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DOMESTIC MARITIME SECURITY: THE NEED FOR A
COLLABORATIVE RESPONSE FRAMEWORK

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Abstract

The Government of Canada has implemented a *"whole of government"* strategy as a mechanism by which it will define its Maritime Security Strategy. This paper illustrates by way of comparison with the United States that our strategy needs improvement. The geographical and commercial context for both nations is shown to be similar, thereby creating the overriding imperatives to adopt a cohesive marine security strategy.

Aspects of the US strategy are examined, the roles and capabilities of key participants like the US Coast Guard are described so as to illustrate that the US strategy relies on a few well resourced agencies within one super-department, the Department of Homeland Security (DHS). These agencies execute a mandate for maritime security over and above their other maritime enforcement responsibilities, and that marine security is an overlay vice a new capability.

The Canadian approach has been to create a super-ministry known as Public Safety and Emergency Preparedness which is similar to DHS, but lacks key capabilities to fully execute the marine security strategy. The Canadian Coast Guard remains a special agency within the Department of Fisheries and Oceans, Transport Canada has the lead for regulations and policy, and National Defence is expected to coordinate the on-water response.

If the *"whole-of-government"* paradigm is to function here in Canada more structural changes are required. Including the development of a team focused on creating a collaborative environment as well as an operational level commander.

DOMESTIC MARITIME SECURITY: THE NEED FOR A
COLLABORATIVE RESPONSE FRAMEWORK

Canada is a huge and vulnerable country badly in need of a robust maritime interdiction and law enforcement capacity on the Atlantic, Pacific, and Arctic coasts, on the Great Lakes and on the St. Lawrence Seaway.[1]

INTRODUCTION

Canadians must be constantly reminded that we are a maritime nation and the sea is important to the wealth and prosperity we all enjoy. In central and western Canada, it is easy to forget this truth, after all 25 million of our 32 million people do not live in a coastal province and only handful credit their source of employment as coming from the sea.[2] The volume of trade passing through our ports is on the increase, a record 443 million tonnes of cargo passed through Canada's ports in 2003, up 41% since 1994.[3] Fisheries revenues continue to rise and are contributing in excess of $22 Billion to our GDP. [4] Thus, it is safe to say the sea has a tremendous impact on our quality of life and our trading relationships with the world as well as our largest trading partner, the United States (US). Not all goods arriving on Canadian shores are destined for Canada; some 50% of the container traffic off-loaded in Montreal is transshipped via rail or truck to the US.

The dilemma then becomes how to effectively provide security without impeding the flow of goods, vessels, passengers etc? Fortunately, Canada has developed a national strategy for Maritime Security, The National Security Policy (NSP) published in April 2004 has directed government agencies as well as the Department of National Defence to establish a capable maritime security framework. How to conduct maritime security

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[1] *Senator Colin Kenny, MANAGING TURMOIL: The Need to Upgrade Canadian Foreign Aid and Military Strength to Deal with Massive Change* 95.

[2] Government of Canada. Statistics Canada, "*Labour Force Survey*," http://www40.statcan.ca/101/cst01/labor21a.htm?sdi=employed (accessed Sep 26 2006).

[3] http://www.tc.gc.ca/pol/en/report/anre2004/8B_e.htm (accessed 10 Oct)

[4] Murray, Vice Admiral (Ret'd) Larry. "*The Strategic importance of Oceans to Canada*," 107.

within Canada is being defined, albeit slowly, by a series of initiatives rather than a comprehensive plan.[5]

This paper will examine the context of our Maritime Security dilemma and the strategies of the Government of the United States and of Canada. The two strategies will be compared, and a number of recommendations will be made consistent with Canada's *whole-of-government* approach.

The thesis of this paper is that for the Government of Canada's marine security strategy to be truly effective, the federal departments must become interoperable and provide an integrated effect.

A Context for Maritime Security

Both Canada and the United States understand the consequences of a disruption in our maritime economic environment. When acquiring an insurance policy, one typically performs a risk assessment to determine threat, probability of occurrence and consequence. This analysis will determine what to insure and for how much. The current view of maritime security analysts is that the following scenarios are likely to occur: shipping containers could be used as a Trojan horse carrying terrorists, WMD, nuclear/chemical/biological weapons or other dangerous goods or components; a ship could be hijacked and used as a weapon directed at infrastructure sunk in a narrow channel, or simply exploded; given our sensitivity to environmental impacts oil tankers are especially vulnerable; today's cruise ships rival small towns and are susceptible to piracy endangering the lives of passengers and crew alike; an attack against a nuclear powered warships could cause a radiological release; and we must also protect our infrastructure ashore as much of it is as vulnerable as the ships enroute to Canada and could perhaps cause even more devastation if attacked. [6] None of these scenarios is all that far-fetched, many have already happened either accidentally, such as the Halifax explosion of 1917, or when terrorists seized the Italian cruise ship *ACHILLE LAURO* in 1985. Nations and key stakeholders must therefore develop a maritime security framework that enables the free-flow of trade yet provides protection, security and potentially a military-like response.

The Maritime Security Paradigm in the United States

The maritime security scenario in the US is fundamentally the same as in Canada yet it is conducted on a much larger scale. Although there are some 300 ports, the top 50 ports handle 90% of the cargo tonnage and 25 ports account for 98% of the container traffic and more than 9 million containers enter US sea ports annually.[7] Most trade is handled by a mere 15 ports who handle 1.3 billion USD of goods moving through these ports daily. They move 99% of international cargo, some 2.5 billion tons of trade which is set to double within the next decade; international trade is 24% of GDP and is expected to reach 33% by 2020. The cruise industry is also blossoming, in 2004 there were 8.1

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[5] Government of Canada. Privy Council Office, "Securing an Open Society : Canada's National Security Policy," 47.

[6] *Ibid.* p 6.

[7] Fritelli, John F. "*Port and Maritime Security: Background and Issues for Congress*," *CRS Report for Congress,* (May 27, 2005), 2.

million passenger embarkations at US ports, a 14% increase from 2003.[8] The ports and marine trade are a vital component of the US economy; therefore ensuring the free flow of goods and services is critical to the overall health of that economy. Thus the need to secure the maritime transportation system so as to enable the ongoing wealth generation capability of the US economy is a national imperative.

