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INTEREST PROJECTION VESSELS: A CONCEPT WHOSE TIME HAS COME

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AIM

1. As part of the cabinet mandate letter to the Defence Minister, Prime Minister Trudeau outlined several priorities for the Department of National Defence including the conduct of a Defence Policy review to be completed by the end of 2016. That mandate letter included a requirement to ensure that the Canadian Armed Forces have the equipment necessary to meet its redefined obligation; importantly for the Royal Canadian Navy (RCN), it included a specific requirement to invest in the Navy; it included a specific requirement to renew Canada's commitment to UN Peace Keeping, primarily through the provision of specialist capabilities, commanders and staffs; it also included a requirement to engage UN partners to increase their own nation's capacity to engage in Peace Keeping operations through training assistance. This mandate provides an opportunity to re-engage the government with the requirement to bolster joint capability through the purchase of a vessel designed to project Canada's interests abroad and thereby meet the government's mandate for a different type of military engagement on the world stage. This paper will once more make the case for an amphibious interests projection vessel(IPV). This paper will stop short of advocating for a beach assault capability although as Canada grows its capability, selection of the right vessel may make this feasible in the future.

INTRODUCTION

2. The concept of an amphibious vessel forming the core of an expeditionary taskforce or the requirement for HADR ship has been debated numerous times in the recent past commencing with the Standing Contingency Task Force experiments in 2005[1] and the latest debate occurring in the summer of 2015, surrounding the French sale, and potential Canadian

[1] Rob Bradford, "An Amphibious Task Group for the SCTF", *Canadian Naval Review* Vol 2, No. 2 (Summer, 2006). http://www.navalreview.ca/wp-content/uploads/public/vol2num2/vol2num2art5.pdf

purchase, of the two Mistral Class vessels built for the Russian Navy that were subsequently withheld from sale due to a trade embargo that resulted from Russian actions in Crimea.[2] The time is therefore opportune to further define the role for the CAF in the context of a redefined defence policy focused on Peacekeeping, humanitarian assistance and capacity building amongst allies and those fragile states that Canada deems a focus of interest. Potential areas of interest include the Caribbean Basin, the Gulf of Guinea, and the Gulf of Aden.[3]All of these potential areas are potential Naval operations areas that would benefit from the capability that an IPV would provide.

3. The paper will offer a brief discussion of the types of recent operations where an amphibious vessel would have been the preferred choice to conduct the operation or assist in its execution, discuss potential mission sets, and discuss the mandatory requirements inherent to such a vessel.

DISCUSSION

4. From East Timor in 1999 to Haiti in 2010, the Canadian Armed Forces (CAF) has learned that it is limited in its ability to support operations ashore from the sea. This operational experience from supporting humanitarian and disaster relief missions is driving the need for the CAF to consider the acquisition of a dedicated vessel to support operations from the sea, especially for humanitarian operations and disaster response scenarios as well as to enhance operations in Canada's North. Figure 1. Depicts those areas where Canadian operations took

[2] Associated Press, "*Egypt buys Mistral-class warships France wouldn't sell to Russia,*" CTV News, 23 September 2015. Last updated 23 September 2015 9:18 am EDT. http://www.ctvnews.ca/world/egypt-buys-mistral-class-warships-france-wouldn-t-sell-to-russia-1.2576825

[3] Patrick Lennox, "After Afghanistan: Maritime Options for the Future of Canadian Global Engagement." Canadian Naval Review, Vol. 5, No. 2 (Summer, 2009), http://www.navalreview.ca/wp-content/uploads/public/vol5num2/vol5num2art2.pdf

place that an amphibious Interests Projection Vessel, to use the French coined term to describe, would have been useful to Canada.[4] Note that it includes the NANOOK series of exercises in Canada's North, which are executed in the context of a joint operation supporting a whole of government approach primarily through the provision of logistical support and mobility. For more detailed descriptions of recent operations where an amphibious Interests Projection Vessel could be of use see Colonel Petrolekas' summary found at Annex A.

