

## **MARITIME DOMAIN AWARENESS (MDA): A Profound Concept for Indonesia**

### *Abstract:*

*Maritime Domain Awareness (MDA) is an earlier concept that reemerged in awareness following the attack on the World Trade Center (WTC) in New York on 9/11/2001. That event raised serious concerns of a possible seaborne attack that adversaries of a state could launch. The concept received worldwide attention as the concern for maritime security grew rapidly with the volume of ocean commerce increasing significantly. The increasing number of piracy involving armed robbery at strategic choke points, notably the incidents of Somalian pirates, raised awareness of maritime authorizes and private stakeholders to the evolving threat. Indonesia, the largest archipelagic country in the world, was among those countries that paying attention to this trend, and trying to apply the MDA concept. This paper is intended to inform others of the essence of the MDA concept in order for maritime decision-makers to take advantage of its precepts. It serves also to raise general awareness of the dire problems in maritime security within the maritime domain of Indonesia. Further, it serves to emphasize that Indonesia must prioritize national and governmental emphasis on its maritime domain to regain its rightful position as a major maritime axis in world commerce. This goal can only be accomplished with the pursuit of a holistic effort of the all maritime elements involved to implement the concept of Maritime Domain Awareness (MDA) in the country.*

### **Introduction**

The vital role of the maritime domain can be traced back a long way in history; indeed, the use of sea lanes by merchant shipping began in the early days of civilization. Its fundamental role as a conduit for trade and commerce has evolved and grown over the time. Nowadays, the

maritime domain is the host for more than half of the global economy. World waterways provide the veins for global commerce in the tremendous traffic of satisfying global supply and demand. Water covers more than 60% of the earth's surface, adding another spatial dimension and environment to be studied and understood if man expects to be able to overcome its hazards and make use of its advantages. Despite man's advanced technology, there are still many aspects of the maritime environs that remain mysterious and unpredictable. This factor of dynamic unpredictability is of constant concern for all maritime users, who must always be prepared for natural phenomena to present them with undesirable, if not disastrous, circumstances. Combine this with the man-made threats of piracy and other crimes conducted at sea, and it becomes evident that the security aspect of maritime activities are greatly compounded. There are initiatives that proposed by authorities in response to this issue.

Notable among initiatives brought forward by various authorities in response to this issue is the Maritime Domain Awareness (MDA) concept developed by the U.S. Coast Guard prior to the 9/11 Attack on New York City in 2001. It was originally an expansion plan of the Coast Guard in Special Interest Vessel (SIV) tracking program which initially examined the means by which specific vessels could be effectively tracked in the broad approaches to the United States.<sup>1</sup> The 9/11 attack forced this initiative to the top priority of the services and simultaneously altered its size, scale, and objectives to the global level. Although the 9/11 attack was airborne, the facts are that the U.S. economy and military are highly dependent on the sea for the livelihood of the nation and the projection of national power.<sup>2</sup> Moreover, the awareness that waterborne attack are extremely likely raised concern over the increased possibility of an enemy gaining access to the

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<sup>1</sup> R.B Watts, *Implementing Maritime Domain Awareness* (Monterey: Naval Postgraduate School, 2006), 1.

<sup>2</sup> National Plan to Achieve Maritime Domain Awareness (Washington D.C.: U.S. Coast Guard, Pre- Decisional Working Draft, 28 April 05), 3.

U.S. homeland by way of the sea. The essential element to defeat these potential threats is the knowledge, especially the information on all activities in the maritime domain.

### **What is MDA?**

Fundamentally, MDA is a concept to gain global information on all of activities occurring within the maritime domain with potential security threats against the U.S. and its interests. This initiative has moved beyond the Coast Guard/Navy tasks, and now involves more departments and agencies in the maritime domain. Although the necessity of MDA implementation at the U.S. strategic level is in accordance with U.S. interests, the enactment of MDA concept remains problematic. The problem lies in the operational deployment of the concept. Covering such a wide spectrum of authorities of agencies in the maritime domain, MDA implementation is faced with two options. One is to use the available resources of all agencies involved. The other is to assign a completely new command structure that has the span of authorities to put MDA concept in force.

