# **Archived Content**

Information identified as archived on the Web is for reference, research or record-keeping purposes. It has not been altered or updated after the date of archiving. Web pages that are archived on the Web are not subject to the Government of Canada Web Standards.

As per the <u>Communications Policy of the Government of Canada</u>, you can request alternate formats on the "<u>Contact Us</u>" page.

# Information archivée dans le Web

Information archivée dans le Web à des fins de consultation, de recherche ou de tenue de documents. Cette dernière n'a aucunement été modifiée ni mise à jour depuis sa date de mise en archive. Les pages archivées dans le Web ne sont pas assujetties aux normes qui s'appliquent aux sites Web du gouvernement du Canada.

Conformément à la <u>Politique de communication du gouvernement du Canada</u>, vous pouvez demander de recevoir cette information dans tout autre format de rechange à la page « <u>Contactez-nous</u> ».

# CANADIAN FORCES COLLEGE / COLLÈGE DES FORCES CANADIENNES JCSP 34 / PCEMI Nº 34

#### EXERCISE/EXERCICE NEW HORIZONS

## THE WHOLE-OF-GOVERNMENT APPROACH TO MARITIME INFORMATION SHARING – REALITY OR FICTION?

#### By /par LCdr/capc James Salt

This paper was written by a student attending the Canadian Forces College in fulfilment of one of the requirements of the Course of Studies. The paper is a scholastic document, and thus contains facts and opinions, which the author alone considered appropriate and correct for the subject. It does not necessarily reflect the policy or the opinion of any agency, including the Government of Canada and the Canadian Department of National Defence. This paper may not be released, quoted or copied, except with the express permission of the Canadian Department of National Defence. La présente étude a été rédigée par un stagiaire du Collège des Forces canadiennes pour satisfaire à l'une des exigences du cours. L'étude est un document qui se rapporte au cours et contient donc des faits et des opinions que seul l'auteur considère appropriés et convenables au sujet..Elle ne reflète pas nécessairement la politique ou l'opinion d'un organisme quelconque, y compris le gouvernement du Canada et le ministère de la Défense nationale du Canada. Il est défendu de diffuser, de citer ou de reproduire cette étude sans la permission expresse du ministère de la Défense nationale.

#### Abstract

The National Security Policy (NSP) clearly delineates that the government's number one priority is that of protecting Canada and of the safety and security of its citizens at home and abroad. Within the document, lies a six-point plan designed to clarify and strengthen the accountability for marine security amongst the various portfolios that play a role in securing our waters. Specifically highlighted within this plan is the establishment of the Marine Security Operations Centres (MSOCs), designed to bring together representation from five key maritime security partners who, as a whole, will possess the authority and capacity to bring to bear all civilian and military resources necessary to detect, assess, and respond to a marine security threat. On the surface, it would seem that the strategies outlined in the NSP through the establishment of the MSOCs have set the stage for an effective maritime security strategy. But have the centres truly been provided the tools to facilitate such a strategy?

This paper examines how best that collaborative, whole-of-government, marine domain awareness can be successfully developed and demonstrates why such an approach is so important to Canadian maritime security. By evaluating the efforts of the centres versus a number of potential barriers, the paper will further demonstrate that, while the MSOCs have succeeded in developing a collaborative National Maritime Picture (NMP), they have failed thus far in achieving the Canadian government's multidepartmental, integrated approach to information sharing and domain awareness as outlined within the policy documents.

# **Table of Contents**

Introduction	1
Information and Knowledge Beget Power	3
A Multitude of Barriers	6
The "Super-Highway" of Choice	8
The Marine Security Operations Centres	10
The National Maritime Picture and Maritime Domain Awareness	12
Confidentiality and Security	14
Lack of Trust and Willingness to Share	15
Data Ownership and Control	16
Privacy	17
Legal and Legislative Limitations/Mandates and Policies	
An Achievable Aspiration	
Conclusion	
Bibliography	

#### Introduction

On the 27<sup>th</sup> of April 2004, the Canadian government released its first National Security Policy (NSP) since the events of the 11<sup>th</sup> of September 2001. The document clearly declared the government's number one priority was that of protecting Canada and of the safety and security of its citizens at home and abroad. The NSP recognized the complexity of modern day threats and of the requirement for an integrated framework to address them, stating it "critical for our key security instruments to work together in a fully integrated way to address the security interests of Canada."<sup>1</sup> This strategy was further solidified during then Defence Minister Bill Graham's assertion that "the Canadian approach to national security [was] based on collaboration among departments and agencies at all levels of government."<sup>2</sup>

Within the document, a six-point plan was introduced with the design to strengthen Canadian maritime security by "clarifying and strengthening accountability for marine security amongst the various portfolios that have a role to play in securing our waters."<sup>3</sup> This plan included the government's announcement to develop new and/or augment existing capabilities including:

- Long-range detection technologies;
- Enhanced screening of ships' passengers and crews;
- Advanced reporting requirements to improve the assessment of potential risks posed by vessels, their passengers and cargo; and

<sup>&</sup>lt;sup>1</sup>Privy Council Office, *Securing an Open Society: Canada's National Security Policy* (Ottawa: Privy Council Office, 2004), 5, 9.

<sup>&</sup>lt;sup>2</sup>"Government of Canada Announces New Marine Security Initiatives," Canada NewsWire, 22 April 2005, 1; <u>http://www.proquest.umi.com</u>; Internet; accessed 21 January 2008.

<sup>&</sup>lt;sup>3</sup>Privy Council Office, Securing an Open Society ..., 38.

