

USAWC STRATEGY RESEARCH PROJECT

MARITIME DOMAIN AWARENESS: A WESTERN HEMISPHERE IMPERATIVE

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ABSTRACT

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The National Strategy for Maritime Security states terrorists will most likely transport weapons of mass destruction into the United States via the maritime domain. Maritime domain awareness (MDA) is the understanding of the situation at sea to enable maritime security. Development of a comprehensive maritime domain awareness program is critical in preventing another terrorist attack on the United States. The focus of this project is to research a question posed by U.S. Northern Command concerning whether Canada and the United States should enter into a bi-national agreement for maritime domain awareness. My research lead me to the conclusion that to truly develop maritime domain awareness that will protect America, a Western Hemisphere multinational treaty organization of willing states needs to be established to develop a common operational picture of the maritime domain. The project lays out a three-phase approach to establishing this organization, beginning with establishing a bi-national agreement with Canada. Phase 2 is bringing Mexico into the organization, which would include the transformation of Joint Interagency Task Force South into the Western Hemisphere Maritime Domain Awareness Center. The final phase develops the organization fully with willing nations in the Western Hemisphere contributing what they can to develop a complete regional common operational picture.

MARITIME DOMAIN AWARENESS: A WESTERN HEMISPHERE IMPERATIVE

This project started researching a question posed by U.S. Northern Command: "Should Canada and the United States pursue a treaty or agreement for bi-national maritime domain awareness?"¹ Because of my research, I have concluded that the United States should expand on this concept and seek to enter into a treaty with nations in the Western Hemisphere in addition to Canada to develop broad comprehensive maritime domain awareness (MDA) program that will enable protection of America from all approaches, not just from the north.

With its vast shoreline and adjacent waters, the United States is extremely susceptible to attacks and infiltration from the maritime domain. The greatest challenge faced in securing this area is establishing a mix between security and the free flow of commerce, which is vital to America's economic well-being. The United States is a maritime nation, with 98,000 miles of shoreline and 3.5 million square miles of water within the exclusive economic zone.² America relies upon the sea to transport over 90% of the imports and exports into and out of this country. As seen during the dockworkers strikes in the west coast ports in 2002, a disruption of the flow of commerce into the country can cause significant disruption in the distribution of goods and a severe loss of dollars and trade to the economy. The maritime domain, which "...encompasses all U.S. ports, inland waterways, harbors, navigable waters, Great Lakes, territorial seas, contiguous waters, customs waters, coastal seas, littoral areas, the U.S. Exclusive Economic Zone, and oceanic regions of U.S. national interest, as well as the sea lanes to the United States, U.S. maritime approaches, and the high seas surrounding America,"³ has always been and continues to be an important environment for America. According to the National Plan to Achieve Maritime Domain Awareness:

There are few areas of greater strategic importance than the maritime domain. The oceans are global thoroughfares that sustain our national prosperity and are vital for our national security. Distinct from other domains (e.g. air and space), the maritime domain provides an expansive pathway through the global commons.⁴

The National Strategy for Maritime Security states terrorists will most likely transport weapons of mass destruction (WMD) into the United States via the maritime domain.⁵ Al Qaeda and other transnational terrorist organizations know that we are dependent upon the seas and they want to exploit that dependency. The narco-terrorists from Columbia and other South American countries know and try to exploit the fact that there is more shoreline than can possibly be covered by surveillance. It is also a means by which terrorists may be smuggled into and out of the U.S. This paper will state that there are three phases required to establish

America's premier maritime domain awareness. First, continue and expand upon the close coordination between America and Canada in data sharing and fusion for MDA. Second, establish a maritime domain awareness bi-national organization with Canada to maintain a shared maritime domain Common Operational Picture (COP). Third, U.S., Mexico, and Caribbean, Central and South American nations should be included in a multinational treaty organization that will provide our hemisphere an optimum MDA program that benefits national decision makers. This will include the transformation of Joint Interagency Task Force South (JIATF-South) into the Western Hemisphere Maritime Domain Awareness Center for fusion of the maritime domain common operational picture. Additionally, research the feasibility of combining U.S. Northern Command (NORTHCOM) and U.S. Southern Command (SOUTHCOM) with the goal of enhancing command and control of MDA information related to the defense of the United States, improve unity of effort in developing international agreements that assist in defense of the parties involved, and enhancement of relations with countries in the Western Hemisphere.