The global marine trade system is quite efficient, utilizing containers to facilitate speed and current business economic models such as just-in-time inventory. Ships are the primary mode of transportation carrying some 80% of the world's trade by volume. The US is the world's leading maritime trading nation accounting for 20% of the annual world ocean-borne overseas trade.[9] Any security solutions that overly impede the flow of goods into the US economy will have a drastic impact on the overall health of the US economy. The trade-off discussion then becomes one of efficiency of commerce versus security so that the system can be expected to operate indefinitely. It is the nature of these expectations that drives the security system to be operational 24 hours a day, 7 days a week. To that end the US government has moved forward with an aggressive maritime security strategy.

The US government departments engaged in actively addressing maritime security include the US Coast Guard (USCG), Customs and Border Protection (CBP), and the Transportation Security Agency (TSA), all housed within the umbrella organization of the Department of Homeland Security (DHS).[10] The USCG has the mandate and is the agency charged with maritime law enforcement and is the lead federal agency for the maritime component of homeland security. [11] Customs is the agency responsible for inspection of cargo, crews, and passengers arriving in US ports. Lastly, the TSA is responsible for the security of the transportation modes. [12] This simplified structure allows for clear command direction to flow from DHS to each agency. Each agency has a clear mandate, jurisdiction and role to play to enable the US maritime security strategy.

Given this organization, the US has implemented a multi-faceted marine security program to ensure the security of this system. In fact, a layered defence plan is in place to mitigate the risks of an incident. The aim of this defence system is to address the risk and deal with any potential problems long before they arrive in US ports of call. The elements of the strategy have been enshrined in legislation.

For instance, the Marine Transportation Security Act of 2002 requires federal agencies, ports and vessel owners to upgrade security, establish security plans specific to departmental mandates, port facilities to develop security and incident response plans subject to review by the USCG, and cargo manifests to be provided to Customs. Importantly, this cargo information is sharable with other federal department and agencies. The act also sets aside money to fund research into methods for improving cargo inspection and physical security. Additional legislation to enable maritime security

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[8] American Association of Port Authoities. "*America's Ports Today*." http://www.aapa-ports.org/files/PDFs/8-pg_Americas_Ports_Today.pdf, 1.
[9] *Ibid.* 4.
[10] *Ibid.* 9.
[11] *Ibid.* 10.
[12] *Ibid* 10.

requires the agency to implement a specific enabler by a specified date. Examples of enablers include fusion systems, and intelligence gathering capabilities, as well as security practices.[13] Enforcement of this act largely falls on the shoulders of the USCG.

The Coast Guard provides DHS with a military, multi-mission, maritime service and as one of the nation's five US Armed Services. The Coast Guard mission is to protect the public, the environment, and U.S. economic interests – in the nation's ports and waterways, along the coast, on international waters, or in any maritime region as required to support national security. Specifically, the roles of the USCG are the following: Maritime Safety, Maritime Mobility (ice breaking, aids to navigation), protection of natural resources (fisheries), national defense (Port Security Units), and maritime security. Maritime Security aims to reduce America's vulnerability to terrorism by preventing waterborne attacks, securing maritime borders, halting the flow of illegal aliens and contraband, and suppressing maritime violations of federal law through illegal drug interdiction, undocumented migrant interdiction, ports, waterways and coastal security operations as general law enforcement operations. [14] These missions are enabled by having in place comprehensive situational analysis centres that support threat assessment and responsive action. In order to react, one must be able monitor the activity taking place, acquire more information so as to resolve apparent threats and determine when to interdict vessels of interest.

The USCG, is well resourced to effectively discharge its duties. As of August 2006, the USCG inventory included: 144 helicopters, 251 ships, 55 aircraft, 1700 small boats, 39,873 active duty, 7,911 reservists, 7,219 civilians, and an additional 30,477 auxiliarists for a total of 85,480 personnel. [15] This asset mix enables the USCG to establish a significant response and patrol capability maintaining watch over the coastal approaches to the US. Coordination of this vast fleet of assets requires both a comprehensive situational awareness and a command & control and communication capability to direct the assets.

Supporting the deployment of ships and aircraft is a C4ISR, (Command, Control, Communication, Computers, Intelligence, Surveillance and Reconnaissance) framework that links together assets for full interoperability between DHS and DOD missions, relies on fusion centres linked into national strategic Intelligence assets providing near real time information giving USCG assets the situational awareness they require so as to perform any of their missions.[16] This situational awareness is also known as Maritime Domain Awareness (MDA). The picture below represents the sensor, data source and fleet assets operating in conjunction to ascertain a vessel's true intentions. The fusion centres fuse data from electronic sources like radar to information sources like customs pre-screening forms, and open source shipping data from Lloyd's to resolve vessels of interest. In short the fusion centre develops a comprehensive picture about a given ship, its cargo, its destination, as well as the last 5 ports of call and any other relevant facts regarding a ship's history.

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[13] *Ibid.* 12-13.
[14] *Ibid.* 7.
[15] United States Coast Guard. "Coast Guard Executive 101 Presentation"
[16] *Ibid.*