Since 9/11, MDA has evolved into a joint interagency effort among the Department of Homeland Security (DHS) - responsible for Homeland Security (HLS) - and the Department of Defense (DOD) - responsible for Homeland Defense (HLD).<sup>3</sup> Within the scope of HLS/HLD operations, MDA does not exercise command and control over operational forces in missions. Concerning the original concept of MDA, it is the process of gathering and disseminating information respective to operations in the maritime domain that operating forces could use in mission accomplishment. MDA is an effort to bring together a wide scope of information from various sources within the maritime institution for the use of the operating forces at the sea. The

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<sup>3</sup> The Coast Guard remains the "Lead Federal Agency" (LFA) for MDA. See Maritime Strategy for Homeland Security (Washington D.C: U.S. Coast Guard, July 2002), 1.

DOD or the DHS or any of the maritime stakeholders, can use the information, intelligence, and products for their operational decision-making and security strategies.<sup>4</sup>

MDA exercises the basic law of the naval warfare principle that the information and location of the adversaries must be known prior to engagement. The MDA concept institutionalizes this principle. The vastness of the maritime domain compounds the effort to locate information on the potential adversaries, let alone the unpredictable environment. This condition is a great advantage to a potential enemy. The challenges given by the nature itself amplify the complexity of the maritime domain. The maritime environment demands the advancement and reliability of technology in providing reliable information for the member of the maritime society in its safe usage continuation of the sea.

The implementation of MDA has to consider the characteristics of the maritime domain that becomes the host environment. The sea is the primary conduit for global economy, acting as the conduit for the sustainability of the world supply. The significant growth of network of global shipping lanes and its vital role in supporting global economy has heightened concerns for its security. Moreover, the increasing number of ships that traverse this network around the world makes sea lane security enormously difficult, in a complex and multi-dimensional environment, to identify specific threats. The problem is already tremendous during the peacetime; and could grow exponentially during conflict, when threats from asymmetric adversaries that could take multiple forms. Assessment of the enemy would be nearly impossible without a sophisticated integrated maritime awareness systems accompanied by the advance surveillance and sensor technology to scrutinize all plausible threats in the maritime environment.

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<sup>4</sup> Concept of Operations (CONOPS): Maritime Domain Awareness, Draft 1.29 (Washington D.C: U.S. Coast Guard, November 2004), 2.

At the strategic level, MDA requires the highest level of analysis, intelligence, and policy in a manner that sufficiently broad in perspective and capabilities. It has to cover all elements in the maritime domain and converge in a joint effort of inter-organizational in the maritime governance. The MDA initiative will certainly entail continuous monitoring of the maritime domain in order to keep the data updated. President Bush elaborated “The heart of the Maritime Domain Awareness program is accurate information, intelligence, surveillance, and reconnaissance of all vessels, cargo, and people extending well beyond our traditional maritime boundaries.”<sup>5</sup> MDA application itself will require a strategy and operational capabilities inherent with the military services that could act as the initial point for the whole MDA system implementation. The military application strategic level planning could be customized for MDA’s purpose with the addition of the distinct characteristics of the maritime domain. While the military is oriented to defense and military command systems and operation, MDA is different in nature regarding its law enforcement role.<sup>6</sup> Its focuses, beside the strategic maritime issues, are on the ability to link and coordinate with other agencies at a strategic level within the same domain. It has to be able to integrate the cross-governmental agencies, gather, analyze, and disseminate data from the vast array of information sources and use them for the benefit of mission accomplishment.