What is Maritime Domain Awareness?

The National Plan to Achieve Maritime Domain Awareness defines MDA as "...the effective understanding of anything associated with the global maritime domain that could impact the security, safety, economy, or environment of the United States."⁶ A good analogy is to equate MDA with air traffic control and the role of the North American Aerospace Defense Command (NORAD). A transponder in every aircraft flying over the skies of the United States tracks their movements and provides the Federal Aviation Administration (FAA) with data about the aircraft. Data provided by the transponder includes the aircraft's flight number, altitude, airspeed, and destination. A hijacked plane can also send distress signals to air traffic controllers via the transponder. NORAD, which is "...responsible for aerospace warning and aerospace control for Canada, Alaska, and the continental United States,"⁷ also receives this information. NORAD then determines if there is a threat to the United States or Canada and directs a response as appropriate. This is aerospace domain awareness and is the enabler for aerospace defense. Maritime domain awareness is the enabler for maritime domain security.

Common Operational Picture (COP) is the centerpiece of Maritime Domain Awareness. To create the national maritime COP, U.S. Northern Command obtains information, intelligence, and knowledge from various intelligence centers throughout the United States. Once collected, the best course of action can then be determined to defeat the potential threat. In order to utilize this information in defense of America, every organization involved in MDA must work

together to collect, analyze, display, and disseminate the intelligence. Some of the intelligence centers that feed NORTHCOM include the USCG's Intelligence Coordination Center (ICC) and the U.S. Navy's Office of Naval Intelligence (ONI), which are co-located at the National Maritime Intelligence Center. The National Plan to Achieve Maritime Domain Awareness states: "[b]y delivering these elements in a manner quickly and easily comprehended, MDA shortens decision cycles and enables decisive operational response."⁸

According to Mr. Jeffery High, Director of the Coast Guard's Maritime Domain Awareness Program Integration Office, "The COP will be shared by various partners within the maritime domain. ...It also can be shared with allies and coalition partners at the appropriate level of security access."⁹ Under the current structure, the United States shares this MDA, at the appropriate classification, with Canada to enhance the security of both countries. Likewise, the elements of maritime domain awareness obtained by Canadian Marine Security Operations Centers (MSOCs) fuse with NORTHCOM's MDA. The better the information sharing between Canada and the United States, the more secure the North American maritime domain will be.

National Plan to Achieve Maritime Domain Awareness

The federal government has developed numerous strategies to provide for the defense and security of the United States. The importance of the maritime domain and the need for understanding the happenings at sea to protect the nation is a common theme throughout the various strategies for national defense. As stated in the March 2005 National Defense Strategy of the United States of America defending the United States against attack is the number one priority for the United States military.¹⁰ Furthermore, defending U.S. citizens and interests at home and abroad is the fourth stated goal of the National Strategy for Combating Terrorism.¹¹ Attainment of domain awareness is the second of five stated objectives in pursuit of this goal. The National Strategy for Maritime Security recognizes domain awareness as vital in supporting the maritime security strategy, which has as a supporting plan to achieve Maritime Domain Awareness.¹² In order to protect the United States from threats in the maritime domain, whether from a nation-state or transnational organization, the National Plan to Achieve Maritime Domain Awareness lists three strategic goals:

Enhance transparency in the maritime domain to detect, deter, and defeat threats as early and distant from U.S. interests as possible;

Enable accurate, dynamic, and confident decisions and responses to the full spectrum of maritime threats; and

Sustain the full application of the law to ensure freedom of navigation and the efficient flow of commerce.¹³

It also delineates four ways to achieve these strategic objectives are through unity of effort, information sharing and integration, defense in depth, and the safe and efficient flow of commerce.¹⁴

In all of these strategies, key to establishing and maintaining our national security is international cooperation. There is a lot of information that makes up a common operational picture, there are a number of organizations, both domestically, and in other countries, that gather information relative to the maritime domain. Although there is some cooperation and sharing between these organizations, more work is required.