Maritime Domain Awareness
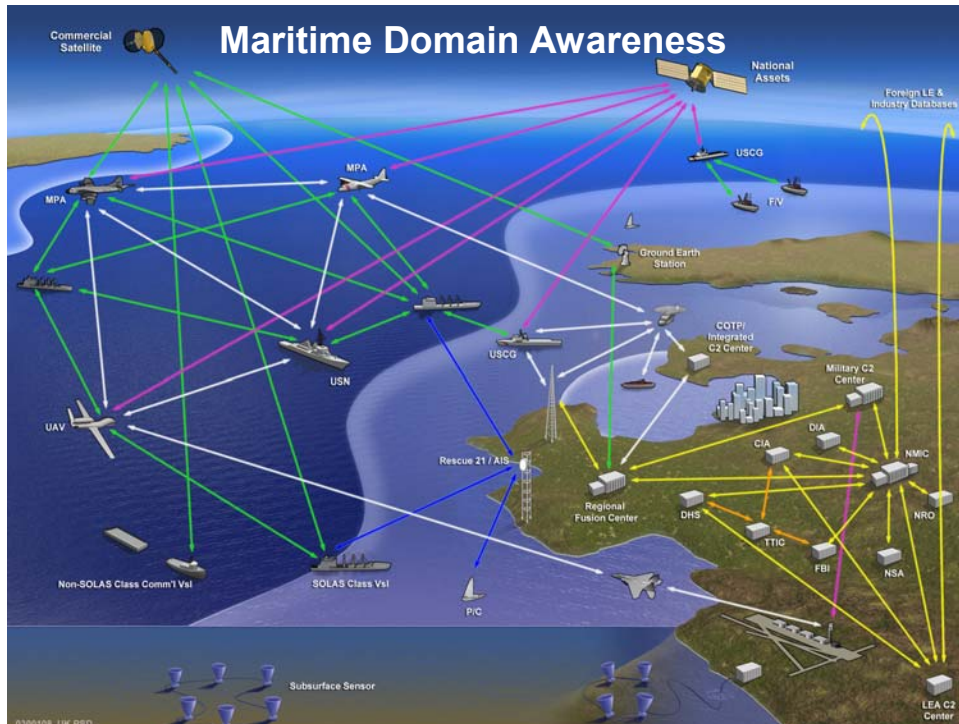
On any given day as the USCG conducts its assigned missions, it will save 15 lives, assist some 114 people in distress, interdict 26 illegal migrants at sea, seize $2.4 million worth of illegal drugs, conduct 23 waterfront facility safety or security inspections, respond to 11 oil and hazardous chemical spills, and board 202 vessels of law enforcement interest.[17] The significance of these daily statistics is the USCG is hard at work contributing to the safety and security of the maritime environment, through the use of the network of assets including satellites, aircraft, vessels and operations centres ashore. Each day the full range of missions is being executed in US waters. If the three block war[18] represents the conduct of humanitarian, peace support and combat operations in the vicinity of three contiguous blocks then the USCG could be said to be dealing with a similar set of operations ranging from safety or rescue at sea, environmental or fisheries protection, to security from terrorism. The USCG is supported with additional naval assets capabilities via its department of defence partners at US NORTHERN COMMAND (NORTHCOM) .

Although still feeling its way in maritime matters, [19] NORTHCOM is involved in a number of maritime security exercises as well as receiving the Navy's operating picture which fuses Navy and USCG sources to provide a comprehensive view of activity on the coasts. Primarily NORTHCOM assumes that DHS and USCG will take the lead on maritime security. Only when intelligence provides awareness that an armed opposition is on its way and stopping that well off shore requires a mix of naval and USCG assets will NORTHCOM truly enter into the picture. From the Canadian context, NORTHCOM and NORAD screen vessels of interest (VOI) and share information to ensure threats to the

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[17] United States Coast Guard. "Coast Guard Executive 101 Presentation." 8..

[18] Krulak, Gen Charles, "The Strategic Corporal: leadership in the Three Block War", Marines Magazine, January 1991, 1.

[19] Fraser, Rear Admiral James D. "*The Maritime Security Environment from the Perspective Of The Binational Planning Group And Northern Command"* 131.

continent are mitigated. Detailed contingency plans, consultation and decision making processes are in place. This includes specific activities to mitigate threats and prevent attacks by maintaining awareness of emerging situations through maritime surveillance activities; sharing maritime intelligence and operational information in accordance with national laws, policies and directives; and assessing maritime threats, incidents and emergencies in order to advise and warn governments.[20] NORTHCOM operates as a supporting commander facilitating the USCG's lead role in enforcement within US waters. The combined activity of US and Canada to monitor and react to maritime security threats is reminiscent of NORAD.

The model for a Maritime version of NORAD is under development. NORTHCOM is concerned about activity off all coasts and within the Great lakes basin. This geographic area is large with many competing interests and a variety of different threats to be managed as well.[21] The USN is structured to project force abroad and take the battle to the terrorist rather than play a defensive game at home and given the sheer size of the USCG and its inherent capabilities as well as presence in the inshore waters of the US, the strategy seems sound. Employing naval assets beyond the 200 nautical mile limit, the coast guard within the littoral regions and out as far as 200 nautical miles with coordination achieved by a mix of coast guard and NORTHCOM operations centre and ensuring the appropriate command is the supported commander while the other fulfills the role of supporting commander. Security at home is expensive and fraught with risk unless complimented by the actions of the maritime industrial community.

Important tenants of the US maritime security strategy recognize that many nations lack a robust coast guard to police their own territorial seas and EEZ's. Terrorists have almost unfettered access to the facilities and ships within their national waters, and can easily embark and begin their journey toward North American shores. Hence there is a pressing need to develop venues and means for international cooperation with the aim to maximize maritime domain awareness; this requires international and commercial partners to improve security and adopt better practices thus enabling maritime commerce rather than impeding. Success requires automation, interoperability and rapid sharing of information and Intelligence.[22] Elements of the strategy are falling into place such as: AIS transponders for ships[23], IMO's International Ship and Port Facility Security codes, and Notice of Arrival reports are employed to mitigate the risk and facilitate law abiding and honest shipping to get through. A layered security focusing on the points of vulnerability transportation modes, staff, passengers, access control, cargo, ports and security while underway, after all piracy at sea remains an issue.

In summary, the US approach establishes a single operational commander for the maritime areas of operation. Within US waters DHS tasks the USCG with the coordination, safety and security roles relying on a complex C4ISR architecture for situational awareness. NORTHCOM is available to provide additional air and naval assets when a threat emerges beyond the USCG's ability to prosecute a threat.

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[20] *Ibid.* 133.

[21] *Ibid.* 135.

[22] Hooper, Commander USCG John. "*The National Strategy for Maritime Security*," 8.

