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EXERCISE/EXERCICE NEW HORIZONS

The Joint Support Ship The Future of Canadian Expeditionary Operations

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Introduction

Much has been written about the need for the Canadian Forces (CF) to transform itself from a Cold War era force, to one that is ready to meet current and future challenges in a world fraught with uncertainty and new and evolving threats. Often this literature is critical, arguing that the CF lacks the capabilities and force structure to deal with these new realities. The Army in particular has come under fire for the heavy nature of their forces and doctrine that still seems focused on a mechanized force on force conflict in Europe against other similarly equipped forces. Ironically enough, during most recent deployments including Afghanistan and previous missions involving operations other than war, Canada's contribution has been based on much lighter and more mobile forces. In fact on several occasions the CF has gone as far as to re-role artillery regiments to light infantry, as was the case with the 5e Régiment d'artillerie légère du Canada during their deployments to Haiti in the late 1990's.

With respect to the Canadian Navy, it is possible to make the argument that it is somewhat of a self-licking ice cream with respect to joint operations. Very effective in combined naval operations with Allies, well configured to support and protect itself overseas in deployed operations, but little able to exert land effect and almost devoid of any capability to support forces ashore. A glaring example is the lack of any capability to conduct naval gunfire support, or to even defend itself through the use of counter battery or suppressive fire when operating in the littoral. Though termed as a multi or general-purpose force, legacy equipment and platforms ensures that the Canadian Navy remains a force largely configured for Anti Submarine Warfare (ASW) and Sea Lines of Communication (SLOC) protection. With the exception of its inherent capability to

conduct Maritime Interdiction Operations it does not really possess any offensive capabilities with which to influence actions ashore.

The Navy's almost negligent lack of interest in shore activities is all about to change however. After some 35 years of yeoman service, the Canadian Navy is on the cusp of embarking on an ambitious project to replace the current AOR class with a new, extremely novel and untried concept. The Joint Support Ship (JSS) Project will deliver three, possibly four 35,000-ton vessels capable of fleet support, limited sealift, and support to forces ashore through the provision of command and control facilities and an enhanced medical capability. For the first time since the demise of HMCS BONAVENTURE in 1971, the last of the Canadian Navy's fleet aircraft carriers, the Canadian Navy will be in a position to provide significant support to forces ashore. The ultimate question is however, how will this support relationship be structured and what capabilities will it afford CF and Canada?

This paper will examine the upcoming introduction of the JSS with its planned capability to transport and support forces ashore and argue that this capability will become a major catalyst for the development of force structures and doctrine with respect to CF expeditionary operations.

Joint Expeditionary Operations

What exactly do we mean when we discuss expeditionary operations in the Canadian context? In recent times there has been seemingly little need or will for the Army and Navy to operate in support of each other in the conduct of joint operations.

During the recent Operation Apollo mission to Afghanistan land and naval forces, while

reporting to the same Canadian commander, executed their individual tasks in a completely separate manner, geographically separated and under the operational control of other nations. The CF even went so far as to award an additional and distinct medal for those who participated in the land portion of the campaign against terror in Afghanistan. With the exception of Camp Mirage (the in-theatre support base), it seemed that there were two separate and unrelated theatres of operations for the three services. Contrast this to the United States Navy's (USN) experience in the Afghanistan campaign, where a significant percentage of its efforts were dedicated to deploying United States Marine Corps (USMC) forces into theatre and then supporting them ashore to achieve land effect, this despite the fact that Afghanistan is a landlocked nation and the USN was operating at the near limit of their current capability in this regard.