• Measures to intercept vessels of concern before they arrive on our shores.<sup>4</sup>

The forward-thinking concepts within the document meant that no longer would multiple departments, with a stake in maritime security, work independently. Specifically highlighted within this plan was the establishment of the Marine Security Operations Centres (MSOCs) that would bring together representation from five key maritime security partners who, as a whole, would be provided "the authority and capacity, through interagency staffing, to bring to bear all civilian and military resources necessary to detect, assess, and respond to a marine security threat."<sup>5</sup>

At first glance, it would seem that the strategies outlined in the NSP and the establishment of the MSOCs have set the stage for an effective maritime security strategy. The need to "improve how [the government] gathers, tracks, analyzes, uses, and shares information" within the maritime realm is clearly delineated within the NSP and the follow-on Defence Policy Statement, as is how doing so will permit the government to "be better prepared to respond quickly and effectively to incidents."<sup>6</sup> What the policies do not address are the constraints that are currently in place that hamper such a strategy. In essence, the government has provided the direction as to what is required in order to enhance our maritime security without providing the necessary tools to accomplish such a

<sup>6</sup>Department of National Defence, *Canada's International Policy Statement: A Role of Pride and Influence in the World – Defence* (Ottawa: Department of National Defence, 2005), 17.

<sup>&</sup>lt;sup>4</sup>Chris Thatcher, "A Pan-Government Approach to Marine Security," *Vanguard* (October/November 2006) [journal on-line]; available from <u>http://www.vanguardcanada.com/MSOCThatcher</u>; Internet; accessed 18 January 2008.

<sup>&</sup>lt;sup>5</sup>Although the capabilities provided through the implementation of the MSOCs can and may likely be made available to non-partner departments if required in support of National security efforts, the five key maritime partners referred to currently only include Canada Border Services Agency, Canadian Coast Guard/Department of Fisheries and Oceans, Department of National Defence, Royal Canadian Mounted Police, and Transport Canada; Privy Council Office, *Securing an Open Society* ..., 39.

task, utilizing those departments that play a key role in the maritime security of this country.

This paper will examine how collaborative, whole-of-government, domain awareness can be successfully developed and demonstrate why such an approach is so important to Canadian maritime security. Further, it will be shown that, while the MSOCs have succeeded in developing a collaborative National Maritime Picture (NMP), the centres have failed thus far in achieving the Canadian government's multi-departmental, integrated approach to information sharing and domain awareness as outlined within the policy documents. This paper will begin by first examining how best to develop effective information sharing techniques and will then examine the unique environment surrounding the maritime domain.

#### **Information and Knowledge Beget Power**

Aligning maritime security efforts begins with knowledge and it is knowledge that is key to effective decision-making. At the root of knowledge is information. Walter Perry explains that information can be "transformed into awareness and knowledge in the cognitive domain and forms the basis of decision-making."<sup>7</sup> The sharing of this information between like-minded individuals or groups then "tends to lower information entropy (and hence increases knowledge) because of the reduction in variance and the

<sup>&</sup>lt;sup>7</sup>Walter L. Perry and James Moffat, *Information Sharing Among Military Headquarters: The Effects on Decisionmaking* (Santa Monica: RAND, 2004), 23.

build-up of correlations among the critical information elements."<sup>8</sup> Geoffrey Till likens information and knowledge to power and delineates the importance of information superiority as a source of operational success in *Seapower - A Guide for the Twenty-First Century.*<sup>9</sup> It is only through the collecting, analysis, and dissemination of information regarding the actions of potential adversaries that states are able to effectively "anticipate emerging risks and threats and ... be in a better situation to do something about them if that seems necessary."<sup>10</sup> Information superiority can then be achieved by maintaining this "uninterrupted flow of information while exploiting or denying an adversary's ability to do the same."<sup>11</sup> How best these actions can be determined is through an activity "which enables a state to be aware of and comprehend what is happening and who is present in all areas of maritime responsibility."<sup>12</sup> This activity is referred to as 'domain awareness' and it begins through the development of a comprehensive picture of a state's maritime area of interest, both domestically and internationally, integrating surveillance and intelligence efforts. Domain awareness then:

...seeks clarity through liaison and coordination between national and international security, intelligence and law enforcement groups to integrate, develop and disseminate critical data related to maritime security.<sup>13</sup>

<sup>10</sup>*Ibid.*, 284.

<sup>11</sup>*Ibid.*, 131.

<sup>12</sup>Capt(N) Peter Avis, *Comparing National Security Approaches to Maritime Security in the Post-9/11 Era*, Maritime Security Occasional Paper No. 14 (Halifax: Centre for Foreign Policy Studies, Dalhousie University, 2005), 13.

<sup>13</sup>Capt(N) Peter Avis, Comparing National Security ..., 13.

<sup>&</sup>lt;sup>8</sup>Walter L. Perry and James Moffat, *Information Sharing* ..., 24.

<sup>&</sup>lt;sup>9</sup>Geoffrey Till, *Seapower - A Guide* ..., 131.

Attention is then focused where it is needed and permits decision makers to best manage risk and take the correct action that is necessary before, during and after an event that might threaten a state's maritime security.<sup>14</sup>

Simple sharing of information is but the first step in developing the necessary knowledge base required for effective decision-making. Collaboration between participating entities provides "the synergistic effects ... that improves the quantity and the quality of the information needed to make decisions."<sup>15</sup> Such collaboration can also support change. Successful businesses often re-examine their strategies in turbulent times and will "learn to quickly adapt or they're forced out of business. They leverage their strengths to increase market share and profitability."<sup>16</sup> The desire for collaboration between like-minded individuals should be no different when it comes to maritime security. So why then do states continue to encounter obstacles in their attempts to further information sharing and collaboration initiatives in support of domain awareness?

