MARITIME DOMAIN AWARENESS (MDA)

Event Report

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RSiS S. RAJARATNAM SCHOOL OF INTERNATIONAL STUDIES
Nanyang Technological University, Singapore

NANYANG TECHNOLOGICAL UNIVERSITY SINGAPORE

EVENT REPORT

MARITIME DOMAIN AWARENESS (MDA)

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Maritime Security Programme,
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S. Rajaratnam School of International Studies (RSIS),
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This report summarises the proceedings of the workshop as interpreted by the assigned rapporteur(s) and editor(s) appointed by the S. Rajaratnam School of International Studies, Nanyang Technological University. Participants neither reviewed nor approved this report.

This workshop adheres to a variation of the Chatham House Rule. Accordingly, beyond the paper presenters cited, no other attributions have been included in this workshop report.

Executive Summary

This workshop examined various Southeast Asian country perspectives on maritime domain awareness (MDA). Participants converged on the following: i) no one can do it alone where it comes to maritime security, and information sharing is the only path toward creating a common operational picture to address threats. Insufficient or incomplete standardisation to fuse and analyse data, poor interoperability and questions of data integrity inhibit relevant actors from building a common operational picture needed to achieve MDA. Besides resource constraints, the hurdles to more effective information sharing are both technical and political; ii) there is a need to incorporate other adjacent domains – including air, space, and cyber, besides straddling between the sea and the terrestrial domain. While navies and maritime law enforcement agencies deal with the symptoms, land-based agencies such as police forces tackle the root causes and the associated intelligence-gathering. The extent to which MDA should comprise a similar land dimension in the Indo-Pacific could be a subject for further exploration; and iii) duplication of efforts stems from political motivations for having one's organisation or format, but that also risks increased competition and institutional infighting, which undermines cooperation. There is a proliferation and potentially saturation of outfits and institutions dealing with MDA within countries and across the region. Through the panel and the breakout group discussions, the Workshop generated some policy recommendations on improving information-sharing; standardisation of the common operating picture; promoting a Whole-of-Community approach; as well as steps towards institutionalising MDA in Southeast Asia.

Definitions and Terminology

The concept of the maritime domain awareness (MDA) stems from the bombing of the USS Cole in 2000 and the attacks of September 11, 2001. With these attacks as the backdrop, the United States issued National Strategy for Maritime Security and called for eight supporting implementation plans, including the National Plan to Achieve Maritime Domain Awareness, in 2005. As stated by one participant, this early invocation of the term is related to the efforts "limiting the operational space for non-traditional threats." Thanks to the US elaboration about MDA and subsequent adoption of MDA initiatives by other nations, the associated terminology has led to different meanings for different actors.

One participant synopsised the goalposts of MDA definitions. On the one hand, a narrow definition perceives MDA as a technology-centric tool for law enforcement agencies to be used primarily for surveillance. On the other hand, a wider definition places MDA in the centre – or in the "Engine Room" – of maritime security governance. Instead of focussing primarily on surveillance, this wider definition calls for society, not just law enforcement agencies, to produce more knowledge of the sea. It is not merely technology-focussed; rather it encompasses the human and political dimensions as well.

Over the course of the workshop, it became increasingly clear that regional perspectives of MDA fall on different parts of the spectrum. Indonesian and Singaporean conceptions of MDA take account of scope for broader maritime security governance beyond maritime situational awareness (MSA) capability development, consistent with the wider MDA definition. While the Philippines and Malaysia perceive a role for MDA beyond situational awareness and vessel tracking capabilities; the approaches were described as embryonic and uncoordinated respectively. Thailand, on the other hand, sees MDA as synonymous of MSA. With a few exceptions described below, the MDA concept is almost entirely absent from the Vietnamese lexicon.