Even a cursory look at history will show that this lack of synergy and mutual support between Canadian naval and land forces has not always been the case; in fact this isolationist attitude it is a fairly recent invention. On a number of occasions since World War II (WWII) the Canadian Navy used the inherent flexibility of sea power to bring about significant land effect. As part of the first rotation of peacekeepers to Cyprus in 1964, HMCS BONAVENTURE carried the Royal Canadian Dragoons' vehicles to the island. The story of the Royal Canadian Navy's (RCN) train buster club during the Korean War is also well known, when Canadian Destroyers employed their 4.7-inch guns to destroy North Korean trains filled with war supplies, thereby assisting in the land campaign. Finally in 1949 during the Suez Crisis, when Canada was truly punching

¹ Report NO. 4 Directorate Of History Canadian Forces Headquarters: *Canada and Peace-keeping Operations* 22 October 1965, 23; available from http://www.forces.gc.ca/dhh/downloads/cfhq/cfhq004.PDF; Internet assessed 19 November 2004.

above its weight in international affairs, the CF had not just the forces but also the capability to deploy and sustain them. The Directorate of History's Official report notes:

The tenor of the discussions, with their emphasis on the problems of logistics, was to set the tone of the Army's role in UNEF. Canada alone among the contributors to the international force took a realistic interest in the prosaic details of administration and supply. When, therefore, Prime Minister St. Laurent announced the Canadian contribution of a unit of battalion size, he was able to add the key phrase augmented by ordnance, army service, medical and dental detachments. Insofar as was possible the Canadian contingent would be self-contained. The Prime Minister also announced the government's willingness to fly the troops to the Middle East on RCAF aircraft and to ship supplies and equipment on board the aircraft carrier HMCS MAGNIFICENT. The MAGNIFICENT would also be used to provide a small hospital, force headquarters, and a communications link to Canada.²

The three historical examples cited prove to illustrate the major capabilities required for Canada to conduct joint expeditionary warfare. Rapidly deployable anywhere in the world, organically sustainable and identifiabley Canadian, these capabilities met the needs of the government in power at the time almost exactly, which was for a force that could quickly deploy to international trouble spots and make a reasonable contribution towards international peace and security. If any force is to be truly expeditionary then it is critical to have the means and established force structure to deploy, sustain, support and command mission tailored task forces that can be called on short notice to deploy most anywhere in the world in support of wider Canadian strategic aims. As the Suez example indicates and although beyond the scope of this paper, expeditionary operations by their very nature happen in someone else's backyard, and the requisite political will is also a major factor in this type of operation. Simply put, with

² *Ibid.*, 15.

the demise of the Canadian Navy's Fleet Carrier the BONAVENTURE the CF lost the organic capability to transport and support forces ashore in any meaningful way.

The Joint Support Ship Programme

The Statement of Operational Requirement (SOR) for the Joint Support Ship (JSS) states that the operational requirements "from a high level capability perspective, is for a JSS capable of fleet support to a maritime task group and joint support through surge sealift and support to forces ashore." While the task group support function is well defined and understood; essentially support to the same level provided by the current Protecteur class. The novel concept of having an AOR conduct surge sealift and support to forces ashore is truly transformational, albeit somewhat lacking in doctrinal detail at this point. The JSS will be built around a number of flexible cargo managing and offloading capabilities. Included in the design will be the ability to drive on and off vehicles via a fitted ramps system and the ability to bring vehicles and cargo ashore in areas where there are no piers, utilizing a logistics-over-the-shore-capability (LOTS). Although not yet completely finalized, the LOTs capability will allow the JSS to completely unload its cargo while at anchor in an austere harbour in conditions up to sea state one.

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³ Canada. Department of National Defence. *Statement of Operational Requirements*. Ottawa: Project Management Office Joint Support Ship, 12 May 2004, 1.

⁴ *Ibid.*, 13, The SOR details the Fleet Support role: "The Fleet Support capability of JSS is fashioned around the requirement to sustain a Canadian Task Group at sea. The capability of the current Protecteur Class is the basis of the model for the next generations of support vessels...Fleet support provided for a JS ship will sustain the task group for 30 days of combat operations. In providing support to Canadian Naval Task Groups the JS ship will supply fuel, ammunition, spare parts, fresh water, food and stores to the ships in the task group in a multi threat environment. They will operate four maritime helicopters of the task group and provide second line maintenance to all maritime helicopters in the group. They will also provide essential medical services, including limited surgical, dental, diagnostic imaging and some laboratory facilities. Replenishment as sea will be provided by either the alongside or stern refueling method."