Carla O'Dell discusses the natural desire of individuals "to learn, to share what they know, and to make things better" and that this desire is simply thwarted "by a variety of logistical, structural, and cultural hurdles and deterrents present in [an] organization."<sup>17</sup> As this paper will address next, there remains many barriers that can

<sup>17</sup>Carla O'Dell and C. Jackson Grayson, Jr., with Nilly Essaides, *If Only We Knew What We Know: The Transfer of Internal Knowledge and Best Practice* (New York: Free Press, 1998), 16.

<sup>&</sup>lt;sup>14</sup>Geoffrey Till, Seapower - A Guide ..., 131.

<sup>&</sup>lt;sup>15</sup>Walter L. Perry and James Moffat, *Information Sharing* ..., xvii.

<sup>&</sup>lt;sup>16</sup>United States, US Coast Guard Office of Public Affairs, "Collaboration: The Pathway to Maritime Domain Awareness Success," <u>https://www.piersystem.com/go/doc/786/76787</u>; Internet; accessed 18 January 2008.

hamper information sharing initiatives and the development of effective domain awareness that, in turn, may contribute to a state's inability to successfully manage its maritime domain. It is not simply a matter of knowing what needs to be done. The tools must be in place in order to facilitate these actions.

## A Multitude of Barriers

In *Intelligence and Security Informatics for International Security*, Hsinchun Chen suggests that a number of barriers must be addressed in order to facilitate effective and fruitful information sharing initiatives. He first describes that within the intelligence and law enforcement domains, confidentiality and security of data is of great concern and there remains the worry that "improper use of data could lead to fatal consequences."<sup>18</sup> Chen continues by stating that within organizations one might expect to find a lack of trust and willingness to share information, as:

... different agencies may not be motivated to share information and collaborate if there is no immediate gain. They may also fear that information being shared would be misused, resulting in legal liabilities.<sup>19</sup>

It is difficult to imagine that efforts to support the security of a nation would not produce such an immediate gain for organizations; however, his presumption of potential legal control. Will one party own a particular dataset? Who will be allowed to input, access and combine such data? And finally, who will be permitted to distribute this data to whom?<sup>20</sup> All very challenging and real concerns when it comes to information sharing.

A final barrier discussed within his book is that of privacy of individuals and the legal and legislative limitations in place that are intended to guide information sharing initiatives. Within Canada, legislative documents such as the *Privacy Act* and the *Charter* are designed to provide clear direction to government bodies as to what personal information may and may not be collected, used, and disclosed between departments as well as when disclosure of such information is permitted. In any information sharing initiative "it is essential to make sure that the data shared between agencies is secure and that the privacy of individuals is respected."<sup>21</sup> Not examined in his book, but of equal importance, are the mandates and policies of departments in support of national security activities. Events over the past decade and a half have meant that:

 $\dots$  in today's global environment no one agency can effectively deal with the asymmetrical threats we face. The only approach for the future is an integrated, interdepartmental, collaborative and cooperative one.<sup>22</sup>

National governments then must provide the necessary legal and legislative mandates in order to effectively support such a whole-of-government approach.

This paper has briefly examined the benefits of effective information sharing and collaboration in support of a nation's maritime domain awareness and how best, in a

 $^{21}Ibid.$ 

<sup>&</sup>lt;sup>20</sup>Ibid.

<sup>&</sup>lt;sup>22</sup>Chris Thatcher, "A Pan-Government Approach to Marine Security," ...

theoretical sense, to develop these strategies. Additionally, potential barriers have been highlighted that must be overcome in order to support an effective maritime security initiative, such that decision makers are best aligned to manage risk and take the correct action in order to counter a threat to a state's maritime security. Next, this paper will consider the importance of the maritime domain to the security and sovereignty of Canada and show why it has been so highly profiled within the NSP.

## The "Super-Highway" of Choice

The world's oceans, rivers and waterways are the highway of choice for the global movement of international commerce. Since 1945, sea-borne trade has doubled every decade and, globally, we now see upwards of 6.2 billion tons of commerce pass through as many as 8,336 ports worldwide. With one half of the world's population living just two hundred kilometres from the sea, it is not difficult to envision that the unrestricted movement of commerce on the high seas is crucial to the well-being and security of the global economy. Even small disruptions can have a significant impact.<sup>23</sup> If the world's oceans are the highways of choice for the movement of international commerce, then in Canada they can best be described as the super-highways of choice.

transport either; up to 20% of this trade remains waterborne.<sup>24</sup> Clearly, Canada is an exporting nation that relies heavily on our oceans and on the uninterrupted flow of commerce to and from its ports and one would be hard pressed to disagree that Canada requires "a comprehensive oceans policy with a defence and domestic security plan"<sup>25</sup> in order to maintain its economic flow of goods as well as ensure security and unfettered access to its ports and waterways. This reliance will only deepen in the future.<sup>26</sup>

Economics aside, the physical security of the public cannot be forgotten and the NSP is quite clear in this regard. Security partners must develop the necessary relationships such that they are capable of being "more responsive to threats to Canada and continental security, and more effective in the engagement of these threats"<sup>27</sup> in support of the stated priorities. Our maritime domain is vast and the evolving, non-traditional threats require that we expand our area of interest beyond simply that of the EEZ and territorial waters and treat this area as a distinct and collaborative area of operations. Of course, this capability is contingent upon the previously highlighted existence of a "clear, legal framework that allows [for the] authority to meet the requirements of the range of domestic operations" as well as the ability to effectively

<sup>25</sup>Ibid.

<sup>27</sup>Dr. Brad Gladman, *Enabling Appropriate Freedom of Action at the Operational Level: The Legal Authorities for the Conduct of Domestic Operations*, Technical Memorandum 2006-17 (Ottawa: Centre for Operational Research and Analysis, Defence Research and Development Canada, 2006), 6.