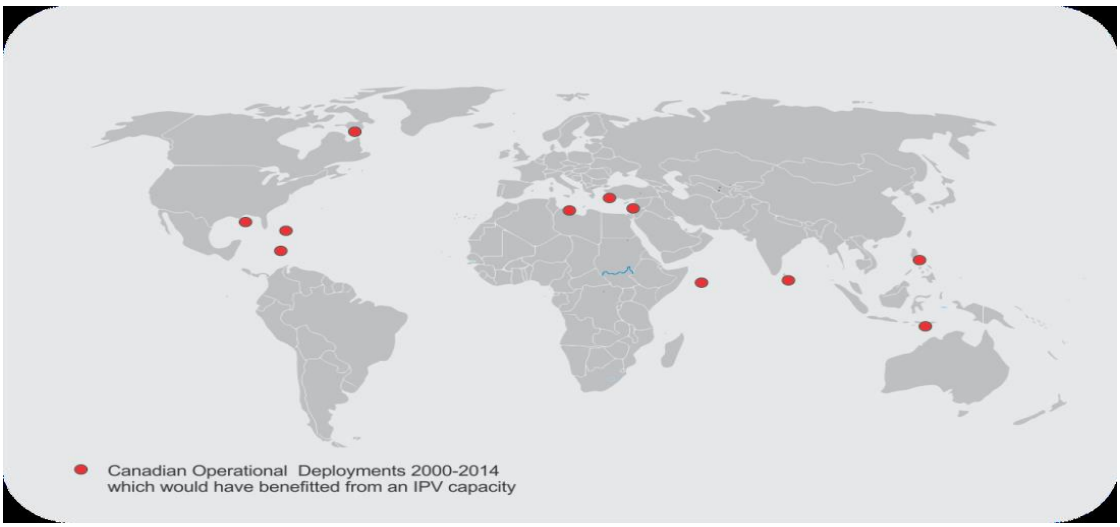

Figure 1 - Canadian Forces operational deployments, missions and exercises which would have directly benefited from an IPV since 2000. Based on all RCN deployments over a thirty year span, 24% of all missions are either humanitarian in nature, or presence/national interests projection.[5]

5. Non-security objectives have and will continue to gain prominence moving into the future. The Future security Environment 2013-2040 produced by the Chief of Force Development characterizes the future as containing significant economic, social and environmental challenges that will continue to drive instability. Issues such as water scarcity,

[4] Colonel G.J. Petrolekas, G.J. Colonel, "REPORT OF THE SA TO CCA ON THE FNS MISTRAL (BPC)," Canadian Army Staff File: 3350-1. 11 July 2014, 2.

[5] Colonel G.J. Petrolekas, G.J. Colonel, "*REPORT OF THE SA TO CCA ON THE FNS MISTRAL (BPC),"* Canadian Army Staff File: 3350-1. 11 July 2014., 12.

climate change, population density and migration combined with resource competition will intensify pressure in those areas of the globe least able to cope, creating challenges for world stability.[6] It is therefore reasonable to project that Canada will remain actively engaged in different types of non-security tasks as it continues to evolve its roll on the world stage. These will include provision of humanitarian aid, intervention in the event of natural disasters, search and rescue missions, non-combatant evacuation of Canadian nationals, logistical and medical support, and provision of command and control facilities in support of coalition operations. Investment in an amphibious interest projection platform will improve the utility and flexibility of the CAF response across the spectrum of non-security missions by increasing the CAF capability to project joint effects abroad. Contingency options to government will therefore be increased in times of crisis and non-crisis alike.

6. Missions at the security end of the spectrum will also be enhanced. In conjunction with appropriate frigate and support ship (AOR) escorts, a seaborne force supported through the use of an amphibious ship with dedicated medical, aviation and command and control capability will be able to support security operations in semi-permissive environments, fulfill constabulary functions (such as OP CARRIBE), and support Special Operations Forces for a limited duration. This will require additional doctrinal development and the development of tactics currently not exercised by the CAF. An assessment of whether we have the right aircraft in the right configurations to support this mission set will need to be undertaken as well as a study to ensure that we have the right sea connectors for over the shore support.

[6] Department of National Defence, *The Future Security Environment 2013-2040*, Ottawa: Chief of Force Development, 2014. http://publications.gc.ca/collections/collection_2015/mdn-dnd/D4-8-2-2014-eng.pdf. Ch 3.