The fundamental focus of MDA, it is not the operational direction of forces, but it is ultimately about awareness and information sharing. This fundamental definition is a key distinction. An MDA center must focus to act as an enabler for organizations to obtain

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<sup>5</sup> Speech (20 January 2002) cited in the “national Plan to achieve Maritime Domain Awareness for the National Strategy for maritime security”, October 2005 in Fang Jau, Irvin L., *“Comprehensive Maritime Domain Awareness: An Idea Whose Time Has Come?”* RSIS, 16 October 2007, 4

<sup>6</sup> Gregory Treverton, “Intelligence: Welcome to the U.S. Government,” in Loch K. Johnson and James J. Wirtz, *Strategic Intelligence* (Los Angeles: Roxbury Publishing, 2004),351

awareness, and not as a forces controller for operational deployment.<sup>7</sup> An MDA center must have the experience in inter-agency operation so it can bridge the gap among the participant agencies. In the maritime environment, this notion is plausible with the existing infrastructure by developing a center for intelligence and information fusion and analysis. This center acts as a medium with an approach to maritime intelligence that will include all the intelligence and information center bodies under the governmental structure. This structure is similar to that of the taken National Maritime Intelligence Center (NMIC) that acts as a node for other governmental centers such as the Office of Naval Intelligence (ONI), the Coast Guard's Information Coordination Center (ICC), and Marine Corps Intelligence Activity (MCIA) with additional active liaison with other law enforcement agencies with interests in maritime domain.<sup>8</sup> With this design, the military structure of the initial setting can be reduced. This link and liaison have increased significantly after the 9/11 attack that evolve around the maritime security and also counter-terrorism on the strategic level.<sup>9</sup> The highlight on the concept of MDA establishment is that in order to achieve a successful MDA implementation will require info-sharing, info-fusion, and a sense making in order to cue responsive intelligence and operational coordination as directed by decision makers backed by relevant maritime legislation and shape by strategy driven policies.<sup>10</sup>

### **MDA FOR INDONESIA: How important it is?**

It is significant to highlight that Southeast Asia is the home of the densest Sea Line of Communication (SLOC) network in the world, with the most prominent being the Malacca

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<sup>7</sup> R.B Watts, *Implementing Maritime Domain Awareness* (Monterey: Naval Postgraduate School, 2006), 33.

<sup>8</sup> Bill Tarry, "Building the NMIC," unclassified briefing to OPNAV, Pentagon, October 2004.

<sup>9</sup> R.B Watts, *Implementing Maritime Domain Awareness* (Monterey: Naval Postgraduate School, 2006), 34.

<sup>10</sup> Irvin L. Fang Jau, "Comprehensive Maritime Domain Awareness: An Idea Whose Time Has Come?" RSIS, 16 October 2007, 3

Strait. Moreover, Indonesian water territory is 80 percent of the whole maritime territory of Southeast Asia. It will be crucial for Indonesia to focus on its maritime domain considering its vast maritime territory. The number of ships that pass through Indonesian territory is increasing significantly along with the global economy growth. This growth means that Indonesia's economy could either be boosted or become vulnerable from the economy increase. Its position between two continents and two oceans places Indonesia in a strategic crossroads of world maritime commerce. In centuries, its position and its maritime composition, was considered its geographical destiny. At the same time the strategic importance of its location makes it susceptible to many threats. Therefore, the option between making Indonesia a maritime power, or being held hostage for its resources, lies in the hand of its people and especially the government. The latter option is obviously not favorable for Indonesia, but is, unfortunately, the path that Indonesia finds itself on at the present time.

The dire warning that comes from the maritime sector is too serious to neglect. Unless Indonesia commits now to making significant changes in its grand strategy, implementing strong legislation, and adopting broad-reaching policies to develop a fundamentally maritime-oriented stratagem, it will relegate itself to mediocrity. Its weak law enforcement at sea, the high-cost economy, and the economic development disparity caused by limited resources and unequal distribution of wealth must be immediately addressed and dealt with, especially in the maritime sector. The ignorance, or lack or willingness of the government to address these issues, along with the absence of a robust national maritime strategy, could greatly decrease Indonesia's geographical advantage. Its current apparent indifference to the problems at hand will result in a distinct loss of influence in its own maritime domain. The absence of realistic governance can be taken advantage of by other entities beside the legitimate state. Those entities could take the form