<sup>&</sup>lt;sup>24</sup>Capt(N) Dave Hudock, "Fundamentals of Sea Power" ...

<sup>&</sup>lt;sup>26</sup>The combined oil fields on the Grand Banks are estimated at holding upwards of 2.751 billion barrels of recoverable oil and Canada's ocean based tourism industry continues to expand with 11.5 million cruise ship passengers landing on Canadian soil in 2005 alone; *Ibid*.

"develop a reliable Common Operating Picture in order to determine an appropriate response to a range of challenges."<sup>28</sup>

In a recent presentation to the Canadian Forces College, the Director of Maritime Strategy suggested how states may best align themselves to counter potential threats to maritime security, stating simply that "sovereignty and security are outcomes of surveillance, presence and control."<sup>29</sup> Has the government then, aligned itself to effectively counter the potential threats and provide this surveillance, presence, and control necessary for sovereignty and security? One would be naive to suppose that simply co-locating those departments with a hand in maritime security will solve the dilemma. Many of the social and organizational barriers discussed earlier must be addressed before success is possible. Using some of the concepts outlined earlier, this paper will next examine the MSOCs and two specific challenges associated with their establishment.

#### **The Marine Security Operations Centres**

Located on the West and East coasts of Canada, the MSOCs were developed to counter a number of stated vulnerabilities and deficiencies within Canadian maritime security. Specifically, the centres were designed to address three shortcomings:

<sup>&</sup>lt;sup>28</sup>Dr. Brad Gladman, *Enabling Appropriate Freedom* ..., 6.

<sup>&</sup>lt;sup>29</sup>Capt(N) Dave Hudock, "Fundamentals of Sea Power" ...

- Lack of a marine intelligence, surveillance and reconnaissance framework that effectively utilizes existing resources to generate accurate, comprehensive and timely maritime domain awareness in Canada's area of interest;
- Lack of ability to fully develop a recognized marine picture which is accurate and timely; and
- Lack of a coherent and comprehensive interdepartmental concept of operations for domestic marine security, specifically, the lack of clear definitions of the roles, functions, responsibilities and powers of agencies and departments in terms of day-to-day operations and crisis management support to marine security operations.<sup>30</sup>

Previously, other government departments with a stake in maritime security carried out their mandates in a stove-piped manner. This led to the gathering and retention of situational awareness intelligence and information that was used exclusively for their use. If information was shared, it was generally in an ad-hoc fashion and in response to specific situations such as support to drug operations or fisheries patrols. The MSOCs were established specifically to counter this deficiency and provide "comprehensive situational awareness and threat knowledge, along with credible deterrent and interdiction capabilities." <sup>31</sup>

It should be noted that these centres, although under the lead of the Department of National Defence (DND), are not military operations centres in the traditional sense. The MSOCs are truly a Government of Canada asset and, although personnel employed in the centres continue to work for their respective departments, their actions contribute to collective maritime security efforts. It should also be noted that the MSOCs are not solely tactical operations centres. Rather, their primary function is to "collect, analyze, and share information in support of contingency operations conducted outside the MSOCs, by

<sup>&</sup>lt;sup>30</sup>Department of National Defence, *Marine Security Operations Centres: Concept of Operations for Initial Operational Capability (IOC)* (Ottawa: Chief of Maritime Staff, 2008), 2.

<sup>&</sup>lt;sup>31</sup>Department of National Defence, *Marine Security Operations Centres* ..., 2.

departments in relation to their respective mandates.<sup>32</sup> In addition to collaborating in support of the development of a Canadian maritime picture and domain awareness, partners also utilize the collaborative environment to enhance their own departmental capabilities such that they are able to provide an improved product to their particular departments.<sup>33</sup> Feeding into Canada Command, the Government Operation Centre (GOC), and a number of interdepartmental regional operation centres, the MSOCs provide a tactical maritime situational awareness to multiple operational commanders, in support of strategic goals.

Regrettably, the scope of this paper limits to what detail the centres may be scrutinized. As such, only two of its primary 'products' will be further examined, specifically, those efforts relating to the information sharing initiatives designed to produce a joint, inter-agency National Maritime Picture (NMP) and functional and effective Maritime Domain Awareness (MDA).

#### The National Maritime Picture and Maritime Domain Awareness

The NMP is a global database containing that vessel information, collected by all MSOC partners, which is shareable by all within the centres. It can best be described as a product of the *surveillance function* of the MSOCs. This unclassified information

<sup>33</sup>*Ibid.*, 5.

<sup>&</sup>lt;sup>32</sup>Contingency Operations are those activities that fall outside of the normal, day-to-day requirements of the centres. An example of such an activity could include a Department of Fisheries response to illegal fishing or a Canadian Coast Guard response to a pollution incident. The centres support such activities through the use of its facilities, communications, and surveillance products, but do not manage or direct such activities. This remains the responsibility of the applicable department in accordance with their individual mandates; *Ibid.*, 4.

includes data elements such as a vessel's position, ship name, last and next port of call, as well as a number of other attributive features and it is developed using numerous sources including Port Authorities, open-sourced databases such as Lloyd's of London, the internet, and Canadian government assets, both military and civil. The database containing this tombstone data then maximizes:

... the content and fidelity of marine information as well as reduces time latency of information integration in an effort to produce as timely and accurate a maritime picture as possible.<sup>34</sup>

MDA is then developed by the individual partners through the analysis of the NMP using other additional information for which they might have access to through their respective proprietary databases.<sup>35</sup> In essence, MDA is the product of the NMP and information that is garnered through the *intelligence function* of the centres.