[23] AIS refers to Automated Information Sensor, a transponder that broadcasts information about the ship, its voyage and its course and speed.

NORTHCOM provides the capacity to extend NORAD's space and air dimension to the maritime domain.

The Canadian Approach

The task for DND and its federal partners is to design and implement a campaign plan that satisfies the constraints and ensure the flow of goods remains unimpeded. To that end, we know this campaign plan is defensive in nature. [24] In order to protect the centre of gravity, our maritime economic interests, we must monitor all shipping entering and leaving Canadian waters. In April of 2004, Canada published its first ever National Security Policy, *Securing an Open Society,* the policy articulated our core national interests and proposed a framework for dealing with the threats to Canadians.[25] VAdm (ret'd) Larry Murray at a June 2005 Maritime Security Conference at Dalhousie University, described the *whole-of-government'* approach as '…one that harnesses current capabilities and builds on existing organizational strengths and expertise in order to maximize efficiencies and economies of scale while reducing the possibility of redundancies, duplication and overlap."[26]

Furthermore the NSP clearly identifies funding for specific projects that are in keeping with this framework. Maritime security is addressed within the section on transportation security; in fact the government of the day published a six point plan which included: clarifying government responsibilities and strengthening co-ordination; the establishment of Maritime Security Operations Centres; increasing the on-water presence of the CF, RCMP, and Coast Guard and the over water surveillance by Department of Fisheries and Oceans; securing inter and intra-fleet communications; pursuing greater maritime security co-operation with the US; and strengthening the security of marine ports and facilities.[27] This plan put in place the fundamental structures to enable maritime interoperability. For instance the operations centres will be staffed by representatives from Transport Canada (TC), Canadian Border Services Agency (CBSA), Royal Canadian Mounted Police (RCMP), Department Fisheries and Oceans (DFO), Canadian Coast Guard (CCG) as well as Department of National Defence (DND) co-located with the Navy's fusion and existing maritime operation's centres on the coasts thus enabling collaboration and information sharing to enable an effective response.

Additionally in the NSP the government provided context for these specific initiatives indicating our reliance on maritime trade, the creative capacity of terrorists to exploit that which is most dear, the openness of our society, and the need to work multilaterally with other like-minded nations to secure the international transportation system.[28] Steps already taken or which are underway include the strengthening of the Marine Transportation Security Act, the acquisition of communication capabilities to allow the MSOCs and Coast Guard vessels as well as the Navy's Kingston class coastal

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[24] English, Allan and others, eds., "*Operational Art: Canadian Perspectives Context and Concepts*," Kingston: Canadian defence Academy Press, 2005) 9.

[25] Government of Canada. Privy Council Office, "Securing an Open Society : Canada's National Security Policy" 4.

[26] Murray, Vice Admiral (Ret'd) Larry. "Canada's Oceans: Maximizing opportunities for Canadians from a Sovereignty and Security Perspective," 2.

[27] *Ibid. 35.*

[28] *Ibid. 35.*

patrol vessels to communicate securely with each other and the coastal operations centres. Lastly various projects to ensure facilities, ports, ships and shipping companies enhance their security posture. Furthermore the NSP clearly states that the Minister for Transport has the lead for marine safety and security policy co-ordination and regulation, the Minister of Public Safety will have lead responsibility for enforcement and policing, the Minister of National Defence will be the lead for coordination of the on-water response within the littorals of Canada and as far out as the exclusive economic zone (200 nautical miles offshore).[29] In addition the MSOCs will work with their counterparts in the USCG to develop a comprehensive picture of the vessels in our contiguous waters, and should systematically share data about the vessels in these waters.

Furthermore, Canada will actively engage with management of the ports and harbours to evaluate threat, vulnerability and risk of these facilities. With Shipping companies programs will be put in place to ensure compliance with the IMO's International Ship and Port Facility (ISPS) code. The global maritime industry is also responding to the challenges of a post 9-11 world, its focus had been the imperatives of speed, openness, throughput facilitation and low cost whereas today it recognizes the imperatives of security in order to remain viable. By partnering with Canada's federal departments and agencies, a made-in Canada solution to address the continuing on-water and surveillance gaps is underway.

Historically, Canada's Coast Guard (CCG) has been focused on marine safety such as icebreaking, search and rescue, and safe navigation. Currently CCG is an operating agency reporting to the Minister responsible for the Department of Fisheries and Oceans. With the NSP, comes a realization that CCG must do even more, with the growing acceptance of the notion of a secure perimeter extending out and around North America - the role has been extended to employ this fleet to provide support to the Canadian security community.[30] Like its American counterpart the Canadian Coast Guard will in an average day, assist more than 4,500 small fishing vessels or recreational boaters in distress, more specifically it will save eight lives, assist 55 people in 19 Search and Rescue cases; service 55 aids to navigation; manage 2,436 commercial ship movements; initiate 14 Boating Safety education activities; process nine Navigable Water Protection applications; respond to five reported cases of environmental pollution incidents; carry out five fisheries patrols; escort four commercial ships through ice; and support three hydrographic missions and three scientific surveys.[31] This ongoing effort is orchestrated by the regional offices of the Canadian Coast Guard and through its vessel traffic information and surveillance network - in particular MCTS centres - the Coast Guard significantly contributes to an enhanced level of maritime domain awareness. "Post 9/11 presence of the Coast Guard fleet serves as a deterrent to unlawful acts and an improved response capability for the federal enforcement community. Federal presence is now a requirement on shared Canada / U.S. waterways to demonstrate to the U.S. the Canadian federal capability and commitment to maritime security."[32] The Coast Guard also provides on-water fisheries patrol and protection on behalf of the Department of

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[29] *Ibid.* 38.

[30] CCG website: http://www.ccg-gcc.gc.ca/overview-apercu/roles_e.htm)

[31] DFO web site http://www.dfo-mpo.gc.ca/communic/facts-info/facts-info_e.htm

[32] DFO website http://www.dfo-mpo.gc.ca/communic/facts-info/facts-info_e.htm

Fisheries and Oceans out to the EEZ, a clear demonstration of Canada's ability to express sovereignty. While undertaking these missions, the embarked fisheries officers are armed. As well, CCG provides on-water presence demonstrating Canadian sovereignty within the Arctic Ocean. The coast guard's parent department, Fisheries and oceans also contributes to situational awareness through the presence of aircraft and fisheries patrols.

