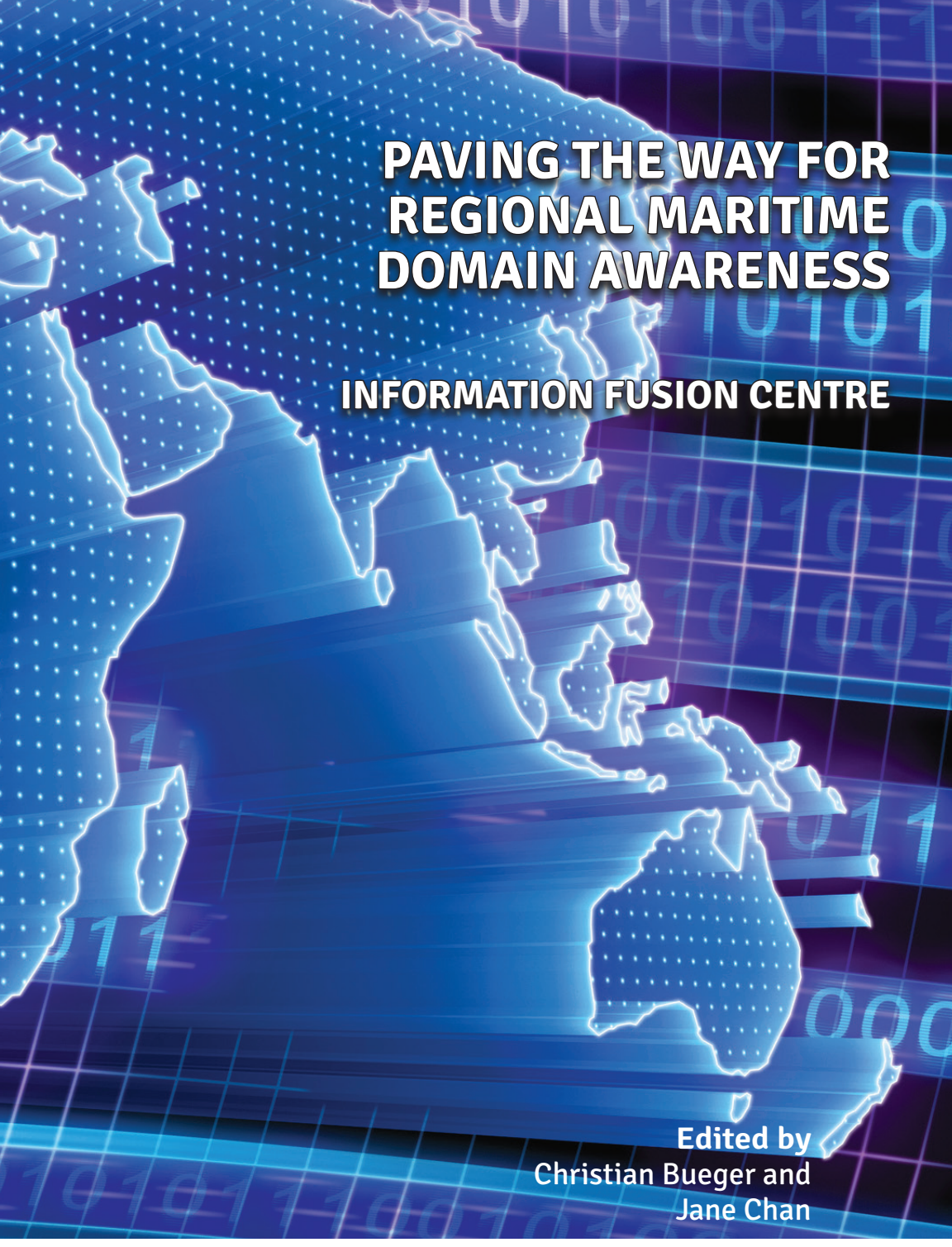

PAVING THE WAY FOR REGIONAL MARITIME DOMAIN AWARENESS

INFORMATION FUSION CENTRE

Edited by
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TABLE OF CONTENTS

Information Fusion Centre and the Global Maritime Domain Awareness network

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The Information Fusion Centre (IFC) in Singapore is part of a global movement to establish maritime domain awareness. This chapter aims to firstly situate the IFC historically – in the move from national naval intelligence to regional information sharing and global maritime domain awareness. Secondly, this chapter aims to contrast the IFC with other regional projects for setting up maritime domain awareness. Some of these regional approaches, such as the Italian led initiative for the Mediterranean Sea, precede the IFC and those experiences have influenced its design. However, majority of the regional approaches were founded over the past five years and are considerably influenced by the IFC approach and overall experience.