JSS has been conceived as a joint project from its very onset. The Canadian Navy could have simply put in place a plan to replace the current AORs with like capabilities, but instead choose to include support to forces ashore as a critical component in the JSS's design. In attempting to establish a starting point, planners decided to directly relate the sealift surge capability to:

The army's vanguard battlegroup requiring 7500 lane metres for vehicles and containers... and flexible cargo transfer systems is a requirement. Planners cannot forecast with any degree of certainty specifically where missions will occur or under what circumstances, therefore this requirement must cater for a wide range of eventualities, mandating the use of flexible transfer systems.⁵

It is important to note that this innocuous paragraph within the SOR contains two critical factors for the JSS project. Firstly the requirement for 7500 lane metres will mean that to transport the vanguard battlegroup all three JSS would be required, as individually they will only provide 2500 lane metres apiece. In fact this number was the deciding factor in how many hulls would be required, the Navy indicating a preference for four, but stating that three would meet the requirement. Secondly flexible transfer systems refer to what and in what circumstances stores and equipment can be unloaded ashore.

Currently when the CF deploys large amounts of equipment and gear to an operational theatre it is done so by means of commercially leased large roll on/roll off (RORO) vessels. These ships have the great advantage of a very large cargo carrying capacity, often sufficient to carry the vehicles and equipment for an entire battle group in a single load. Their downside is their requirement for safe functioning ports, specifically configured to receive these types of vessels. Often, in an area of conflict or in less

⁵ *Ibid.*, 2.

developed regions, neither of these conditions exist, necessitating the docking and unloading of critical equipment far from the theatre of operations. As was the case transporting vehicles in and out of Bosnia, the evolution required an almost 1000-kilometer rail and road move from the seaport of disembarkation (SPOD) at Thessaloniki in Greece to the Canadian area of operations. Such a move adds significant time to an operation and as a result deploying forces in this manner cannot be described as a rapid reaction force. In future with the likely increase in crises on the African continent, and in the developing world in general, the requirement to introduce forces through nonfunctioning or non-existent port facilities will become even more acute. Key to the JSS's flexibility will be the ability to self-unload cargo in austere port conditions, either while alongside or from anchor.⁶

The SOR also identifies several other CF projects and capabilities that JSS will either support or facilitate. The most significant of these include:

The Maritime Helicopter Project;

The Joint Task Force Headquarters Project;

The National Military Support Capability:

The Tactical Command Control and Communication Project;

The Relocatable Temporary camp Capability; and

The Joint Uninhabited Surveillance and Target Acquisition System.⁷

Dr Paul Mitchell in his article *Joint Support Ship: Transformational or White*Elephant writes that "It (JSS) has the potential to change the CF from a force configured to fight armored engagements in Central Europe and blue water naval engagements into a

⁶ *Ibid.*, 15.

⁷ *Ibid.*, 4.

lighter, more globally deployable expeditionary force..." These are lofty aspirations indeed for a platform that started its life as the simple need to replace the Navy's aging replenishment ships. In fact much of the criticism currently being leveled against JSS by groups such as the Canadian American Strategic Review (CASR) group focuses on its major strength, the ability to use size and modularity to perform multiple missions. "Jamming all these capabilities into a single hull-type naturally results in an enormous design or, more accurately, concept." What most critics using this line of argument have failed to recognize is that there is no intent to carry out all these tasks simultaneously, but rather smaller scale combinations of one or two of its range of overall capability. The key to the JSS concept is the high degree of modularity being built into the design of the JSS and the resultant flexibility. Much like the capabilities inherent in the fleet aircraft carriers because of their large size, JSS is being designed to be ready to leverage its internal space and capacity to take on roles that are currently not yet even defined.

The Joint Support Ship Project's Effect on the Air Force

The requirement for the JSS to operate close to shore or alongside during unloading, and in the littoral while providing support to land operations will have a significant effect on helicopter operations within the Navy and the Air Force. The JSS SOR describes this mission as an Afloat Flight Deck Role. "In this role the JSS will provide the capability to land and launch five army utility helicopters." It will be

⁸ Mitchell, P.T, "Joint Support Ship: Transformation or White Elephant," *Proceedings of the United States naval Institute*, Vol 130, Issue 3 (March 2004), 64.