The Department of Fisheries and Oceans also plays an important role in Maritime Security, the department conducts fisheries patrols by air, and these flights provide 5000 hours of coverage annually.[33] The aircraft are well equipped with sophisticated avionics such that accurate positioning and photography of vessels of interest can be undertaken. This record keeping is essential to establish evidence that will withstand the scrutiny of our court system.

In sum, the Coast Guard contributes to maritime security though monitoring of vessel traffic in our coastal and inland waterways through its network of operations centres, radar sites and ships patrolling these waters. These efforts provide much of the technological data to populate the situational awareness plot of shipping activity within our waters. Coast Guard vessels regularly embark fisheries officers and RCMP thus enabling the enforcement of Canadian laws. The Canadian CG is certainly engaged in a two block war while operating in the littorals combining safety with a limited enforcement capability. The third block is in the domain of the RCMP with additional support available from the navy.

In 2005 the RCMP received additional funding designed to enhance the security of Canada's marine transportation system and maritime borders. This financial infusion resulted in the development and implementation of five new national marine security initiatives to further strengthen integration among federal, provincial and municipal partners to target, disrupt and eliminate organized crime networks and potential terrorist threats. The five initiatives are: National Port Enforcement Teams, Marine Security Operation Centres, Marine Security Enforcement Teams, Marine Security Emergency Response Teams, and National Waterside Security Coordination Program.[34] The National Ports Strategy is part of the RCMP's overall Border Integrity mandate. The RCMP established the strategy in 2002 to enhance National Security and target criminal activity at Canada's major seaports - including Halifax, Montréal and Vancouver. The mandate for the strategy is to take an intelligence-led, multi-disciplinary and integrated approach to significantly disrupt and eliminate organized crime groups or terrorist groups that may use Canada's seaports as a conduit for illegal cargo and/or persons that could pose a threat to Canada's national security. These additional enforcement initiatives were put in place to give the RCMP greater capability and capacity to conduct maritime security operations.

For instance, the RCMP and the Canadian Coast Guard (CCG) have combined their expertise and strengths in a new marine security program to further enhance national security and strengthen Canada

with the RCMP. By 2010, there will be 4 new purpose-built patrol vessels on the Great Lakes/St. Lawrence Seaway. In the interim, three vessels (1 RCMP and 2 Coast Guard), have been deployed to conduct joint security patrols in the region. The enhanced partnership strengthens Canada's marine enforcement presence in one of the countries busiest marine regions. [35] Knowledge of what is passing through our ports and across our borders is within the realm of border services, an agency within the Department of Public Safety and Emergency Preparedness Canada.

Canada Border Services Agency (CBSA) plays a key role in monitoring and tracking imports and exports. Given the quantity of cargo entering Canadian ports it is quite simply impossible to inspect it all, as with all other government departments there are insufficient resources available to enable it all. That being said, CBSA does require all ships to provide a copy of their manifest 24 hours prior to a ship being loaded. The manifest is analyzed, if additional detail is required, CBSA requires the shipper to provide it. The penalty for not providing it could be denial of permission to load that container. Through a complex assessment process the manifest is reviewed and an overall threat determined.[36] This information gathering apparatus contributes to greater knowledge about ships entering Canadian waters by sharing with the key maritime security departments an awareness of the incoming cargo, recent ports of call and other relevant attributes about the vessel. Additional insight on incoming vessels, such as the safety and security aspects for vessels falls within the mandate of Transport Canada.

Transport Canada (TC) sets the marine security policy on behalf of the Federal Government and primarily focuses its efforts on safeguarding and collaboration. TC is responsible for implementing the provisions of the International Ship and Port Facility Code, defined by amendments to the 1974 Safety of Life at Sea Convention (SOLAS) sponsored by the IMO.[37] Some 160 countries are signatory to this code. Canada adopted new Marine Transportation Security Regulations and these came into force on July 1st, 2004. These regulations require ships and marine facilities to have security plans and officers, as well as three internationally recognized maritime security levels.[38] TC determines when to change the levels, and issues bulletins to inform all stakeholders of any change in Maritime Security (MAR SEC) level. TC audits the vessel and facility security plans as well as any training programs designed to provide security officers with the necessary education to carry out their role. TC also chairs the Interdepartmental Marine Security Working Group (IMSWG) a group established to coordinate the federal response for marine security, identify gaps, propose mitigation strategies, facilitate interdepartmental collaboration, prioritize projects for implementation that address the gaps and develop national policy recommendations. This committee operates at the operational level with an emphasis on policy. It also draws its membership from personnel located in Ottawa away from the daily milieu of the coastal operation's centres. TC also requires incoming vessels to publish a pre-arrival information report 96 hours before arriving in Canadian waters. This report provides detailed information about the

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[35] RCMP website http://www.rcmp-grc.gc.ca/fio/marine_ports_e.htm
[36] CBSA website http://www.cbsa-asfc.gc.ca/agency/strat-e.html#_Intelligence,_Risk_Analysis
[37] International Maritime Organization, "FAQ on ISPS Code and maritime security," accessed Oct 10, 2006.
[38] Frappier, Gerry. "Maritime Security A National Perspective," 115.

ship, its cargo, and its past and future ports of call. International regulations now require vessels greater than 300 gross tonnage to carry automatic identification system (AIS) transceivers. These transceivers must be able to provide the ship's name, type, position, course, speed, navigational status and other safety-related information – automatically.[39] This becomes yet another data source for the fusion centres fuse with positional data generated by more traditional means such as radar, further enabling the creation of cogent maritime situational awareness.

In sum, TC is responsible for overall governance of the Canadian maritime security framework, the policy and regulations that set the conditions to establish maritime domain awareness in our coastal waters, inland waterways, the great lakes and the facilities that operate in these regions.