7. One possible role for future employment of the CAF as per the ministers Mandate letter is to support capacity building efforts for partner Nations. One initiative Canada could emulate or directly support is the Partnership Stations initiatives of the United States(US). The US currently uses amphibious ships to support its partnership station initiatives in Africa, Central and South America as well as the Pacific. The partnership stations are designed to provide capacity building support to nations that require outside expertise to grow their own internal capability but desire a limited outside footprint in their Nation. The amphibious ships utilized by the US provide a roving school house that executes its mandate with the required minimal footprint in the host nation. They arrive and depart in a predetermined (short) amount of time in order to provide a specific training package utilizing embarked training teams to meet specific host nation requests.[7] The United States uses these amphibious platforms to provide a whole of government, domestic and international team to execute this training. The RCN would undoubtedly be welcome to participate through the provision of such a ship. An amphibious ship would be required to properly fulfill the training mandate and therefore allow the government to meet its policy objective of capacity building while having the ship forward deployed to those areas most likely to require the assistance in the future. Frigates and other vessel types are limited in their ability to provide and support the breadth of training and the required teams to meet this mandate.

8. In summary, preliminary analysis of an interim amphibious capability in 2006 identified the following missions sets:

a. Search and Rescue in Canada;

[7] US Department of State, "*Africa Partnership Station and Maritime Capacity Building in Africa*." Foreign Press Center Briefing by Rear Admiral William Loeffler Naval Forces Europe and Africa, Director for Policy, Resources and Strategy, 26 March 200, http://fpc.state.gov/121013.htm Last accessed 4 Feb 2016.

b. Disaster Relief in Canada and abroad;

c. International Humanitarian Assistance;

d. Surveillance/Control of Canadian Territory and Approaches;

e. Protection and Evacuation of Canadians Overseas;

f. Peace Support Operations (UN Chapters VI and VII);

g. Aid of the Civil Power;

h. National Sovereignty/Interests Enforcement; and

i. Defence of North America.[8]

As discussed above, with the expansion of the mission set to include capacity building for partner Nations, this mission set remains extant today and should form the basis in any future statement of requirements.

9. To meet the mission set identified, at its core an IPV needs to be structured around four core capabilities and be flexible enough to be configured in such a manner to privilege one function over another in order to meet the goals of the mission the ship is expected to execute at a particular moment. These core functions are: a hospital, a helicopter capability, a command and control capability and a troop embarkation capability concurrent with an ability to transport troops, vehicles or supplies (sea-lift) from ship to shore by means of landing craft or aircraft.[9] These functions would be the minimum necessary in an IPV.

10. Scoping and assessment work done in the past to inform the debate surrounding amphibious operations has centered on 4 different vessels that meet the following minimum requirements:

[8] Department of National Defence, "*Preliminary Options Analysis of Interim Canadian Forces Amphibious Capability*," Report Number: DMSS-2-3-2006-007 Rev 00. December 2006, Draft. 4-5

[9] Petrolekas, 3

a. All ships must be capable of carrying at least 200 troops to the amphibious operations area;
b. All ships must have air asset capability;
c. All new ship construction will be in accordance with current Canadian Shipbuilding Policy;
d. All ship options shall meet Canadian environmental requirements;
e. All ship options shall meet all Canadian statutory requirements;
f. All ships are to be able to transit both the Panama and Suez canals; and
g. All ships can be accommodated in Halifax and Esquimalt harbours.[10]

The four ship classes are: The French Mistral Class, the United States San Antonio Class, The Dutch Rotterdam Class and the British Bay Class.[11] From the assessment of these vessels it is clear that the minimum requirements could be refined further to give a clearer picture of the amphibious requirements. In fact the minimum requirements appear to have been written with procurement in mind such that it opens up the widest possible field of contenders rather than giving a reasonable explanation of capability required. Extrapolating from the vessels assessed the requirements for each core functional area can be refined as follows.

11. In terms of an onboard hospital, it should be capable of operations up to and including those of a full NATO defined Role 3 hospital[12], equipped with at least 2 surgical suites, dental, pharmacy, laboratory, radiological, intensive care and general wards for at least 70 people. The hospital itself within the ship should be of sufficient permanent size to remain fitted and stocked

[10] Ibid, 4.
[11] Ibid, 3.
[12] Department of National Defence, "*Preliminary Options Analysis of Canadian Forces Amphibious, AOR, and Sealift Capability*," Report Number: DMSS-2-3-2005-005 Rev 002.,October 2005, 2.

with all required equipment such that the hospital can physically accommodate all required role 3 functions at any time. Employment of the hospital would then be dependent only upon the personnel embarked for the mission to be performed. The ship should be capable of additional casualty control areas in the event of mass casualty situations such as a large scale humanitarian effort.

