment from the government to strengthen the RCN, and a desire for Canada to become more involved in PKOs, the CAF are in a strong position to propose the establishment of a Canadian amphibious capability. In so doing Canada would strengthen its position within NATO and amongst its coalition partners and will be plotting a course to progress from a Medium to a Major Global Force Projection Navy.¹²

RECOMMENDATIONS

17. It is recommended that the following courses of action be considered:

- a. Resurrect the Amphibious Warfare Development Program with participation from the RCN, CA and RCAF. Open up discussions on the establishment of a *Standing Contingency Task Force*, or similar, with the possibility of integration with the Disaster Assistance Response Team.
- b. Liaise with NATO and other coalition partners to improve knowledge and experience of amphibious shipping and landing craft, to enable the preparation of a Statement of Requirements for an amphibious platform.

¹² *Ibid.*, 44.

- c. Investigate the lease of landing craft and/or amphibious shipping to development experience and produce doctrine.

- d. The Canadian Army should develop closer interoperability with the RCN in the maritime environment, to create a greater awareness of the capabilities and functions of the navy, with the intention of generating amphibious skills within the CA.

Annex: A. Examples of Amphibious Shipping amongst NATO and Coalition Partners.

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ANNEX A

EXAMPLES OF AMPHIBIOUS SHIPPING AMONGST NATO AND COALITION PARTNERS

Country Ship Class	UK Albion	UK Bay	NL Rotterdam	US San Antonio	Australia Canberra
Displacement (Tonnes)	18,797	16,419	12,955	24,900	27,500
Length (M)	176	176	166	208	230
Beam (M)	28.9	26.4	25	32	32
Draught (M)	7.1	5.8	6	7	7.1
Propulsion	4 x DGs	4 x DGs	4 x DGs	4 x DGs	1 x GT, 2 x DGs
Speeds (Kts)	18	18	18	22	19
Range (Nm)	8000	10,000	6000	unknown	9000
Landing Craft (Launch)	4 x LCU (Dock) and 4 x LCVP (Davit)	1 x LCU (Dock) or 2 x LCVP (Dock)	4 x LCVP (dock)	1 x LCU (Dock) or 2 x LCAC (Dock)	4 x LCU (Dock)
Vehicles	67	150	90	unknown	150
Embarked Troops	400 (+300)	350 (+350)	611	720 (+80)	1000 (+600)
Crew	325	158	128	361	358
Aviation	2 Helo spots	1 Helo spot	2 Helo spots (6 Helos)	4 Helo spots (2 Helos) VTOL compatible	6 Helo spots (11 Helos) STOVL compatible
Other	Advanced Command & Control		100 bed hospital	24 bed hospital	ICU and Sickbay

Source: Adapted from, Saunders, Stephen. "Jane's Fighting Ships 2013-2014" (Coulson, Surrey, UK: IHS Jane's, 2014), 31, 557, 903, 948.