The Department of National Defence supports maritime security by conducting patrols by maritime patrol aircraft, sovereignty and fisheries patrols conducted by HMC Ships. The major contribution is the coastal operations and fusions centres that dedicate significant resources to the development of the maritime situational awareness picture. The core functions of these centres are to analyze and manage information; generate situational awareness; exchange information; provide intelligence, information and data; and bring together OGD and military resources to respond to a marine security incident.[40]

More importantly the MSOC is at the centre of Canada's layered defence concept. Integrating sensor data received from RADARSAT, AIS (CCG), High Frequency Surface Wave Radar (HFSWR), to data sources like Lloyd's Fairplay, Pre-Arrival Information Report (TC), Custom's Commercial Information data (CBSA), and over flights (DND & DFO). The aim of the game is to separate the known from the unknown, and convert all unknown contacts into a known contact so as to define the threat and plan a coordinated response commensurate with the threat. "Through the use of proven risk management techniques, we facilitate the flow of legitimate low risk trade and travel while concentrating on the areas of higher risk."[41] The MSOCs are structured to behave like an operations centre and as such use their tools to collaborate and resolve maritime picture, Not part of the mandate is the exercise of command and control in response to a threat. In fact the NSP, clearly states: "The Minister of National Defence will be the lead minister for the coordination of on water response to a marine threat or a developing crisis in our EEZ and along our coasts."[42] Not the clear cut strategic direction that inspires trust in the system. The former Chief of Maritime Staff, VAdm MacLean saw the issues of maritime security and more traditional maritime defence as increasingly linked.[43] The emergence of non-state actors and continued inter-state disputes further confounds the picture; our security at home is indirectly influenced by affairs abroad.[44] Recognizing that defence of Canada is a number one priority, as it has been since confederation and reiterated in numerous defence policy statements and papers, the ability to employ military assets

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[39] International Maritime Organization website: http://www.imo.org/Safety
[40] Government of Canada, "Maritime Security Operations Centre – Scope Statement"
[41] Kinney, Laureen. "Marine Aspects of the Security and Prosperity Partnership,"
[42] Government of Canada. Privy Council Office, "Securing an Open Society : Canada's National Security Policy," 38.
[43] MacLean, Vice Admiral Bruce. "Chief of Maritime Staff Address: Maritime Security," 1.
[44] *Ibid*. 1.

closer to home in a marine security role becomes a logical extension of the number one priority. Employing DND assets in a constabulary role at home is an answer but perhaps the not best answer. The Navy must become interoperable with the core departments who respond to a maritime security event; so that support can be provided to the RCMP.

Post transformation the Canadian Forces has established a command and control structure that supports the concepts of mission command, but more importantly the recognition of strategic, operational and tactical command.

The challenge is to determine if Canada's maritime security organization fits within this model and have all stakeholders accepted their responsibilities? Laying out the participants within the model:[45]
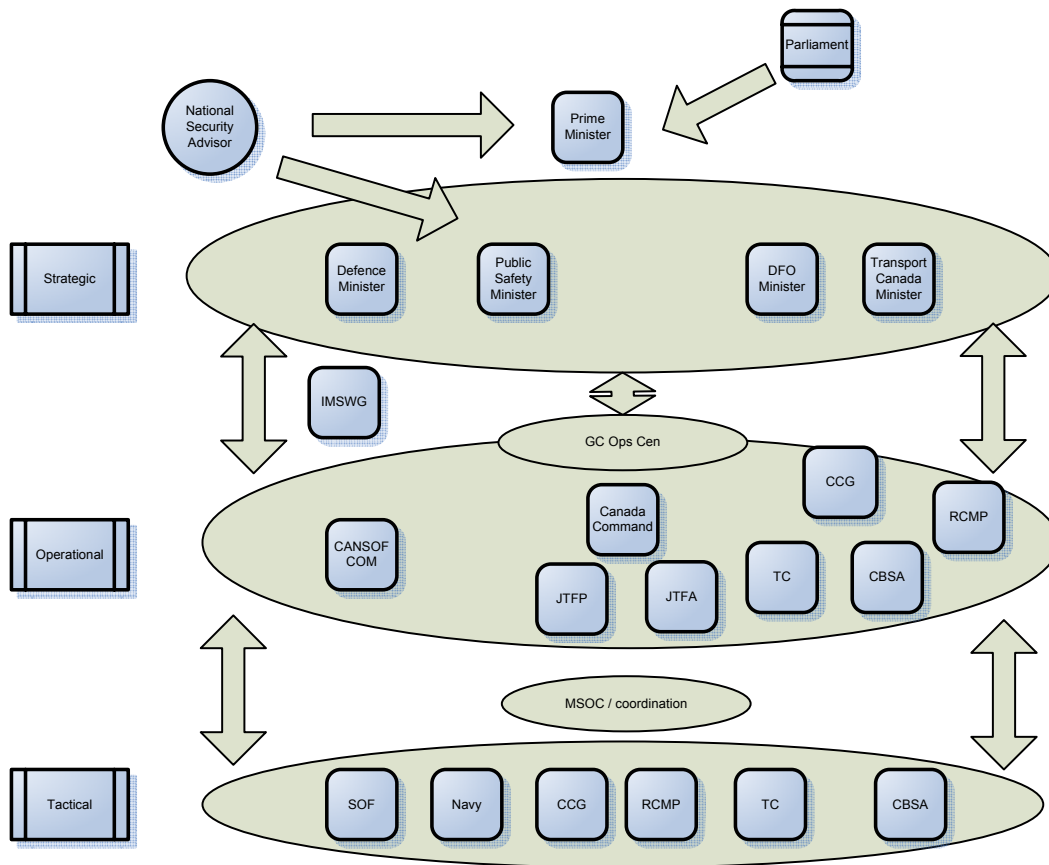
A close review of the Concepts of Operations for Canada Command, Joint Task Force Atlantic and Pacific show that each has considered their role in support of the "*whole-of-government* "approach to maritime security response. Canada Command's Concept of Operations ensures that it can, through its subordinate commands create the common operating picture and support other government departments.[46]

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[45] Lannan, Major Tim. "Interagency coordination within the National Security Community: Improving the Response to Terrorism," *Canadian Military Journal* (Autumn 2004) 52
[46] Government of Canada, "Canada Command: Concept of Operations." June 2006. Sect 1.4.1.