12. In terms of Command and Control, it should have sufficient office and planning space for a commander and staff to lead a combined and joint operation. It should include an operations room capable of 24/7 watch operations separate from that of the ship, sufficient communications and data links to enable command and control in all environments(Air, Land and Sea), and it should include planning and office space for OGD and potentially NGO partners. It should be envisaged that an embarked staff could include up to 150 people and scalable to the mission being executed.

13. In terms of Helicopter capability, it should have the capability to support and operate a minimum of 6 helicopters including first and second line maintenance. The vessel should have the capability of operating all classes of RCAF helicopters, (Cyclone, Griffin, Cormorant and Chinook.) in heavy seas and in all conditions of visibility. Further, its hangar and flight deck should be immediately accessible to the hospital.

14. Finally, in terms of the sealift[13] it should have the capacity to embark up to a 500 person Battalion capable of being landed in two waves via landing craft. The vessel should also be capable of providing up to 1500 lane meters of cargo capacity. This is consistent with the report "Afloat Logistics and Sealift Capability Option Analysis by the Operational Research Division

[13] "Sealift capability refers to the ocean-based transport of a large quantity of military equipment with the capability to load or unload materiel and personnel to a secure port facility, Ibid, 11.

(ORD Project Report PR 2004/08) dated May 2004 that states that the average number of lane meters required per move is approximately 2600 lane meters."[14] 1500 lane meters available in the IPV plus the projected 1500 lane meters that will be available from the Joint Support Ship would provide ample lift to meet CAF needs and provide redundancy in shipping availability.

CONCLUSION

15. The defence review currently being undertaken by the Government of Canada provides an opportunity to rectify a longstanding deficiency in the ability to project Canada's interests abroad. Operations over the last 30 years have provided ample evidence of the utility of an amphibious vessel in both the domestic and expeditionary roles. Significant study has gone into this issue and based on research done to date it would be possible to prepare a proper statement of requirements in short order that could be put out to tender under the National Ship Building Procurement Strategy.

16. With close protection and support from the Halifax Class Frigates as well as the forthcoming joint Support ship, Canada can extend its sphere of influence, by rapidly positioning military or relief personnel to almost any nation in the world, under any conditions.

RECOMMENDATION

17. Develop and staff a recommendation for the inclusion of an amphibious IPV in the forthcoming defence policy review.

Annex A: RECENT CF MISSIONS AND POTENTIAL IPV EFFECT

[14] Ibid, 11.

ANNEX A

RECENT CF MISSIONS AND POTENTIAL IPV EFFECT[15]

Mission	Year	Location	Benefit
TOUCAN	2000	East Timor	The Canadian UN force was initially commanded and fully supported from the sea but in an ad hoc fashion. Configuration of an IPV with both air and sea connectors would have greatly increased the effectiveness of across the beach logistics support – as well as reduced the costs, safety and environmental issues involved (the AOR ran a fuel pipe ashore) while increasing the effectiveness of the contribution
STRUCTURE (Disaster Relief)	2004	Sri Lanka	Because of distance, the benefit would not have been immediate, however, once there the hospital capabilities of an IPV would have provided facilities that the DART simply did not have in addition to a helicopter ability that DART deployed without. Furthermore, Canada ended up in Sri-Lanka because the requirements for airfield access to deploy limited the locales Canada could consider. If an IPV Mistral could tie alongside, in addition to its wealth of capabilities, the platform could also be used for power generation as US Amphibious Vessels and Carriers did in Indonesia
UNISON (Disaster Relief)	2005	Louisiana	Canada dispatched destroyers and frigates in a much appreciated gesture of support, however an IPV without troops on board would have had space

[15] G.J. Petrlekas, Colonel, "*REPORT OF THE SA TO CCA ON THE FNS MISTRAL (BPC)*," Canadian Army Staff File: 3350-1, 11 July 2014.