Country Perspectives

For Indonesia, MDA means “establishing a network of information sharing and analysis among maritime stakeholders.” The Coast Guard has been mandated as the main agency to conduct MDA with the aim of enhancing understanding of incidents at sea and along coast lines besides formulating appropriate solutions to mitigate and manage the incidents that are primarily non-traditional in nature. However, some non-traditional challenges, such as dealing with maritime militia, were recognised as ones that should be dealt domestically rather than collectively. They may be insurmountable at present.

Lacking a central agency to overview MDA, Malaysia seems to be less coordinated in its approach. Various ministries claim jurisdiction and “get in their own way building siloes and empires.” Mainly owing to distaste for the politician behind the policy, the Malaysian National Ocean Policy has been deemed a failure. Since the establishment of the new government under prime minister Mahathir, the “silo and empire” issue has been furthered by the fact that Malaysia now has two different National Security Councils. With an eye on MDA, the next strategic vision may be unveiled in September 2019, when a new maritime/defence strategy is expected.

In the Philippines, bureaucracy is the major hurdle to achieving MDA albeit in a different perspective from Malaysia. Since shifting its focus from internal to external threats in 2011, the Philippines has adopted a whole-nation approach – from diplomacy, to law enforcement, to military action – for maritime security activities. The government shift is monumental, but its substantive results in the maritime domain to date had been characterised as “modest.” In the light of the China Coast Guard deployments, the president’s Executive Order 57 launched a new inter-agency approach for maritime issues in 2015. The resulting National Coast Watch System (NCWS) was established with the US support, including expanding vessel tracking and interdiction capabilities. However, while recognising that a wider MDA approach is suitable for the challenges the Philippines faces, NCWS may be inadequate for maritime governance beyond situational awareness capabilities, notably sovereignty-related and environmental issues.

Although not identical, the terminology used by Indonesia, Malaysia, the Philippines and Singapore (via the Information Fusion Centre or IFC) was fairly consistent. Thailand, however, employs diverging definitions from others and MDA has barely entered into the Vietnamese lexicon.

As mentioned above, the Thai conception of MDA is identical to MSA. Surveillance capabilities and databases are the means to achieve awareness as the outcome. What others may refer to as maritime threat awareness is called “situational understanding” (SU) in Thailand. SU means having images in real time or near-real time to be used for operational planning. It refers to the concept of network-centric operations for traditional threats. Current Thai MSA/MDA capability development separates domestic and international sharing networks, with the latter as a “future network” under a given framework of international cooperation.

In Vietnam, the references to MDA only appear in documentation related to defence relations with the US The term comes out of the Vietnam-US Joint Vision Statement on Defence Relations from 1 June 2015, but it does not appear in statements with other countries such as Japan, Australia, India or China. The joint statement with the US itself does not include a definition of MDA and there is no systematic approach in place. Vietnam interprets MSA/MDA with related terms such as “navigational awareness”, “knowing, surveillance and reconnaissance” besides others closer to International Maritime Organisation (IMO) definitions.

Information Sharing and Systems

Regardless of which definition of MDA is adopted, participants acknowledged that no one can do it alone and information sharing is the only path towards creating a common operational picture to address the threats. The hurdles to more effective information sharing are both technical and political.

The creation of a common operational picture is complicated by various technical hurdles, including poor interoperability and questions of data integrity. Standardisation between systems is not complete and can compound already-prevalent interoperability issues. The IMO only standardises Automatic Identification System (AIS) and Long-Range Identification and Tracking (LRIT) systems, meaning that broader networks and data exchange systems are not always interoperable. Understanding MDA as “the basis of information sharing and cooperation to counter current maritime challenges”, inadequate standards to fuse and analyse data inhibit relevant actors from building a common operational picture needed to achieve MDA. However, be it equipment or information systems, resource constraints must also be taken into account.

Laws and regulations will also play a pivotal role in how data is used, shared and protected. In addition to considering privacy and confidentiality obligations, this legal dimension becomes vital to prosecution for maritime crimes. Organisational dynamics can also shape data usage and information sharing through data misinterpretation, misclassification or loss while moving data from one organisation to another. Such issues indicate that technology is far from infallible: not only can it break or be compromised, but adversaries also have access to many of the same technologies. As such, the maritime community will necessitate the agility to respond when technology falters. In other words, both technical and organisational redundancies must be built in.