The Concept of Operations for Joint Task Force Atlantic goes into greater detail as to what the specific issues are and how best the CF can be utilized to manage the threat depending on whether it is a domestic or international situation. It clearly recognizes the importance of the MSOC has in support of Canada's maritime security response efforts.[47]

The Concept of Operations for JTFP similarly underscores the requirement to develop the maritime picture and provide sovereignty patrols.[48]. The Joint Operations Centre will coordinate all requests for assistance by civil authorities.[49] This document does not go into depth regarding maritime security and the necessity to establish formal command and control environment.

Surprisingly, the MSOC will not direct or command any required response needed to resolve or respond to a maritime security related incident. The MSOC will actually transfer control to regional authorities of the identified lead department. That department will operate out of its regional offices and execute command and control in keeping with their departmental standard operating procedures. [50] The MSOC will continue to monitor events as they unfold and provide the common operating picture as required. The dilemma inherent in this approach is that likely when additional collaboration from other departments may become necessary and vital to the timely resolution of the incident, command has been assumed by parties outside of the MSOC. From a unity of command, and mission command perspective and in keeping with military tenets, just when effective command and control is required, it is given up.

Comparing the US and Canadian Maritime Security Strategies

Certainly, the threats to both nations are similar, and both countries have recognized the need to respond with a sound maritime security strategy. Although the volume of trade and the capacity of both countries to respond is different, both countries have responded. Canada recognizes one more element in the equation; our domestic economy also needs a relatively open border with the US, as our economy relies on exports to the US. Although the US relies on imports from Canada as inputs into their economy, the impact of reducing the flow would cause comparatively greater impact in Canada. Since many imports arriving in our ports are destined for US markets, this to creates an imperative that we cannot ignore. There is a need for a comprehensive maritime security strategy.

Overall, the Canadian approach is similar to the US; the Department of Homeland Security has the overarching responsibility, the three key agencies TSA, Customs and the US Coast Guard are all within the DHS umbrella. Furthermore USNORTHCOM, the military command responsible for defence of continental US is charged with supporting DHS when additional assets or capabilities are required. The US framework ensures command & control is firmly defined. An important point to note regarding the US approach is its simplicity, within one department are the agencies charged with the prime

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[47] Government of Canada, "Joint Task Force Atlantic: Concept of Operations." June 2006 13.
[48] Government of Canada, "Joint Task Force Pacific: Concept of Operations." Jan 2006. p 67.
[49] *Ibid.* 92.
[50] Government of Canada, "Maritime Security Operations Centres: Concept of Operations." 13.

responsibilities for executing the US maritime security strategy, each with a discrete role and the resources required to perform the mission.

In Canada, we have put in place a '*whole-of-government*' strategy to ensure capabilities from relevant departments and agencies are brought to bear. The primary government departments and agencies are however, lead by four distinct Departments:

- ‹ Transport Canada sets policy and regulations;

- ‹ Coast Guard who have vessels and presence is a special agency within the Department of Fisheries and Oceans;

- ‹ Immigration, Border Services and the RCMP, the agencies with enforcement capabilities, are all within the Department of Public Safety; and

- ‹ the military assets, who provide fusion and operation centre support, are in the Department of National Defence

The single greatest failing one can observe in our Canadian strategy is a reluctance to identify a single federal department or agency to be responsible for Maritime Security. According to RAdm Dean McFadden, there is a vital need to operational maritime situational awareness to truly enable the constabulary function; this can be accomplished through the establishment of a joint staff inclusive of military and representatives from the federal and provincial stakeholders.[51] Furthermore, the joint staff must recognize the threat and develop contingency plans to control assigned forces while respecting the legislated mandates of the stakeholders. Without such an enabling structure the unity of command concept will be absent. The departments will continue to compete for scarce resources and make internal prioritization trade-offs that do not necessarily respect the needs of the national maritime security strategy, let alone support a cohesive response capability. Although it must be acknowledged this ad hoc approach to inter-departmental collaboration has been successful in the past and thus is expected to be effective for the future. For instance, in early August, 1999, a maritime patrol aircraft on a routine patrol mission off the West Coast of B.C. was the first to spot the Korean ship that smuggled 130 Chinese migrants onto Canada's shores. The plane's crew spotted the ship, which had no visible identification markings and no fishing gear aboard, about 350 kilometers off the Queen Charlotte Islands, moving toward shore. The crew notified the RCMP of the suspicious vessel, then provided continuous electronic surveillance of its movements until an RCMP boat and armed boarding party could intercept it.[52] Notwithstanding that our current strategy and system seem to work, the Senate Committee for Defence and Security continues as an advocate for change.

In the latest Senate Report, "Managing Turmoil: the need to upgrade Canadian Foreign Aid and Military Strength to Deal with Massive Change"[53] Senator Kenny proposes the following changes:

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[51] RAdm McFadden's address to CMS Senior Manager Conference 25 October, 2006 with permission.
[52] http://www.airforce.forces.gc.ca/athomedocs/athome_4_5_e.asp (accessed 20 Oct)
[53] Senate Committee on National Security and Defence, "Managing Turmoil: The Need to Upgrade Canadian Foreign Aid and Military Strength to Deal with Massive Change," October 2006.