Current Maritime Domain Awareness Initiatives

There are initiatives in the U.S. Pacific Command's area of responsibility to improve sharing of MDA with other countries; the critical trade route choke points such as the Straits of Malacca and Singapore are its primary focus. Designed to enhance maritime security in the Malacca Straits region of Asia, the Regional Maritime Security Initiative pursued by U.S. Pacific Command will fuse together the MDA of participating countries to help prevent the proliferation of WMD/illegal substances and improve the security response to detected threats.¹⁵

The U. S. Northern Command, which is responsible for defense of the homeland, has only developed a limited working relationship with Canada concerning North American MDA. There has been much talk on the establishment of a maritime North American Aerospace Defense Command (NORAD) type organization with Canada to establish North American MDA, and the memorandum of understanding for NORAD is due for renewal in the spring of 2006. However, the best example of an organization that combines the power of the United States and her western hemisphere neighbors is the Joint Interagency Task Force, South, (JIATF-South) under command of the United States Southern Command.

Unity of effort is a critical enabler in the attainment of the stated goals and international cooperation is paramount in unity of effort. Although a key component in the unity of effort, international cooperation is dependent upon voluntary participation by a nation. The Department of State (DOS) is responsible for forging international agreements and initiatives with foreign governments and international organizations. To lead the efforts in the international arena, DOS has developed the International Outreach Coordination Strategy that recognizes the voluntary participation of nations in securing the global maritime domain, but also sets the groundwork for nations to work with the United States to establish international security regimes contributing to global MDA.¹⁶ Additionally, DOS has developed a Partner Capacity Building to combat WMD terrorism initiative which

“...refers to the process of collaboration between two or more organizations from distinct nations leading to the effective and efficient transfer of best practices capabilities – skills, expertise, procedures, laws, systems, equipment, and technology – to enable a more robust global defense against terrorist attacks involving nuclear, biological, chemical, or radiological weapons or materials.”¹⁷

DOS (through the Office of Transportation Policy in the Bureau of Economic and Business Affairs and the Office of Oceans Affairs in the Bureau of Oceans and International Environmental and Scientific Affairs) works with other federal agencies such as the DOD, DOJ, and DHS to develop MDA programs in the international arena. The United States has signed two Proliferation Security Initiative Ship Boarding Agreements with the countries of Panama and Belize. These agreements allow the parties to intercept ships suspected of transporting WMD, their delivery systems, and related materials. It also calls for the sharing of operational information on the detection and location of suspect ships.¹⁸ Greater coordination and cooperation is required from other western hemisphere nations to further the MDA required to protect all the countries.

Following the tragic events of September 11, 2001, Congress passed, and President Bush signed into law, the Maritime Transportation Security Act of 2002. This act provided several benefits to the development of MDA. First, section 70113 Maritime intelligence states, “[t]he Secretary shall implement a system to collect, integrate, and analyze information concerning vessels operating on or bound for waters subject to the jurisdiction of the United States, including information related to crew, passengers, cargo, and intermodal shipments.”¹⁹ The term secretary is the secretary of the department the USCG is operating in, at this time, meaning the Secretary of Homeland Security. Other departments of the federal government and agencies receive this information as required to enhance further the maritime domain awareness of the United States.