⁹ Canadian American Strategic Review: "Joint Support Ship — DND's Ever-Shifting Afloat Logistics Sealift Capability", http://www.sfu.ca/casr/101-navalsc.htm, Internet accessed 8 December 2004.

¹⁰ *Ibid.*. 14.

possible to transport these helicopters in the hold of JSS and then use the ship's elevator system to move them on deck and ready them for flight. It is somewhat unclear the effect operating in this manner for an extended period of time, beyond simple uncrating and flying off, will have on the operations of JSS's own organic helicopters. Currently the Army's utility helicopter is the CH-146 Griffon which has limited capability to fly over water due to its lack of endurance and lack of internal buoyancy. This helicopter with relatively small lift capability, only eight fully equipped combat troops and fewer in extreme conditions, was described in the 1998 Office of the Auditor General's Report as "one of the platforms that cannot be fielded in mid-intensity conflict." ¹¹ A quick look at the specifications of the CH-146 Griffon as compared to the new maritime helicopter the CH-148 Cyclone, makes it abundantly clear which aircraft is better suited to the utility mission of support to forces ashore. The CH-148 Cyclone can lift some 5,800 Kg whereas the CH-146 itself weighs only 5,300 KG and can carry approximately 2,000 Kg of cargo. In addition with its integral rear ramp the CH-148 Cyclone is well suited to quickly load and unload equipment.

Given these facts, it seems unlikely that the CH-146 Griffon will be the primary choice for operations from the JSS, particularly if it is to be at the potential expense of embarked CH-148 Cyclones. Canada's last experience with maritime helicopters supporting forces ashore in Somalia during Operation Deliverance was not a particular success. For these missions HMCS PRESERVER's Anti-Submarine Warfare (ASW) aircraft were rapidly modified with the addition of door mounted machine guns and conducted low-level surveillance over hostile ground, a mission their crews had not

Office of the Auditor General, "1998 Report of the Auditor General of Canada", (Ottawa: Minister of Public Works and Government Services Canada), April 1998, section 4.67.

previously trained for. While the missions were flown and results achieved, significant questions were raised with respect to command and control procedures and acceptance of risk. Even though the missions flown in Somalia were somewhat ad hoc in nature, with little or no doctrine available to support them, the point remains that air operations from the JSS will be significantly different from those as practiced today in the fleet and these operations will have a significant effect on Air Force doctrine and training. There is the opinion in certain quarters within the Air Force, that the CH-148 Cyclone is a very expensive aircraft, as currently configured with its extremely sophisticated avionics and sensor package to be used primarily as a general purpose utility helicopter which is not its primary mission. While some credence can be attributed to this school of thought, there are also a number of other missions such as reconnaissance and search and rescue that could also be considered in support of forces ashore. Missions, that while critically important to land forces, might cause potentially unmanageable additions to the already significant training burden shouldered by maritime helicopter crews. In the end the splitting up of these missions, as some of our Allies do, may be a possible answer. Rather than attempt to cross-train all crews in every role, it might be more effective to have certain detachments, particularly those onboard the JSS focus on support to forces ashore and be well prepared for those missions. There is already precedence within the Canadian maritime air community in the way which CH-124A crews focused on active (ASW), while CH-124B crews become experts in passive acoustics. It is unlikely however these maritime crews can be all things to all commanders particularly in an increasingly complex environment.