As has been noted above, the NMP is a product of the collaborative efforts of all MSOC partners using all of the tools, sensors, and information available to each through their individual departments. MDA on the other hand, remains the product of individual efforts by partners and it is brought together in a stove-piped manner. Using the barriers outlined by Chen and the concepts of effective information sharing techniques produced

<sup>&</sup>lt;sup>34</sup>The NMP should not be confused with the Recognized Maritime Picture (RMP), which is a Department of National Defence (DND) generated product that is shared with other defence allies. The RMP contains information garnered from unclassified and classified sources and, while the two products may at times overlap at the unclassified level, the NMP does not contain DND information that is classified in nature; *Ibid.*, 8.

by Till and Perry, this paper will next review the government's efforts in relation to the development of the NMP and MDA.<sup>36</sup>

## **Confidentiality and Security**

The MSOCs have a variety of protocols and safeguards in place that ensure that confidentiality and security are maintained when developing the collective NMP and the individually developed MDA. The necessary filters and classification levels of its employees are maintained to restrict unauthorized access to material that has been deemed sensitive and "access to departmental equipment, information, intelligence, surveillance and reconnaissance data" as well as "the conveyance of sensitive information from one system to another [is] governed by appropriate law, legislation, policies, security regulations and departmental guidelines and standards."<sup>37</sup> While the nature of the information contained within the NMP is such that dealing with this barrier is likely a simple task, the information contained within individual partner's MDA presents an additional information sharing challenge. Although confidentiality and security of data is of great concern and, as stated by Chen, some may fear that the improper use of this data might lead to serious consequences, it would appear that the

<sup>&</sup>lt;sup>36</sup>While the potential barriers to information sharing initiatives published by Chen are by no means exhaustive, they do provide an effective baseline from which to examine the efforts within the MSOCs. As such, it will be these three barriers suggested by Chen, in addition to the current legislative mandates and policies specific to the MSOC partners, which will be used to evaluate the centres' efforts in the development of a National Maritime Picture and Marine Domain Awareness.

MSOCs have addressed this obstacle through the implementation of a sound and thorough strategy.<sup>38</sup>

## Lack of Trust and Willingness to Share

There does not seem to be a lack of trust or an unwillingness to share information when partners within the centres develop the NMP. One only need review the most recent Concept of Operations, ratified and agreed to by all participants, to see that the policies and concepts specific to the NMP have set the stage for successful information sharing in this regard.<sup>39</sup> Ultimately, the centres now produce a common NMP, for use by all, in support of the national security initiatives outlined in the NSP, in addition to supporting their individual mandates. Unfortunately, it is not possible to determine whether this success has come through a desire to contribute to the security of the nation or if it is simply the product of government direction. One would hope that it is the former, however, whether by desire or direction, the end result remains the same.

When examining the efforts in MDA versus this potential barrier, the legislative and legal constraints that inhibit the development of a collaborative MDA mean that the trust and willingness of the departments within the centres have yet to actually be tested. These legislative and legal constraints will be addressed later in this paper; however, this barrier to information sharing will no doubt be significant should the MSOCs be permitted in the future to engage in a more collaborative effort when developing MDA.

<sup>&</sup>lt;sup>38</sup>Hsinchun Chen, Intelligence and Security Informatics ..., 143.

<sup>&</sup>lt;sup>39</sup>Department of National Defence, *Marine Security Operations Centres* ..., 8.

#### **Data Ownership and Control**

The MSOCs have addressed the barriers relating to control of data within the NMP and each partner has access to, and is expected to contribute a variety of data elements to, the common NMP. As an example, the Department of National Defence (DND) alone has designated upwards of one hundred, over-lapping data elements, from multiple resources, for inclusion into the NMP.<sup>40</sup> Yet ownership of the collective NMP remains a concern as no one department within the centres is permitted to maintain the multi-departmental/interagency NMP. Although it acts as the 'landlord' for the MSOCs, DND has, in fact, no legal authority to be the custodian of such information.<sup>41</sup> While the department is currently securing the necessary "legal authority to ... retain the NMP database(s) ... that it manages on behalf of the MSOC partners"<sup>42</sup> this barrier remains in place. When examining the MDA efforts in the centres, data ownership and control remain clear yet, as discussed earlier, this product continues to be developed by individual departments, for use by those departments alone. Consequently, MDA developed by MSOC participants is owned, controlled, and retained in their respective proprietary databases.<sup>43</sup> While the data ownership and control barriers presented by Chen are not an obstacle for the development of MDA in the centres, the information sharing efforts clearly do not meet the collaborative goals as laid out in the NSP.

<sup>43</sup>*Ibid*.

<sup>&</sup>lt;sup>40</sup>Department of National Defence, *Marine Security Operations Centres* ..., Annex B.

<sup>&</sup>lt;sup>41</sup>LCol S. Robidoux, "Briefing Note for CDS Action Team 1: CF Responsibility for Intelligence Gathering and Dissemination within Canada," (Ottawa: 15 March 2005): 2, quoted in Dr. Brad Gladman, *Enabling Appropriate Freedom* ..., 12.

<sup>&</sup>lt;sup>42</sup>Department of National Defence, *Marine Security Operations Centres* ..., 9.

#### Privacy

In her 2007 annual report to Parliament on the *Privacy Act*, Privacy Commissioner Jennifer Stoddart concluded, "in today's surveillance society, people expect strong privacy laws and want their federal government to take their responsibility extremely seriously". She continued that there was a requirement for an "overarching framework on how the government collects, uses, discloses and protects personal information."<sup>44</sup> While there is a clear requirement that maritime security efforts pay heed to the legislative acts designed to provide this framework, they must also not be hampered by such regulations. A middle ground is required; one that supports the efforts of the MSOCs without abusing the inherent rights of the individual.