A second section of this act stipulates that the Secretary shall conduct foreign port assessments to determine the effectiveness of antiterrorism measures of the port. The Coast Guard proposed the enactment of this assessment to the International Maritime Organization for inclusion as an amendment to the International Convention for the Safety of Life at Sea (SOLAS). In 1914 in response to the RMS Titanic catastrophe, the international community adopted SOLAS. Its purpose was to improve the safety of merchant ships at sea. It regulated safety equipment and procedures including the number of lifeboats required on ships, damage control equipment, and the necessity for a continuous radio watch. SOLAS has continually evolved in an effort to in an effort to improve safety at sea. Adopted in December 2002 and

enacted in July 2004 as Chapter XI-2 – Special measures to enhance maritime security became part of SOLAS.²⁰

The United States Coast Guard (USCG) has established teams to visit foreign countries to assess their compliance with these requirements. From these visits, the USCG obtains intelligence that determines the security of port facilities and establishes relationships with the port authorities, which leads to an increased sharing of information between the two countries. As of October 2005, the Coast Guard has visited 39 countries and found 34 to comply with the International Ship and Port Facilities Security Code (ISPFSC) requirements. These 39 countries account for approximately 78% of the last ports of call of ships entering the United States.²¹

Additional amendments to SOLAS include the requirement for a security alert system in all ships that can transmit a signal to competent authorities ashore indicating a security issue with the ship. The navigation bridge and a secondary location can activate the system and it must identify the type of security alert. Governments are also required to set security levels in their countries with which ships must comply.

Another aspect of the ISPFSC calls for the installation of an Automatic Identification System (AIS) on ships over 300 tons. The AIS identifies the ship name, course and speed, classification, call sign and registration number.²² Additionally, ships are also now required to provide the USCG with 96 hour's notification prior to entering United States waters. The previous requirement was 24 hours. These requirements further enhancement of maritime domain awareness.

Focus is on improvement of international cooperation with regard to MDA. The Canadian National Security Plan of April 2004 calls for closer cooperation between the United States and Canada on maritime defense. Specifically, it calls for the establishment of MSOC headed by the Canadian Forces Maritime Command. These MSOCs "...will have the authority and capacity...to bring to bear all civilian and military resources necessary to detect, assess, and respond to a marine security threat."²³ The MSOCs will share information with the USCG Operations Centers to create a common operational picture for North American MDA. Further, the United States and Canada have established a Bi-national Planning Group (BPG) with personnel from the United States Northern Command (NORTHCOM) and the Canadian military to review existing contingency plans and develop new security strategies related to the maritime domain, among other areas. According to the Canadian Department of National Defence, the BPG has already "...[w]orked to enhance North American maritime defence by facilitating the development of shared strategic maritime awareness and the improvement of intelligence and

information sharing between Canada and the United States.”²⁴ This includes the stationing of a Canadian liaison officer at NORTHCOM to facilitate sharing information between Canada and the United States. There is close coordination between these two countries that dates back to 1958 with the creation of NORAD and continues today.

In the effort to continue development of North American security and prosperity, Canada, Mexico, and the United States established a Security and Prosperity Partnership (SPP) on March 23, 2005. The goal is to “...establish a common approach to security to protect North America from external threats, prevent, and respond to threats within North America, and further streamline the secure and efficient movement of legitimate, low-risk traffic across our shared borders.”²⁵ While not as specific as the Canadian National Security Plan’s call for cooperation and sharing of information between countries, the SPP does call for the strengthening of information sharing and coordinated operations in the maritime domain.²⁶ Other than the previously mentioned agreements with Belize and Panama, there are no specific bi-national or multi-national agreements with other Western Hemisphere nations on developing MDA. Continuing efforts are required with other countries in the Western Hemisphere to broaden U.S. maritime domain awareness.

Proposed Maritime Domain Awareness Initiatives

Developing a more secure North American maritime domain is a good start to securing the approaches to America, however, the real solution is the development of a western hemisphere MDA common operational picture that incorporates all countries. This long-term goal will require the cooperation of Departments of State, Homeland Security, Defense, and other organizations of the United States government. A three-phase solution to development of western hemisphere MDA is required. First, continue with the bi-national efforts already underway with Canada. Second, expand the scope of the Security and Prosperity Partnership to develop MDA that combines Canadian, Mexican, and American assets for a fused picture. Third, include other western hemisphere countries to the same level as our Canadian partnership, with the functionality of JIATF-South.