Mission	Year	Location	Benefit
			for high tonnages of relief supplies, the helicopters would have assisted an overburdened US system in evacuating people from rooftops, transporting supplies and moving people to care facilities which could no longer function due to power outages.
LION (NEO)	2006	Lebanon	A DFAIT led, CF supported operation Lion was the evacuation of Canadian nationals from Lebanon. In that crisis, most nations struggled to evacuate nationals and since all were doing it at the same time, finding ferries or ships to transport citizens from Lebanon to Cyprus proved problematic. Equally either from Lebanon, or Cyprus, finding charter aircraft to fly Canadians home was difficult, let alone obtaining landing slots as all other nations were doing the same thing. An IPV would have permitted the evacuation of citizens in assets under complete Canadian control and not subject to the unavailability of commercial assets, which ended up becoming a political issue for the government at home as it was roundly critiqued for its difficulties in evacuating Canadian citizens.
OCEAN SHIELD (anti-piracy)	2009	Somalia	With vast amounts of ocean to cover in relation to the ships assigned to Ocean Shield, helicopters proved to be the main element of deterrence and pirate interdiction. The more helicopters the better. An IPV would have quadrupled (if not more) the amount of ocean area that could be covered and responded to.

Mission	Year	Location	Benefit
HESTIA (Disaster Relief)	2010	Haiti	Even though the CF was quick off the mark, the restrictive funnel to the delivery of capacity and aid was the small ramp and lack of taxi facilities at Port au Prince airport. No matter how much aid was ready to be delivered, it was restricted in flow by lack of facilities. The CF as a consequence was obliged to open a staging base in Kingston, Jamaica. Flow improved with the opening of Jacamel airport, but this facility was incredibly restricted. Flow of troops to support the mission on the ground were not flown in, but transported on open helicopter decks of frigates between Kingston and Haiti. An IPV Mistral would have eliminated all these obstacles. Firstly, the Mistral could carry more aid than dozens of C-17 flights and would not have faced the congested funnel of either Port au Prince or Jacamel. Second, up to a Role 3 hospital could have been deployed with far more (and secure) medical capability than the DART could deploy. Third, troops and their equipment could have been transported by the IPV and its sea and air connectors would have bypassed the damaged and essentially non-existent infrastructure. Finally, the C2 element would not have been limited by what could be carried onboard a frigate, or transported by air so that a WoG response would have been more fulsome from a coordination standpoint.
MOBILE	2011	Libya	An IPV Mistral would have provided value in two separate phases of the

Mission	Year	Location	Benefit
(NEO/Intervention)			operation. The first was during the NEO phase where Canada experienced severe difficulties in repatriating Canadian nationals. Second, the options for additional Canadian involvement would have expanded to include CSAR, an afloat HQ for the CA NATO comd, or as a hosting platform for other NATO assets.
RENNAISSANCE (Disaster Relief)	2013	Philippines	Again, quick off the mark, the location of Canada's contribution was not dictated by the area of the greatest need, but the area that we could get to. The Eastern Philippines, the sites of greatest infrastructure destruction (air and road networks) required contributions that could be delivered by air, or across the beach. The nearest airhead to the point of greatest need was CEBU and priority was given to those nations that could provide last mile delivery and effect. An IPV would have accomplished three things. First, it would have complemented and augmented the transport capacity of C-17's. Second, Canada could have contributed to the most devastated zones across the beach or by air not having to rely on an airhead. Third the onboard hospital would have provided trauma care that the DART was unable to deliver.
NATO Active Endeavour Allied Action			Like Op OCEAN SHIELD, the square mile ocean area that could have been covered by Canadian assets would have been greatly increased.
NANOOK	multiple	Arctic	When deploying on NANOOK there

Mission	Year	Location	Benefit
(Projection)			are invariably three to four sub-deployment considerations. 1. The RCN deployment and sustainment in conjunction with the CG. 2. The deployment of land forces to an airhead to then conduct sovereignty patrols on land 3. The deployment of air assets and their sustainment from an airhead. Having an IPV Mistral would simplify the deployment of those three assets by having a single vessel incorporating all three elements. In addition, the ability to embark OGD's would make NANOOK a far greater expression of sovereignty than has been the case to date

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