The Joint Support Ship Project's Effect on the Army

All cranage and movement of equipment onboard JSS is predicated on a maximum weight of 30 tonnes. 12 This weight limit was selected by navy planners based on the notional maximum weight of the replacement for the Leopard 2 Main Battle Tank (MBT) currently intended to be the Mobile Gun system (MGS). Creating a force that can be delivered efficiently and expeditiously from the sea and supported ashore is much more however than merely accounting for the weights of individual pieces of gear. Advancing With Purpose: The Army Strategy makes no mention of any significant doctrinal changes in this regard. 13 The Army seems intent on completing the process of digitizing their combat forces and moving towards being medium weight knowledge based force, with some components at higher readiness levels than others. 14 This is simply not enough. Creating a force that is truly joint and expeditionary, and that can be transported and then delivered anywhere in the world from the sea into uncertain circumstances, and then sustained, is a complex and challenging task. It is also a task requiring very specific equipment and training. This type of specialist force cannot be thrown together in a hasty manner and then be expected to work as a team. The requirement for such a force to work together to develop doctrine and procedures and then exercise them is critical to its success. Delivering a force ashore ready for immediate employment, is simply not the same as transporting it to theatre in a commercial vessel, and then taking as much as a month to marry up forces with

¹² Department of National Defence, *Statement of Operational Requirement...*, 17.

Department of National Defence. *Advancing With Purpose: The Army Strategy*. (Ottawa: Chief of the Land Staff, May 2002).

¹⁴ Ihid.

equipment. Other nations that possess similar capabilities, such as the JSS will afford Canada, use marines or some type of naval infantry in this role, specifically because it does require specialists. While it is not the author's intent to argue in favor of transforming the CF based on the USMC model. There is likely much merit in allowing specific battalions to be tasked with the sea delivery role to ensure the effective development of the capability. These battalions would need to have their equipment prepositioned at, or very near the designated seaport of embarkation (SPOE) facilities and have their readiness states synchronized with those of the JSS. Currently the requirement within the JSS SOR is to have a quick reaction company ready to move in ten days, with the rest of the vanguard force at twenty-one days notice to move. ¹⁵

Integral to the JSS SOR is the requirement for providing "Support of forces operating ashore across the spectrum of conflict up to, and including mid-intensity operations." A definition of mid-intensity operations and details of the type of operations to be supported are not given in the SOR but it would be safe to assume that they would be of the type conducted by the Canadian light infantry forces in Afghanistan against the Taliban, albeit within reasonable proximity to the coast. This type of support structure is unlike anything currently in place, and once again assuming that this can be made to happen without significant investment and training on behalf of the Army would be naïve at best.

¹⁵ Department of National Defence, Statement of Operational Requirement., 10.

¹⁶. *Ibid.*, 14.

The Joint Support Ship Programme's Effect on the Navy

The JSS SOR states that "Because many operations will take place in the littoral environment, JS vessels could expect to be threatened by shore based weapons and shore based aircraft, as well as by naval or terrorist forces." In fact when engaged in supporting forces ashore, it is likely that JSS would be tied to the geographic area and would be a significant target. The ship itself will be provided with a basic self-defence capability, but JSS, like the current AOR will rely on other ships in the task group to provide it with surface defense, air defense and ASW protection. As a result JSS will most likely require the protection of other naval forces in anything but the most benign environment. This will have a significant effect on both the Navy's employment of its legacy forces (at the moment the Halifax Class Frigate would most likely be used in this escort role) and future ship design and procurement. The Navy will need to factor in the defense of JSS in any future joint operation and as a result potentially loose flexibility in employment, and deployment of surface forces in more traditional sea control roles.

Moving further into the littoral in defense of JSS will require the Canadian Navy to develop a number of additional capabilities, perhaps most important of which will be force protection against shore-based threats. Medium caliber guns, missiles even rocket launchers and medium caliber weapons will all present a threat to JSS and will require the Navy to defend against them. While a full naval gunfire support capability is not crucial within the JSS concept, the ability to quickly project accurate and concentrated fire ashore in some form of counter battery mode will once again become critical. Whether this requirement can be met using a modified version of the frigates' current

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¹⁷ *Ibid.*, 11.

main armament or require a new weapons system remains to be seen. It is clear however that any such capability is currently not resident within the fleet.