The current efforts between the United States and Canada focus on developing an information exchange similar to NORAD. This will result in actionable intelligence for the two countries to provide to decision makers in the maritime domain. Sharing of this actionable information between Canada and the United States allows each country to provide assistance when required. According to Admiral Thomas H. Collins, Commandant of the USCG, “We [Canada and the United States] are conducting joint, reciprocal maritime law enforcement

operations in each other's waters. The goal is to leverage our intelligence and operational partnership to serve as a force multiplier and increase the security of both our nations."²⁷ Per the Canadian National Security Plan, the bringing together of the Canadian MSOCs and the USCG Operations Centers would lead to coordinated efforts to target and intercept threats that have been detected by the two sets of operations centers.²⁸ Canadian Royal Canadian Mounted Police and American Coast Guard are working together on this endeavor, sharing information and conducting combined interceptions of suspect vessels as well as working in each other's territorial waters. This is an example of North American MDA providing information to protect more than just the United States and recognizes the importance of working with our border nations to improve our collective security.

Follow-on to the current efforts of Canada and the United States would be to integrate fully their respective MDA. Each country is currently developing its own maritime COP through their respective organizations and then sharing limited information with the other country through liaison officers. An organization like NORAD would synthesize the information from both countries and provide a coordinated response, should one be required. A maritime NORAD co-manned with Canadian and American personnel receives input from both countries' information-gathering systems, the National Maritime Intelligence Center for the United States, and the MSOCs from Canada. The fused information would be near-real time that maritime commanders would have access to and enable quicker, more fully informed decisions, thus improving the chances of preventing a terrorist attack. Per the National Strategy for Maritime Security, "[w]herever feasible and operationally effective, agencies should co-locate in multiagency centers to facilitate direct interaction and efficient use of limited resources."²⁹ The benefits also apply to the international cooperation required to achieve maritime domain awareness for North America. A maritime NORAD organization that can fully fuse the MDA of both countries will be greater than the sum of individual parts. The costs of developing this combined COP should be minimal, given the current infrastructure in place at NORAD. Additionally, the organization already in place will allow for a quick stand-up of a maritime domain awareness section of NORAD to implement this policy with little risk. NORAD already has the infrastructure required to fuse the data collected, display it, and disseminate the information to the operational commanders.

The advancement of Canadian-U.S. MDA will greatly reduce the risks of a terrorist attack against the either country from the maritime domain, at least from the northern approaches to the two countries. There is still a vast area of the maritime approaches to the United States from the south. Phase two in development of United States maritime domain awareness

requires Mexico to join the efforts of Canada and the United States to further complete this picture. The Security and Prosperity Partnership signed between the three countries addresses the need to develop coordinated operations and information sharing in the maritime domain. Commander, U.S. Northern Command, Admiral (ADM) Timothy J. Keating stated in his testimony to the Senate Armed Services Committee on March 15, 2005 that NORTHCOM is working to improve relations with Mexico and the United States military.³⁰ In the maritime domain specifically, NORTHCOM is assisting Mexico to make operational their newly purchased E-2C Hawkeye command and control aircraft for utilization in the attainment of MDA. Further, his staff has held senior level meetings with members of the Mexican military to enhance the relationships and build trust between the two countries. ADM Keating also testified to continued support to Mexico via the Foreign Military Finance program.³¹ This program can assist Mexico in developing their MDA infrastructure and a common operational picture that is compatible with the U.S. and Canadian COP. Further, Canada and the U.S must extend an invitation to Mexico to join in NORAD and its maritime organization.

Mexico and the USCG already enjoy a certain level of cooperation that can further improve relations between the two countries. The Joint Interagency Task Force-South working the narco-terrorist threat from South America has established a working relationship with Mexico. There is a sharing of information between JIATF-South and the Mexican government regarding potential movement of drugs into their country. This is the precursor to the sharing of MDA with Mexico and the U.S. The vast majority of trafficking coming from South America is via the sea. Inclusion of Mexico in America's maritime domain awareness falls in line with the requirements of the National Strategy for Maritime Security

The final step in the development of western hemisphere Maritime Domain Awareness is the inclusion of all nations in the hemisphere to vastly increase the level of MDA and security against terrorist attacks and proliferation of WMD/E. The ability to share and fuse the MDA information of each of these nations in a single center would provide an immeasurable increase in the protection of the maritime domain of North America. Here too, NORAD and JIATF-South provide the ideal beginning of a western hemisphere MDA organization. JIATF-South has much to offer in the way of developing a Western Hemisphere MDA.