of local warlords, insurgency, terrorist groups, or other non-state actors. It could also end up in a claim of the ungoverned areas by another state. Harsh evidence of this is the case of Sipadan-Ligitan islands, claimed by the Malaysian government, and arbitrated in their favor by the International Court of Justice (ICJ) in 2002. The ICJ based its judgment on the basis 'effective occupation' meaning that Malaysia was taking care of the people on those islands more than the rightful owner, Indonesia, which, in effect, had abandoned them. The other result of lack of adequate governance of troubled sea areas is highlighted by recurring instances of illegal fishing, oil smuggling, illegal logging, human trafficking, and drugs trafficking. These illegal activities occur at staggering rates on a daily basis using Indonesian waterways as their conduit. Although occasional interdictions are made, and even fewer convictions have been obtained, the larger portions have gone unnoticed or ignored.

The insufficient resources, infrastructures, and funding are not solely to blame for the current problems, although they are often offered as scapegoats for the government's inability to control the issues. A more basic problem is that of a debilitating lack of collaboration among the agencies and government stakeholders in the maritime domain.

In a basic collaboration continuum, the Coordination phase is on the left, representing the least advanced; the Cooperation stage is in the center, and the Collaboration stage is at the right, approaching the goal of full collaboration. The meager steps that Indonesia has taken so far remain in the coordination phase. The revitalization of the Indonesian Maritime Security Coordinating Board (IMSCB) in 2005 was, and unfortunately still is, accompanied by continuing reluctance of other institutions within the government stakeholders to participate in its coordination effort. Conflicts of interest continue to arise due to different interpretations of various legislative declarations by the agencies involved. Some agencies assert their delegated



power to exercise certain authorities over various maritime issues, unwilling to relinquish that authority to a newly established body. The failure of the government to override such parochial entrenchment allows the problems to continue, and perpetuate the ineptitude of the maritime sector caused by the bureaucratic and operational power struggles. The maritime sector direly needs firm leadership through strong governance to meet the challenges of today, much less the greater challenges of the future..

Governance within the maritime sector will always be presented with distinct challenges that the land-based governance does not have. The nature of fluidity of the sea has three difficult consequences for governance. The first, is that it is always fluid, making it all but impossible to mark a clear border on the sea by fixing an installation in a point on the sea surface. Second, the looming unpredictability of the environment, with conditions often changing without warning, makes any preparation for pre-planned actives more difficult. Third, the sea itself is multi-dimensional domain, with varying conditions occurring simultaneously at any particular geographical location. It will distinguish itself from the air column, surface, water column, seabed and subsoil, with each of them being different in nature.<sup>11</sup> These difficulties demand a higher and more advanced technology to understand it, and a different management of governance.

In the situation and condition such as Indonesia, where vast area and multi-dimensional maritime environment present, the effort will not be sufficient in the technology effort – although it is also very crucial – but it will also require the presence of the inter-organizational collaboration. This effort will include the information sharing process and joint operation. The MDA concept will juxtapose the information sharing process to a new level that it will be

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<sup>11</sup> Robert Cribb and Michelle Ford, "Indonesia as an Archipelago: Managing Islands, Managing the Seas" in *"Indonesia beyond the water's edge"*, (Singapore:ISEAS publishing 2009), 13

accessible for the use of maritime operational intent and mission oriented. As discussed above, the conquest of these variables will not be achieved in a singular effort. Development and implementation of new technologies, new forms of governance, new ideas and problem-solving approaches must be attained through a process of inter-organizational collaboration. This effort must include the elevation of information-sharing to a new level that can be widely shared and accessed among all maritime assets involved for the accomplishment of operational activities.