Future employment of the JSS as a joint capability will also have a resultant fallout for the Navy in other operations. It seems inevitable that the final number of JSS hulls will be three, with two stationed on the east and one on the west coast. This means that with one in either refit or some sort of extended work period that only two would be left available for operations. If one or possibly even two are deployed on joint taskings then at least one coast will be left without an at sea refueling capability. This predictable loss of capability will therefore have a significant effect on fleet operations beyond the units that would likely be deployed with JSS. As with the Army, there will also be a significant learning curve in developing the appropriate Canadian doctrine to support JSS operations. The Navy should be able to profit greatly from other nations experience in this regard, but the fact remains achieving the requisite operational capability will require a major investment of resources.

The Joint Support Ship Programme's Effect on Joint Capability

Limited Afloat Joint Task Force Headquarters

In the case of the JSS size does matter. Her large volume will allow a degree of modularity never before seen in a Canadian designed warship. As part of the general capability of supporting joint operations there will be a number of sub roles and capabilities. These capabilities will offer significantly more options to government for the JSS employability, but will also have a significant effect on joint force structure. In

the role of JTF HO "the JSS will provide accommodations, working space and facilities for Command, Control and Communications staff (seventy-five personnel)."18 Essentially JSS will provide the shell within which a JTF HO could set up shop. This would include secure working spaces, briefing areas, operations areas, staff accommodations, helicopter transport and the external communications pipeline necessary for the JTF HQ to plug into to fulfill its mandate. In addition approximately thirty support personnel and vehicles would be embarked for a total of one hundred and five JTF HQ personnel. Currently "the mission of the Canadian Forces Joint Operations Group (CF JOG) is to provide a rapidly deployable, operational-level command and control capability for the CF in order to meet domestic and complex international commitments." This JTF HO with its signals support is completely built around the concept of deploying and commanding the mission from ashore. While the JSS is being developed as a plug and play concept, where the JHQ staff will be able to arrive with their equipment onboard, set up and commence operations, it would be naïve to assume that it will be as simple as that. The recent Canadian experience in the Gulf during Operation Apollo of transferring a veteran Naval Task Group Commander's staff from a frigate to a destroyer, highlighted significant equipment compatibility and training issues inherent in this sort of transfer. While the plan was ultimately successful it was not a simple as first envisioned. A JTF HQ moving onboard to support an operation ashore and then moving ashore would be much more complex and will require the development of very specific doctrine and equipment fits.

¹⁸ *Ibid.*, 14.

¹⁹ Canada. Department of National defence. *Backgrounder: Canadian Forces Joint Operations Group*, http://www.forces.gc.ca/site/Newsroom/view_news_e.asp?id=1385, Internet accessed 4 January 2005.

The normal core staff of the CF JOG ashore is approximately one hundred and thirty persons. If Canada were commanding a large force ashore, this core staff would be augmented significantly, perhaps by that same number again. As currently planned for in the SOR, only a portion of the JTF staff would be embarked in JSS, with the intent for the joint force commander and his staff to go ashore at the earliest reasonable opportunity. The obvious question however is, what if he is unable to disembark or the conditions change; this after all is envisioned being a rapid reaction force? The commander would then be in the uncomfortable position of having to remain onboard, without a major part of his planning staff, or go ashore under uncertain conditions, both of which are unacceptable in a situation where Canada has either accepted a significant coalition command role, or is about to deploy CF personnel ashore into a difficult situation. If the mission is support to the forces ashore then there can be only one supported commander. Planning to do otherwise and not creating the conditions for the JTF Commander to embark all of the staff and planning team seems to be out of step with current joint doctrine. It seems likely that should Canada assume a larger command role that the concept of a single JSS conducting more than this role would be problematic. One option would be to focus the JSS containing the JTF HQ solely on the command and control role with a second JSS dealing with medical and fleet support.