JIATF-South is a true American interagency task force. It combines the power of the United States military with the law enforcement arm of the federal government, including the Drug Enforcement Agency, the Federal Bureau of Investigation as well as the Customs and Border Patrol Agency, the Defense Intelligence Agency, the Central Intelligence Agency, the National Security Agency and the National Geo-Spatial Intelligence Agency. Their mission is to

track boats and planes coming up from Columbia and surrounding countries to identify and intercept those that are attempting to smuggle drugs into the United States and her neighbors. JIATF-South then shares this information with certain Caribbean nations and Mexico, as well as Columbia, to create a common operational picture used to intercept the narco-terrorists before they can reach the shores of America and her neighbors.

This is the model organization required to collate the data collected about the maritime domain and develop true western hemisphere maritime domain awareness. JIATF-South has a very successful history of intercepting narco-terrorists before they can reach the shores of America and sell their drugs to our children. JIATF-South should grow into the Western Hemisphere maritime domain awareness center consolidating a comprehensive MDA common operational picture to prevent other terrorists from utilizing the sea as a means to exploit seams in our maritime defense.

While Canada already has a mature maritime domain awareness organization, the majority of nations in the Western Hemisphere do not. These nations require assistance from NORTHCOM, SOUTHCOM, and DOS to develop the ability to integrate with the U.S. and Canadian military forces. Mexico and the Caribbean nations do not have the equipment, such as ground-based radar, necessary to track all the vessels operating in their maritime domain, nor do they have the infrastructure to share the information, as Canada does. Further, the U.S. and Canadian forces would have to conduct training with these countries to develop their ability to operate in a combined environment.

The Department of State will be critical in the execution of this effort. One of the strategic goals listed in the DOS's International Outreach Coordination Strategy is to enhance outreach to foreign governments to solicit support for improved global maritime security. Coordination of U.S. technical assistance to promote effective maritime security in critical regions is one of its strategic objectives.³² Through this program, DOS should assist nations in the western hemisphere in developing the critical capabilities required to develop their maritime domain awareness and ensure its integration with the U.S. and Canadian common operational picture.

The U.S. Northern Command needs to enter into multinational agreements to incorporate their MDA into a complete western hemisphere organization dedicated to maritime security for the benefit of all. This multi-party alliance has several benefits over a bi-national agreement. First, it allows for growth, as other countries observe the benefits of the organization and desire to join, similar to what is happening in Europe with NATO. Second, it would require Senate ratification, which, once approved, will indicate an increased level of support to our allies and neighbors, support of the philosophy of a North American MDA, and most importantly, funding.

Recommendations

The hard work underway by the Departments of State, Homeland Security, and Defense to build a multinational system to combat terrorism and counter proliferation of WMD/E are laudable. A three-phased approach to complete the MDA picture is required. DOD is currently working with Canada to enhance MDA and is exploring the next logical step of establishing a maritime organization similar to NORAD. This effort, considered phase 1, fully integrates the maritime domain awareness of both countries to improve mutual self-defense.

Phase 2 consists of incorporating Mexico in the MDA with the U.S. and Canada. U.S. Northern Command is working closely with Mexico to increase the sharing of information and cooperation between the militaries of both countries. To prevent possible terrorist attacks coalescence of these three countries' maritime domain awareness into a common operational picture is required and NORTHCOM should pursue this goal.

U.S. Southern Command, through JIATF-South is doing an exceptional job in preventing narco-terrorists from entering the United States. To complete the entire MDA for America, the U.S. should pursue the integration of all nations in the Western Hemisphere in a mutual treaty. Evolving JIATF-South into the Western Hemisphere Maritime Domain Awareness center fusing the common operational picture of participating nations boosts the chances of countering proliferation of WMD/E and prevention of further terrorist attacks.