The centres themselves do not collect or store personal information from any sources and only collect and store tombstone information on vessels within their area of interest when developing the NMP. The Concept of Operations for the centres is clear in that they "will operate within Canadian law and policy, including the Canadian Charter of Rights and Freedom, the Access to Information Act, the Privacy Act, and other relevant legislation."<sup>45</sup> This does not, however, stop individual departments within the centres from continuing to collect personal information in support of their mandates and when developing individual MDA. Article 4 of the *Privacy Act* clearly states that doing so is permitted when "it relates directly to an operating program or activity of the

<sup>&</sup>lt;sup>44</sup>Carly Weeks, "Canadians Fear National Security Measures Threaten Privacy," CanWest News, 18 October 2007, 1; <u>http://www.proquest.umi.com</u>; Internet; accessed 21 January 2008.

<sup>&</sup>lt;sup>45</sup>Department of National Defence, *Marine Security Operations Centres* ..., 5.

institution."<sup>46</sup> In their current configuration, the centres once again have in place the necessary privacy doctrine such that partners continue to abide by current legislation while successfully implementing the goals laid out within the centres' documentation. This does not, however, mean that privacy barriers are not impeding the centres' ability to meet the goals laid out in the NSP. These barriers simply exist beyond the reach of the centres' ability to address.

The aforementioned barriers discussed thus far have been rather minor in nature and have not prevented the centres from achieving a collaborative NMP. This has not been the case with MDA. As will be shown next, the centres' inability to effectively share information in support of the development of a truly inter-departmental, Canadian MDA revolves around a number of legislative and legal limitations that are currently in place. Although discussed separately by Chen, potential barriers surrounding legal limitations, mandates and policies directly fall from legislation. As such, it requires that they be examined in tandem.

#### Legal and Legislative Limitations/Mandates and Policies

Government departments within Canada are guided by their individual mandates. Unless operating in support of another department, they do not hold the authority to conduct activities other than those relating to their stated mandate. As an example, the Canadian Coast Guard (CCG), who fall under the Department of Fisheries and Oceans

<sup>&</sup>lt;sup>46</sup>Department of Justice, *Privacy Act.* R.S., 1985, c. P-21, Article 4; available from <u>http://laws.justice.gc.ca/en/P-21/index.html</u>; Internet; accessed 21 March 2008.

(DFO), are mandated via Article 41(1) of the *Oceans Act* to provide "services for the safe, economical and efficient movement of ships in Canadian waters."<sup>47</sup> Nowhere within this act is this department mandated to support maritime security. With no mandate, how then can this department legally collect and share relevant maritime security information within the centres? If one examines other relevant legislation, such as the *Customs Act*, it becomes clear that information sharing has its limits, such that "anything collected under the auspices of the Customs Act cannot be shared with any other department."<sup>48</sup> Similar legislation applies for the Canadian Forces (CF). The nature of our society and legislation "prohibits military operations except in specific circumstances in which the legal authority has been granted."<sup>49</sup> In order for the CF to meet the intent expressed within the NSP, the legal authority must be in place to support such operations. Without such a clear and legal framework, the CF would be "either legally prohibited from conducting specific operations, or insufficiently responsive to meet the requirements of the security environment."<sup>50</sup> Some have argued that this may, in fact, be the case.

Within the NSP, it states that the "Minister of National Defence will be the lead minister for the co-ordination of on-water response to a marine threat or a developing crisis in our Exclusive Economic Zone and along our coasts."<sup>51</sup> In a 2006 Technical Memorandum, Dr. Brad Gladman argues that this direction is not clearly defined as

<sup>&</sup>lt;sup>47</sup>Department of Justice, *Oceans Act*, 1996, c. 31, Article 41(1); available from <u>http://laws.justice.gc.ca/en/O-2.4/index.html</u>; Internet; accessed 24 February 2008.

<sup>&</sup>lt;sup>48</sup>Chris Thatcher, "A Pan-Government Approach to Marine Security," ...

<sup>&</sup>lt;sup>49</sup>Dr. Brad Gladman, *Enabling Appropriate Freedom* ..., 5.

<sup>&</sup>lt;sup>50</sup>Ibid.

<sup>&</sup>lt;sup>51</sup>Privy Council Office, Securing an Open Society ..., 38.

'defence' per the *National Defence Act* and that "there is currently no legislative authority in place to undertake this mission on a permanent basis."<sup>52</sup> In the absence of this legal authority, the CF is then unable to fulfil this stated government intent. One only needs to examine more closely the Concept of Operations for the MSOCs so see that the authors of this document seem to be in agreement with this argument in part. As has been noted earlier, while information sharing in support of the development of the NMP continues, it is obvious that the efforts surrounding the collaborative development of MDA continue to be hampered. The individual acts supporting the MSOC partners seem to restrict their abilities in this regard. This of course does not mean that solutions cannot be found. Information sharing is possible and there are a number of avenues available to the government that can permit individual participants within the centres the ability to share relevant information in support of the development of useful MDA, while still respecting the *Privacy Act* and other legislation.

In 2004, Transport Canada (TC) and the Royal Canadian Mounted Police (RCMP) finalized an agreement for the sharing of sensitive law-enforcement information that permits the two departments to share information on "organized crime and criminal association, to assist in the screening of airport workers." Information is exchanged in a manner "that fully respects domestic legislation such as the Privacy Act."<sup>53</sup> The number of partners involved in the continuous development of MDA would seem to make the use

<sup>&</sup>lt;sup>52</sup>Dr. Brad Gladman, *Enabling Appropriate Freedom* ..., 10.