For real-time information sharing, communication applications such as K3M or even WhatsApp are also growing in importance. That the maritime community uses unofficial tools, such as WhatsApp, was not perceived as an issue per se, but could be explicitly mentioned in Standard Operating Procedures (SOPs) as an antidote to other communications or sharing shortfalls.

Further to the technical challenges, the politics of information sharing cannot be inconspicuous. If viewed as intelligence, then data sharing quickly becomes sensitive and can even be perceived as a threat to autonomy.

Broadly, countries do not readily reveal the state of their surveillance capabilities. The politics of information sharing is heightened when hierarchy comes into play; some may only share information to their equivalents in rank or title.

One way around the issue of politicising information sharing was to circumvent the term “intelligence”, instead opting for “insight” sharing. Another remedy may be to agree to sensible compromises to share information at the procedural and tactical levels. Confidence building at these levels, rather than at the operational or strategic level, may help in mitigating political concerns over sovereignty.

Institutions and Outfits

One question that undergirded the discussion is: what number of institutions and formats is appropriate? Some proposed new formats, including one participant suggesting an ASEAN Information Fusion Centre as the "formal embodiment of MDA in Southeast Asia, directly supporting the ASEAN centrality for its members." Relatedly, as mentioned by a participant in the question and answer session, an associated concern may be that actors do not engage in multinational fora to cooperate, but rather to disrupt from within. The role of extra-regional spoilers (outside of Southeast Asia) was only a minor point of discussion, but it is notable in relation to questions over ASEAN centrality.

However, more participants pointed to the current saturation of outfits and institutions as a sign that new outfits may be excessive. Referring to the creation of new institutions and formats to deal with transnational MDA, one participant suggested that we may be "at a point where we don't require more formalisation", while another mentioned that we may be at the "absorptive point", after which personnel would be stretched thin to fill seats for the variety of courses on offer.

Avoiding duplication was a key theme, however efforts to do so might have been made difficult by the political motivations for having one's own organisation or format. One participant noted that in the Western Indian Ocean alone, eight regional (information-sharing) centres have ambitions to do regional MDA. There are three main systems by which this could be accomplished. There are six coordination fora and even more regional organisations that should be taken into account. Two European frameworks, the EU CRIMARIO PROJECT and the MASE programme, further exemplify the pitfalls of overlapping outfits. After clashes over opinions on whether they should follow the Regional Cooperation Agreement on Combating Piracy and Armed Robbery against Ships in Asia (ReCAAP) Information Sharing Centre (ISC) model, the competition between the two outfits was intensified.

As such, rather than the cooperation necessary for effective MDA, duplication can also risk increased competition and institutional infighting. With this in mind for Southeast Asia, one participant remarked that endeavouring to reduce complexity and duplication may not be as fruitful as learning how to best live with it. Furthermore, coordination between outfits with diverse geographical scopes would help link between regions without supplanting local centrality. To facilitate this type of coordination, one participant noted that ASEAN Regional Forum (ARF) inter-sessional meetings on maritime security have been really fruitful.

To overcome the technical hurdles above, there may be ad-hoc, mini-lateral approaches for maintaining ASEAN centrality without needing to create a new institution or demanding too much of existing centres. In this vein, one participant alluded to an MDA visualisation tool that four ASEAN members currently use. The tool, which incorporates synthetic aperture radar and has an internal chat function, may suggest lessons for nations to build integration into the front end, rather than having to integrate balkanised systems post-development.

Extra-regional Perspectives

Elsewhere in the world, including in the EU, MDA is appearing on agendas. In the 2018 Action Plan, in support of the revised EU Maritime Security Strategy, MDA, surveillance and information sharing, is listed as one of the five clusters to protect critical maritime infrastructure and human activities at sea. European maritime security initiatives continue to focus more on interests closer to home, but they are also progressively bolstering their presence in Southeast Asia. The next step for European MDA will be interoperability for integrated maritime surveillance across the European economic area.