Limited Afloat Hospital

Currently health care to personnel on CF deployed operations is provided by either a Field Hospital or and Advanced Surgical Centre. As defined by NATO, this Role

three medical support is equivalent to a "small community hospital with basic surgical resources."²⁰ When located in close proximity to forces ashore in an unsettled region with an asymmetric threat shore based units are vulnerable to attack, and require dedicated force protection resources, particularly in a non-contiguous battle space. These units are also quite static in nature and do not normally have their own dedicated helicopter support. As part of the support to forces ashore role, the JSS SOR calls for the JSS to "support a hospital facility ... of up to seventy five personnel and have a capacity for up to thirty patients."²¹ The working documentation for the Afloat Replenishment Ship (ALSC), the JSS Projects' former name, indicates that this would also be a Role Three facility. 22 Once again however, there are significant differences between providing this support ashore and sea basing the capability. For the CF Health Services (CFHS), an organization whose recent operational experience has been almost entirely land based. dealing with a new and challenging environment in which to deliver services will require significant training and potentially new and different equipment. For the JTF Commander, the JSS with a ship's inherent advantages of mobility, self-protection and integral helicopter support offers a significant and previously unknown capability for him to still ensure a critical support function is in place, all the while enabling him to configure his forces ashore in a lighter and more mobile manner.

²⁰ Canada. Department of National Defence. *Tenets of Health Care: Canadian Forces Health Services*: http://www.forces.gc.ca/health/about_us/cfms_history/engraph/chapter2_e.asp?Lev1=5&Lev2=1&Lev3=3, Internet accessed 14 Jan 2005.

²¹ Ibid.

²² Canada. Department of National Defence. *ALSC Afloat Logistics and Sealift Capability Medical Requirements Working Group Draft Report*. (Ottawa: Project Management Office Joint Support Ship, May 2003), 9.

Support to Special Operations Forces

Currently the CF lacks any method of projecting larger numbers of Special Operating Forces (SOF) out to sea, or overseas in any significant way without host nation support. In addition pre-positioning such forces to deal with a potential crisis is a severe challenge for the CF, from both a logistical and secrecy perspective. While it is true that frigates and submarines can undertake this task on a smaller scale, the numbers of SOF required for major missions simply cannot be accommodated within these smaller units. In addition a frigates' one helicopter severely limits both capability and flexibility in terms of any redundancy or reserve once operations are initiated.

Non Combatant Evacuation operations (NEO) is clearly one of the most obvious scenarios for Canadian SOF involvement, however many other nations, the US, UK, Spain and Australia to name a few that possess both SOF and amphibious forces, use this ability to sea base as a force multiplier for SOF. Although not specifically mentioned in the JSS SOR other than NEO, support to SOF seems like a natural role for JSS. The ship's ability to operate off shore in international waters, out of surveillance range if required, for an extended period of time is an important capability. In addition JSS will have the planning space, communications systems and complement of four CH-148 Cyclone helicopters to support the operation. These capabilities, particularly the significant amount of helicopter support would allow SOF excellent freedom of maneuver and significant flexibility in terms of the missions that they could undertake. In addition the capability afforded SOF by JSS' ability to remain on station for up to six months would allow multiple missions to be planned and executed with SOF able to reconstitute, rest and prepare for subsequent tasks. All these factors contribute to make

JSS an ideal operating base for SOF and will deliver a capability never before seen within the CF.

Conclusion

JSS like no other Canadian designed ship, and perhaps no other previous CF capital acquisition, is being conceived and executed as a joint project and capability. It has been presented and justified to government as a model of transformation for the CF. This novel way of doing business, where an individual service grafts numerous additional joint requirements onto an already existing need, may well be a model for the future. When this platform with its many capabilities is delivered, the first in 2011, it seems reasonable to believe that the government will wish to use these capabilities, and expect that they will be mature enough to be used operationally. As can be seen from this paper the numbers of potential capabilities with respect to joint expeditionary operations are numerous. In fact, part of the challenge may be deciding which ones are the most important to ensure the appropriate investment is made in terms of resource allocation and doctrine development, to allow these capabilities are properly supported.

The paper has also identified potential areas of involvement and potential challenges for each of the services with respect to the JSS. Quite a number of the likely roles of JSS require that the personnel from the Army and Air Force be specially trained and possess the right equipment to carry them out. Clearly JSS has the potential to become a major catalyst for the development of force structures and doctrine with respect to Canadian Forces expeditionary operations

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