<sup>&</sup>lt;sup>53</sup>"BACKGROUNDER - Key Highlights in Response to Chapter 3 of the Auditor General's Report National Security in Canada - the 2001 Anti-Terrorism Initiative," Canada NewsWire, 30 March 2004, 1; <u>http://www.proquest.umi.com</u>; Internet; accessed 21 January 2008.

of an 'agreement' or Memorandum of Understanding (MOU) somewhat challenging.<sup>54</sup> Rather, clear legislative direction is required. Article 273.6 (1) of the National Defence Act tells us "the Governor in Council or the Minister may authorize the Canadian Forces to perform any duty involving public service."<sup>55</sup> Further, under Article 273.6(2) of the NDA, standing authorities have been previously instituted with respect to CF assistance in law enforcement matters. A standing authority pertaining to permanent CF assistance in response to maritime security would no doubt assist in resolving some of the legal constraints that have been alluded to above.<sup>56</sup> This said, a standing authority under the NDA would only provide limited clarity. In addition to a standing authority, an Order in Council (OIC) specific to information sharing, what may and may not be shared, and what may and may not be held by whom, would clearly assist the centres' goal with respect to fulfilling the direction within the NSP.<sup>57</sup> The intent would never be to subsume the *Privacy Act* and other legislation, but rather to permit the sharing of that information that is deemed vital to the maritime security of Canada.<sup>58</sup> As will be discussed next, it is possible to address the legislative obstacles discussed above.

<sup>&</sup>lt;sup>54</sup>A Memorandum of Understanding (MOU) is a legal document that outlines an agreement between parties. It does not have the same weight as a formal contract, but is beyond a gentlemen's agreement; Dr. Brad Gladman, *Enabling Appropriate Freedom* ..., 1.

<sup>&</sup>lt;sup>55</sup>Department of National Defence, *National Defence Act,* R.S.C., 1985, c. N-5, Article 273.6(1); available from <u>http://laws.justice.gc.ca/en/N-5/index.html</u>; Internet; accessed 9 February 2008.

<sup>&</sup>lt;sup>56</sup> Dr. Brad Gladman, *Enabling Appropriate Freedom* ..., 11.

<sup>&</sup>lt;sup>57</sup>An Order in Council (OIC) is a legal instrument made by the Governor in Council pursuant to a statutory authority or, less frequently, the royal prerogative. All orders in council are made on the recommendation of the responsible Minister of the Crown and take legal effect only when signed by the Governor General. Many OICs are regulations or legislative orders in relation to and authorized by an existing act of parliament while others are notices of appointments. As an example, the appointment of the Judge Advocate General comes about as an OIC; Government of Canada, "Canadian Gazette," http://canadagazette.gc.ca/glossary-e.html; Internet; accessed 24 March 2008.

<sup>&</sup>lt;sup>58</sup>Dr. Brad Gladman, *Enabling Appropriate Freedom* ..., 12.

#### An Achievable Aspiration

Faced with similar challenges, Australia has, over the past seven years, instituted the necessary changes required in order to ensure that government entities are provided the freedom to develop an effective MDA. Very much similar to Canada today, Australia's jurisdiction for maritime counter-terrorism used to lay "first and foremost in the hands of the intelligence and law enforcement agencies within Australia, and their local counterparts abroad."<sup>59</sup> The Australian Defence Force was relegated to assisting civil law enforcement only when requested to do so. Post 9/11, their military has, as one would expect, played an increasingly important role in maritime security efforts. Their recently established Joint Offshore Protection Command integrates both defence and customs personnel and capabilities and assumes a direct role in prevention, interdiction, and response within their offshore areas.<sup>60</sup>

Following the recommendations of a number of Parliamentary Committees, the Australian government made far-reaching changes to legislation, thus enabling effective collaboration between interested parties. In its current state, their system now exhibits a logical flow for responsibility and coordination.<sup>61</sup> Much different than that of the US Homeland Security, which created an entirely new bureaucratic structure, the Australian whole-of-government approach has:

<sup>&</sup>lt;sup>59</sup>Sam Gray-Murphy, "Air Power and Trans-national Terrorism: The Possibilities, Advantages and Limits to Using Australian Air Power in the War on Terror," (Tuggeranong: Australia Air Power Development Centre Paper Number 20, 2005), 18.

<sup>&</sup>lt;sup>60</sup>Sam Gray-Murphy, "Air Power and Trans-national Terrorism ..., 18.

<sup>&</sup>lt;sup>61</sup>Capt(N) Peter Avis, Comparing National Security ..., 36.

... laid the foundation for national security, and thus maritime security, in legislation that ensured that information of a preventative nature is freely distributed between relevant agencies, even to the point of removing legislative barriers to [promote] such free exchange.<sup>62</sup>

In just a few short years, their efforts have led to the achievement of an integrated product by not only "cultivating an expectation for departments to share information and coordinate action"<sup>63</sup> but also by providing the means to accomplish such an exchange. While no less difficult than the challenges facing Canada, the Australian government has taken the necessary steps to facilitate their whole-of-government approach to maritime security.

#### Conclusion

Few would disagree that the theories provided regarding how best to succeed in information sharing initiatives do not remain valid in today's asymmetric environment and these theories remain no less valid for Canada's coastal defence. It is only through the collaborative efforts described by authors such as Perry and Till that governments can expect to develop a well-founded and truly multi-agency MDA. This paper has shown that there are also a number of barriers that may test a government's will, and subsequently their efforts, in the development of this MDA, but that it is possible to address these obstacles if the necessary tools are in place.

<sup>&</sup>lt;sup>62</sup>*Ibid.*, 41.

<sup>&</sup>lt;sup>63</sup>*Ibid.*, 87.