The US is also doubling down on its commitments to the region through the Southeast Asia Maritime Security Initiative (SEAMSI) worth $450 million, the Asia Reassurance Initiative Act (ARIA) passed on 31 December 2018 worth $1.5 billion over a five-year period and a potentially forthcoming Indo-Pacific Maritime Coordination concept. The latter two have a strong MDA component. ARIA mandates specific strategies for Southeast Asia and names increasing MDA programmes in South and Southeast Asia as one of its eight objectives and the forthcoming concept could culminate in an interconnected MDA network for the Indo-Pacific more broadly. SEAMSI is also being revamped as the Indo-Pacific Initiative, which will also extend to India, Sri Lanka and Bangladesh in addition to the Southeast Asian beneficiaries.

Concluding by Returning to Definitions

With regards to this wider definition, broadening the maritime community has played a small, but significant, role in the discussion. Participants observed that the shipping industry and non-governmental organisations sometimes have valuable information that navies or coast guards sometimes lack, yet challenges to data fusion hinder effective MDA. Notably, the IFC is enhancing its private engagements in connection to broadening the maritime community. Rather than depending on traditional calls to treasuries as a way to bridge resource constraints, suggestions also included appealing more to the public and the media.

Participants also opened the discussion to land-based links, questioning the very expansiveness of the term “maritime” in MDA. This was carried out at two levels. Firstly, the question is how to incorporate other adjacent domains – including air, space and cyber. Second question is how to address links to the land domain. Navies and law enforcement agencies deal with the symptoms, whereas land-based agencies such as police forces are dealing with the root causes and the associated intelligence-gathering. Regarding anti-piracy efforts in the Gulf of Aden, the EU is shifting its attention away from the naval operation, Atalanta, and is instead increasing stock in the two civilian missions, EUCAP Somalia and EUTM Somalia, the former of which has a mandate to enhance Somalia’s maritime civilian law enforcement capacity and advise land-based law enforcement agencies. The extent to which MDA should comprise a similar land dimension in the Indo-Pacific could be a subject for further exploration. This conference abridged conceptions of what MDA is; ending on this note provided food-for-thought on what MDA is not.

ABOUT THE INSTITUTE OF DEFENCE AND STRATEGIC STUDIES

The **Institute of Defence and Strategic Studies (IDSS)** is a key research component of the S. Rajaratnam School of International Studies (RSIS). It focuses on defence and security research to serve national needs. IDSS faculty and research staff conducts both academic and policy-oriented research on security-related issues and developments affecting Southeast Asia and the Asia Pacific. IDSS is divided into three research clusters: (i) The Asia Pacific cluster – comprising the China, South Asia, United States, and Regional Security Architecture programmes; (ii) The Malay Archipelago cluster – comprising the Indonesia and Malaysia programmes; and (iii) The Military and Security cluster – comprising the Military Transformations, Maritime Security, and Humanitarian Assistance and Disaster Relief (HADR) programmes. Finally, the Military Studies Programme, the wing that provides military education, is also a part of IDSS.

For more information about IDSS, please visit www.rsis.edu.sg/research/idss.

ABOUT THE S. RAJARATNAM SCHOOL OF INTERNATIONAL STUDIES

The **S. Rajaratnam School of International Studies (RSIS)** is a think tank and professional graduate school of international affairs at the Nanyang Technological University, Singapore. An autonomous school, RSIS' mission is to be a leading research and graduate teaching institution in strategic and international affairs in the Asia Pacific. With the core functions of research, graduate education and networking, it produces cutting-edge research on Asia Pacific Security, Multilateralism and Regionalism, Conflict Studies, Non-traditional Security, Cybersecurity, Maritime Security and Terrorism Studies.

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