As a potential follow-on study, examine combining NORTHCOM and SOUTHCOM to provide unity of effort and stronger command and control for defense of the United States. Command and control of a combined western hemisphere MDA is just as important as the generation of intelligence. MDA enables decision makers in dealing with potential threats from the maritime domain. Having separate combatant commands responsible for the western hemisphere could delay the movement of information to those decision makers and result in a catastrophic terrorist attack. The current arrangement prevents a single combatant commander from developing maritime domain awareness that covers all approaches to the United States. This single chain of command supplies the unity of effort vital in protecting the citizens of this country.

Conclusion

This project evolved from research into the utility of the U.S. and Canada entering into an agreement on maritime domain awareness to considering the proper requirements of the United States in preventing a terrorist attack from the maritime domain. Considering the belief stated in the National Strategy for Maritime Security, "...the maritime domain is the likely venue by which

WMD will be brought into the United States,³³ it is important that the America's MDA be as expansive as possible. The ongoing efforts to develop shared maritime domain awareness with Canada is an excellent first step, and considered the precursor of phase one in this paper. The cooperation and coordination between United States and Canada provide the groundwork for enhanced MDA. Phase one of this project calls for an integrated organization, similar to NORAD that focuses on the maritime domain of Canada and the United States. Providing a fused common operational picture from both countries will greatly increase their protection against future terrorist attacks and stop the proliferation of WMD/E.

Inclusion of Mexico in the sharing of MDA, ideally with a multinational co-manned command that fuses information related to the maritime domain of all three countries consists of phase two. Mexico and the United States share a border on two coasts that is open for infiltration by terrorists. Narco-terrorists already attempt to penetrate the vastness of this border to smuggle drugs in both countries that also make it to Canada. Prevention of proliferation of WMD/E and terrorists via these same corridors is the goal for this phase.

A broader perspective requires a multi-national organization inclusive of other countries in the Western Hemisphere, which makes up phase 3. Developing JIATF-South into the operations/intelligence center for the maritime domain would mutually benefit all participating nations. More information available to decision makers and law enforcement agencies increases the opportunity to interrupt the flow of illegal shipments and WMD/E. An organization based on the successes of JIATF-South will deliver this intelligence for the protection of all.

The National Strategy for Combating Terrorism sets the goal of defending U.S. citizens and interests at home and abroad and emphasizes the attainment of domain awareness as critical to achievement of this goal.³⁴ A full court press to develop a multi-lateral agreement including U.S., Canada, Mexico and all nations in the western hemisphere in support of a Maritime Domain Awareness combined Common Operational Picture is needed to ensure the safety and security of U.S. citizens and interests at home as well as our allies and neighbors. With over 94,000 miles of shoreline in the United States and the world's oceans transporting over 80% of the global trade, America cannot go it alone when it comes to development of a secure maritime domain.

Endnotes

¹ Strategic Studies Institute, *USAWC Key Strategic Issues List 2005*, (Carlisle, PA: Strategic Studies Institute, July 2005), 48

² Condoleezza Rice, *International Outreach and Coordination Strategy* (Washington, D.C.: United States Department of State, November 2005), 2

³ Thomas H. Collins, *The U.S. Coast Guard Maritime Strategy for Homeland Security* (Washington, D.C.: U.S. Coast Guard Headquarters, December 2002), 34

⁴ George W. Bush, *National Strategy for Maritime Security: National Plan to Achieve Maritime Domain Awareness* (Washington D.C.: The White House, October 2005), 2

⁵ George W. Bush, *National Strategy for Maritime Security* (Washington D.C. The White House, September 2005), 4

⁶ Bush, *National Strategy for Maritime Security: National Plan to Achieve Maritime Domain Awareness*, ii

⁷ U.S. Northern Command – About Us; available from http://www.northcom.mil/about_us/about_us.htm; Internet; access 18 February 2006

⁸ Bush, *National Strategy for Maritime Security: National Plan to Achieve Maritime Domain Awareness*, 9

⁹ Jeffery P. High, *U.S. Coast Guard's Maritime Domain Awareness Efforts Before the Subcommittee on Coast Guard and Maritime Transportation Committee on Transportations and Infrastructure U.S. House of Representatives October 6, 2004*, available from <http://www.house.gov/transportation/cgmt/10-06-04/high.pdf>; Internet; accessed 27 November 2005.