Only recently established, the MSOCs are in their infancy, however, the efforts thus far in accomplishing the direction provided within the NSP have been noteworthy. Specifically, the establishment of a truly integrated, whole-of-government NMP has shown that the vast majority of the barriers described by Chen can be overcome; yet the legislative obstructions remain. The direction within the NSP is straight forward and yet the centres do not seem to have been provided the necessary legislative tools required to develop the type of collaborative MDA as described by Perry and Till. If it is agreed that effective MDA is derived from analysis of all information from all sources, how then can the centres be expected to develop National MDA if all partners are unable to contribute to this analysis in a collaborative manner? It would seem that they cannot and that further review and action is required with respect to the legal and legislative barriers that the centres are currently encountering. Until such time as the centres are provided these tools, their efforts in the development of MDA will continue to be conducted in a stove-piped manner and will not meet the direction as provided by the government in the NSP.

#### **Bibliography**

- Avis, Capt(N) Peter C. Comparing National Security Approaches to Maritime Security in the Post-9/11 Era. Maritime Security Occasional Paper No. 14. Halifax: Centre for Foreign Policy Studies, Dalhousie University, 2005.
- "BACKGROUNDER Key Highlights in Response to Chapter 3 of the Auditor General's Report National Security in Canada - the 2001 Anti-Terrorism Initiative." Canada NewsWire, 30 March 2004; <u>http://www.proquest.umi.com</u>; Internet; accessed 21 January 2008.
- Borys, Major W.J. "Need to know to need to share: how terrorism is changing the intelligence community's culture." Toronto: Canadian Forces College Command and Staff Course New Horizons Paper, 2006.
- Canada. Department of Justice. *Oceans Act*. 1996, c. 31; available from <u>http://laws.justice.gc.ca/en/O-2.4/index.html</u>; Internet; accessed 24 February 2008.

. Department of Justice. *Privacy Act.* R.S., 1985, c. P-21; available from <u>http://laws.justice.gc.ca/en/P-21/index.html</u>; Internet; accessed 21 March 2008.

\_\_\_\_\_. Department of National Defence. *Canada's International Policy Statement: A Role of Pride and Influence in the World – Defence*. Ottawa: Department of National Defence, 2005.

\_\_\_\_\_. Department of National Defence. *Marine Security Operations Centres: Concept of Operations for Initial Operational Capability (IOC)*. Ottawa: Chief of Maritime Staff, 2008.

\_\_\_\_\_. Department of National Defence. *National Defence Act.* R.S.C., 1985, c. N-5; available from <u>http://laws.justice.gc.ca/en/N-5/index.html</u>; Internet; accessed 9 February 2008.

\_\_\_\_\_. Privy Council Office. *Securing an Open Society: Canada's National Security Policy*. Ottawa: Privy Council Office, 2004.

Chen, Hsinchun. Intelligence and Security Informatics for International Security: Information Sharing and Data Mining. New York: Springer, 2006.

Gladman, Dr. Brad. *Enabling Appropriate Freedom of Action at the Operational Level: The Legal Authorities for the Conduct of Domestic Operations*. Technical Memorandum 2006-17. Ottawa: Centre for Operational Research and Analysis, Defence Research and Development Canada, 2006.

- "Government of Canada Announces New Marine Security Initiatives." Canada NewsWire, 22 April 2005; <u>http://www.proquest.umi.com</u>; Internet; accessed 21 January 2008.
- Government of Canada. "Canadian Gazette." <u>http://canadagazette.gc.ca/glossary-e.html</u>; Internet; accessed 24 March 2008.
- Gray-Murphy, Sam. "Air Power and Trans-national Terrorism: The Possibilities, Advantages and Limits to Using Australian Air Power in the War on Terror." Tuggeranong: Australia Air Power Development Centre Paper Number 20, 2005.
- Hudock, Capt(N) Dave. "Fundamentals of Sea Power." Lecture, Canadian Forces College, Toronto, ON, January 22, 2008, with permission.
- O'Dell, Carla and C. Jackson Grayson, Jr., with Nilly Essaides. *If Only We Knew What We Know: The Transfer of Internal Knowledge and Best Practice.* New York: Free Press, 1998.
- Perry, Walter L. and James Moffat. *Information Sharing Among Military Headquarters: The Effects on Decisionmaking*. Santa Monica: RAND, 2004.
- Robidoux, LCol S. "Briefing Note for CDS Action Team 1: CF Responsibility for Intelligence Gathering and Dissemination within Canada." Ottawa: 15 March 2005:
  2. Quoted in Dr. Brad Gladman, *Enabling Appropriate Freedom of Action at the Operational Level: The Legal Authorities for the Conduct of Domestic Operations*. Technical Memorandum 2006-17. (Ottawa: Centre for Operational Research and Analysis, Defence Research and Development Canada, 2006), 12.
- Thatcher, Chris. "A Pan-Government Approach to Marine Security." *Vanguard* (October/November 2006). Journal on-line; available from <a href="http://www.vanguardcanada.com/MSOCThatcher">http://www.vanguardcanada.com/MSOCThatcher</a>; Internet; accessed 18 January 2008.
- The World Factbook. "Canada." <u>https://www.cia.gov/library/publications/the-world-factbook/geos/ca.html</u>; Internet; accessed 9 March 2008.
- Till, Geoffrey. *Seapower A Guide for the Twenty-First Century*. London: Frank Cass, 2004.

- United States. U.S. Coast Guard Office of Public Affairs. "Collaboration: The Pathway to Maritime Domain Awareness Success." <u>https://www.piersystem.com/go/doc/786/76787;</u> Internet; accessed 18 January 2008.
- Weeks, Carly. "Canadians Fear National Security Measures Threaten Privacy." CanWest News, 18 October 2007; <u>http://www.proquest.umi.com</u>; Internet; accessed 21 January 2008.
- Winter, Donald C. *Maritime Domain Awareness (MDA) Capability*. The Secretary of the Navy: 20350-1000, 17 May 2007.