The adoption of the MDA concept by the Indonesian government is a logical step to insure the improvement of the management of its maritime domain. This would naturally require adaption of the original U.S. version to allow for the differences in the Indonesian maritime situation. Indonesia's limited infrastructures, inadequate funding, and the lack of political will should not stop the implementation of MDA in the maritime domain. In his book, Admiral Marsetio on Indonesian sea power, he emphasizes the development of the concept of MDA for Indonesia as soon as possible.<sup>12</sup> This piece of thought based itself on the argument of Indonesia's predominant position from the points of view of geo-economy, geo-politics, and geo-strategy. However, this predominant position is not yet been fully recognized nor utilized by the government nor the people of Indonesia. In fact, it has been exploited by Indonesia's neighbors, Malaysia and Singapore, for their own economic interests. This condition should raise the Indonesian government awareness of the strategic importance of the maritime domain in order to the formation of new maritime strategy, thus allowing the development of an integrated maritime system within the scope of maritime security. The development of an effective maritime grand strategy could result in Indonesia regaining its previous role as a predominant maritime power, and again be faithful to its geographic maritime destiny. This destiny has been abandoned by the

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<sup>12</sup> Admiral DR. Marsetio, Maritime Domain Awareness in "Sea Power Indonesia" (Indonesian Defense University, 2014), 54-61

government and the people for centuries because of the intervention of the colonial rule of foreigners. Marsetio emphasizes the absence of a national maritime strategy as an indication of the non-acknowledgement of the government of its maritime orientation. It is fair to say that the Indonesian government does not include maritime perspectives in its policies, let alone have a national strategy, so there are no maritime approaches within its legislation.<sup>13</sup> This fact is contradictory to the geographical fact that Indonesia is the largest archipelago in the world, and therefore should have a distinctive maritime orientation once again.

The implementation of MDA would require the legislative backing of a national maritime strategy and national maritime security strategy. Without these strategies as MDA's legitimation, its application on the sea would always be hampered by many obstacles raised by both external and internal factions.

Indonesian MDA's concept is similar to the U.S. original concept. It would emphasize the process of gathering, analyzing, and delivering information throughout the governmental agencies in the maritime domain. It is going to base on the establishment of information sharing among government agencies for the use of the respective authorities. The existing infrastructures of the government agencies are relatively sufficient for the initial start of realizing the MDA concept in Indonesia. The dispersion of information gathering in many areas could be considered to cover a large portion of the Indonesian maritime territory. However, these resources are operated under the command and control of their respective authorities. There is only a little effort to combine all of these assets into one establishment similar to that of the NMIC in the U.S. The effort to promote this concept will undoubtedly face many challenges from many agencies in the maritime domain. The support from the political and governmental arenas will be a crucial factor in implementing the MDA for the national maritime interest.

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<sup>13</sup> Ibid page 58

Without any political backbone, the MDA concept will always remain a paper concept that will never come to fruition. Furthermore, Marsetio argues that one form of support from the legislative should be by regulating a decisive action. This action must be unilateral in its consolidation of authority from all involved agencies, dissolving previously decreed authorities, and appointed to a single body with the mandate of sole authority over the maritime security domain. The poor performance of Indonesian maritime security enforcement deserves a prompt response not only from the government as the main body of bureaucracy, but also from all other maritime stakeholders.

## **Conclusion**

Indonesia, as the largest archipelagic and maritime country in the world, should start conducting itself as such. Indonesia is in dire need of restructuring its maritime sector to meet the challenges it faces, including systemic problems it has faced for years, and the external existing and emerging threats. Implementation of the MDA concept is the best option in Indonesia's national interest from the perspective of a maritime country that relies heavily on the unhindered flow of maritime trading and commerce in support of the nation's economy and development. The MDA concept, with its holistic approach, would greatly enhance the government's ability to manage the necessary resources in the governance of such a vast enterprise. The existing maritime infrastructure should prove sufficient for initial MDA implementation. The government should carefully examine initiatives that emerge from appropriate agencies regarding increasing concerns of maritime domain governance.

The development of an Indonesian MDA must be a joint effort in integrating information gathering, analyzing, and dissemination to all maritime agencies for support of operational activities. Its implementation must be initiated in all due haste to ensure stability of its

organization and to protect the very integrity of the nation itself. In this way, Indonesia can regain its geographical destiny as a major maritime axis in world commerce.

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