‹ Mandate of the Canadian Coast Guard to include an armed constabulary role, and make the protection of Canada's coasts its central function;

‹ Transfer the Canadian Coast Guard into the Department of Public Safety and Emergency Preparedness;

‹ Commit to an urgent recapitalization of the Canadian Coast Guard to ensure that it has the number and type of vessels it needs to fulfill this new role;

‹ Assign the Canadian Coast Guard the maritime enforcement roles of the Departments of Fisheries and Ocean, Transport, Environment, Canada Border Services Agency, and appropriate sections of the *Criminal Code*; and

‹ Plan for these changes immediately with a view to completing the transformation and reequipping of the Canadian Coast Guard by 2015.[54]

The impact of these changes would be to put the onus on the Minister for Public Safety for on-water response and enforcement. Thus safety, enforcement and security would be within the domain of one department, thus aligning our approach to that of the US.
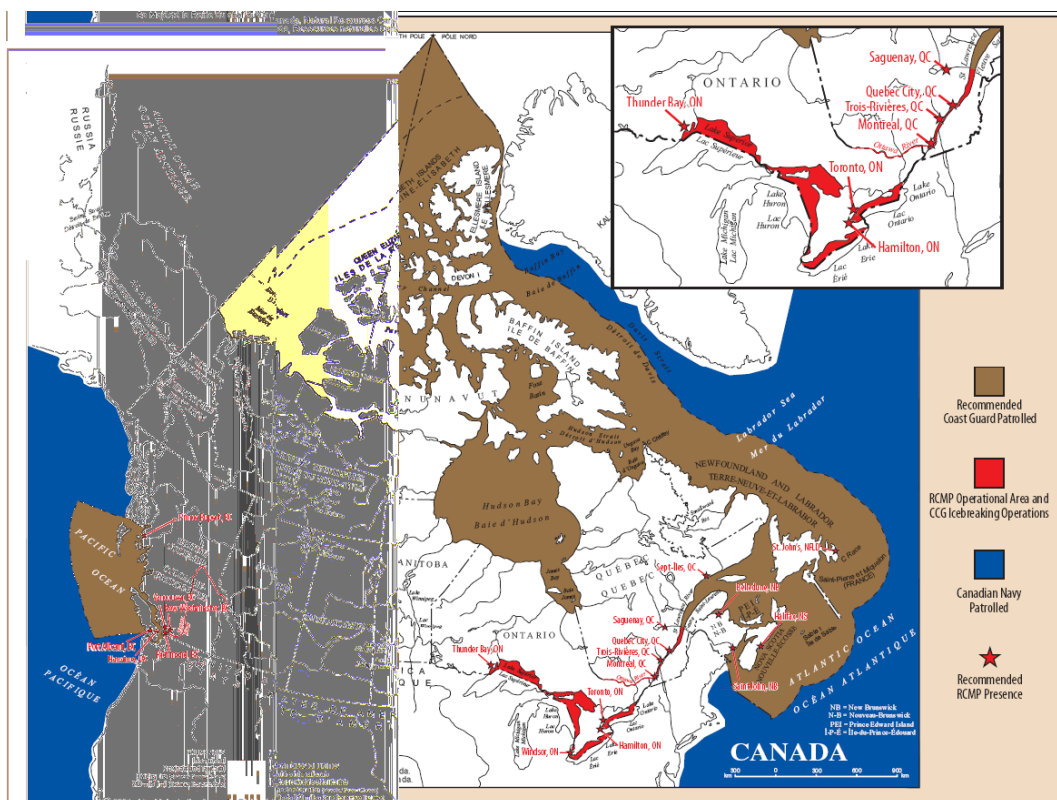
Furthermore, the Senator also notes that the layered defence strategy should be reviewed and enforcement roles should be allocated as follows: DND beyond the 200 NM limit, CCG assume responsibility for enforcement in the littorals and out to 200 NM, including

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[54] Senate Committee on National Security and Defence, "Managing Turmoil: The Need to Upgrade Canadian Foreign Aid and Military Strength to Deal with Massive Change," October 2006. 99-100.

sovereignty patrols and ice breakers in the north (vice DND)[55], and the RCMP to conduct enforcement with the inland waterways and the great lakes. [56] It could be argued that the Navy's coastal patrol vessels offer CCG a force multiplier capability within the littoral regions and should therefore be so tasked when such missions do not preclude their coastal navigation and officer training responsibilities.

Recommendations

Senator Kenny's structural changes and re-equipping recommendation for the Coast Guard go a long way to simplifying collaboration and execution for Canada's maritime security partners. Unfortunately, he has not gone into great depth regarding how to re-equip the coast guard, certainly the age and complexity of the platforms within that fleet would cause one to support such a recommendation. As TC remains outside of the Public Safety umbrella organization, one further set of recommendations is needed so as to foster closer collaboration between these departments. A joint staff structure or planning cell needs to be created so that scenarios and contingency plans can be developed that reflect the maritime security threat and the processes and operating procedures that ensure effective collaboration and information sharing so as to enable enforcement and appropriate evidentiary processes to be followed. These contingency plans must include considerations for control and direction of assigned forces. The committee functioning at the operational level would exist to engender collaboration and information sharing. Outputs from this group should be exercise scenarios and direction on how to operate as a single entity. This committee needs to have a bias towards action.

Conclusion

This paper sought to explain the maritime security context, identify and compare the Marine Security strategies of both Canada and the US so as to identify any missing elements in Canada's strategy. A review of the economic factors and geography confirms that both nations need a sound, yet pragmatic maritime security strategy. As we have seen the US has concentrated its efforts with Customs and the Coast Guard, both agencies are within the Department of Homeland Security, providing leadership, direction and accountability. The USCG has had a constabulary capability for decades and thus is well suited to employment in a Marine Security role.

Canada has recognized the need to develop a maritime strategy, and is taking steps to define a layered defence strategy and deploy the resources from many departments in order to realize this strategy. Each of the departments brings the appropriate resources but many without sufficient training and interoperability experiences to be ready. The other element still required, and arguably the most important is, a single operational leader within government providing accountability and leadership.

Senator Kenny has made a number of reasonable recommendations that will make Canada's maritime security strategy simpler and more effective. Additionally the adoption of a plans and exercises group to foster collaborative practices and techniques will provide the needed underpinnings to enable a comprehensive response framework.

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[55] *Ibid,*, 99.
[56] *Ibid,* 95.

This element is missing from the Canadian solution is a Commander functioning at the operational level, without it the departmental assets will be uncoordinated in their individual techniques and tactics thus offering those who seek to do us harm an opportunity from which they can exploit our weaknesses.

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