¹⁰ Donald Rumsfeld, *National Defense Strategy* (Arlington, VA: Pentagon, March 2005), iv

¹¹ George W. Bush, *National Strategy for Combating Terrorism* (Washington D.C.: The White House, February 2003), 11

¹² Bush, *National Strategy for Maritime Security*, ii

¹³ Bush, *National Strategy for Maritime Security: National Plan to Achieve Maritime Domain Awareness*, 2

¹⁴ *ibid*, 4

¹⁵ ADM Tom Fargo; available from <http://131.84.1.218/speeches/sst2004/040503milops.shtml>; Internet; accessed 22 January 2006

¹⁶ Rice, *i-ii*

¹⁷ *Partner Capacity Building*, Department of State website, available from <http://www.state.gov/t/isn/c16587.htm>; Internet; accessed 17 February 2006.

¹⁸ *Proliferation Security Initiative Ship Boarding Agreement with Belize, Proliferation Security Initiative Ship Boarding Agreement with Panama*; available from <http://www.state.gov/t/isn/trty>; accessed 17 February 2006.

¹⁹ *Maritime Transportation Security Act, U.S. Code*, vol 46, sec 70113

²⁰ *International Convention for the Safety of Life at Sea (SOLAS), 1974*, Chapter XI-2

²¹ Admiral Thomas H. Collins, Address to Homeland Defense Symposium, "Developing an Integrated Approach to Maritime Security in the Post 9/11 Era", 25 October 2005; available from http://www.uscg.mil/commandant/speeches_collins/102405_def%20symposium_remarks.doc; Internet; accessed 28 November 2005.

²² *What is the Automatic Identification System (AIS)?*; available from <http://www.navcen.uscg.gov/enav/ais/default.htm>; Internet; accessed 17 February 2006.

²³ Paul Martin, *Securing an Open Society: Canada's National Security Policy* (Ottawa, Ontario, Canada: 24 Sussex Dr, April 2004), 38-39, available from http://www.pco-bcp.gc.ca/docs/Publications/NatSecurnat/natsecurnat_e.pdf, accessed 17 February 2006.

²⁴ Enhanced Canada-U.S. Defence Cooperation and the Bi-National Planning Group, *Department of National Defence/Canadian Forces News Room*, available from http://www.forces.gc.ca/site/newsroom/view_news_e.asp?id=1528; Internet; accessed 29 November 2005.

²⁵ *Fact Sheet. Security and Prosperity Partnership*, available at <http://www.dhs.gov/dhspublic/display?content=4553>; Internet; accessed 17 December 2005.

²⁶ *ibid*

²⁷ Collins, Address to Homeland Defense Symposium, "Developing an Integrated Approach to Maritime Security in the Post 9/11 Era"

²⁸ Martin, *Securing an Open Society: Canada's National Security Policy*

²⁹ Bush, *National Strategy for Maritime Security*, 22

³⁰ Admiral Timothy J. Keating, Statement of Admiral Timothy J. Keating, Commander United States Northern Command to the Senate Armed Services Committee on March 15, 2005; available from http://www.defenselink.mil/dodgc/olc/docs/test05-03-15Keating_SASC.doc; Internet; accessed 18 February 2006.

³¹ *ibid*

³² Rice, *International Outreach and Coordination Strategy*, 7

³³ Bush, *National Strategy for Maritime Security*, 4

³⁴ George W. Bush, *National Strategy for Combating Terrorism* (Washington D.C.: The White House, February 2003), 11