KNOWING THE SEA: FROM NAVAL INTELLIGENCE TO MARITIME DOMAIN AWARENESS

The collection and analysis of information related to security at sea was historically the domain of naval intelligence. Naval intelligence bureaus became important national security instruments in the two world wars and assumed a growing role informing the nuclear security strategies of the Cold War. Maritime Domain Awareness (MDA) can be understood as an attempt to move the knowledge of security at sea from the area of national intelligence towards a wider transnational space which benefits all countries in managing their seas and ocean resources. This move towards global maritime domain awareness is influenced by six key developments.

First, with the adoption of the UN Convention of the Law of the Sea (UNCLOS) the responsibility of nation states was extended significantly. With the signing of UNCLOS, maritime nations assumed the obligation to protect not only their traditional territorial seas, but also their new Exclusive Economic Zone. Rather than an instrument of naval hegemony and warfare—within this new legal texture—detailed maritime knowledge became

a matter of importance for coastal states worldwide. It also raised the question of how countries with a weak capacity to monitor and safeguard their waters could be better assisted to fulfil this obligation.

Second, the understanding of security at sea shifted towards a broader recognition of the transnational dimension. If power projection and interstate disputes over boundaries and resources were seen as the main security issues, this fundamentally changed starting from the 1990s. Vital in this development was the escalation of piracy in the Straits of Malacca in the 1990s. This not only exposed the vulnerability of the international shipping industry to crime, but also documented that piracy is more than low scale crime and requires to be recognised as a regional and international security problem potentially affecting all nations.

Third, concerns over extremist violence at sea and maritime terrorism gained importance since the bombing of the US navy's USS Cole in 2000 and the aftermath of the September 11, 2001 attacks intensified the transnational focus. In reaction to the problem of transnational terrorism, the US, but also other states to form new collaborations to address the threat collectively. It also raised new awareness for other maritime crimes, such as global smuggling networks and their potential role in the proliferation of weapons or as a source of revenue for extremist groups. As a result, the focus of surveillance activities shifted from monitoring military vessels to shipping and other maritime activities.

Fourth, technological developments triggered new thinking about surveillance and intelligence. When shipping volumes increased, new navigational aids became necessary to avoid collisions. Therefore, in the 1990s, the Automatic Identification System (AIS) was introduced to detect and identify ships complementing radar. AIS became mandatory for a large portion of the commercial fleet by December 2004, regulated through the International Maritime Organization. The functionality of AIS, initially limited by its short range, was extended through satellite technology – which by 2010 allowed tracking global ship movement in real time. Also, other relevant data for maritime, including data from customs, borders, environmental or fishing agencies became increasingly available in electronic format.

Fifth, data processing and communication technology improved. Data storage and transfer capabilities, as well as calculating power and programming languages were significantly advanced allowing the processing of large

data. The internet, email or social network application introduced new ways of transnational communication. The popularization of the World Wide Web also meant better information technology literacy, allowing systems to increasingly be operated by non-specialists.

Sixth, the new capacity in collecting and processing large amounts of data combined with concerns over transnational security threats gave rise to a new law enforcement paradigm, known as intelligence-led policing. This paradigm is associated with the hope to overcome capability gaps by detecting threats and hence allowing the use of assets more effectively through targeted interceptions or arrests.

These developments taken together enabled a new way of knowing the sea. International and regional inter-governmental collaboration, transnational thinking, the availability of new data, the promises associated with new processing and sharing technology, and the rise of a new law enforcement paradigm are core premises of the move towards global MDA. The next part gives a short history of the evolution of regional MDA systems. How did the above developments translate into concrete MDA projects, and where does the IFC sit in that spectrum?

THE EVOLUTION OF REGIONAL MDA INFRASTRUCTURES AND ANALYSIS CENTRES

The evolution of regional MDA infrastructures is closely related to the issue of modern piracy as one of the most visible and immediate maritime security threats. Triggered by concerns in the shipping community, public records and statistics on maritime crime incidents have their origins in the work of the International Maritime Organization, which started to collect data on piracy in the 1980s. Complementing this work, the industry-led International Maritime Board (IMB) started to compile incident data with a focus on piracy and fraught, both to increase political pressure, but also to assist mariners in stress. The IMB also installed a live reporting centre.

When seeking a regional response to the rise of piracy incidents in the Strait of Malacca, regional and international actors agreed on an innovative mechanism through which data on piracy would be collected and analysed. A multilateral agreement was signed for that purpose in 2004, titled the Regional Cooperation Agreement on Combating Piracy and Armed Rob-

bery Against Ships in Asia (ReCAAP). When the agreement entered into force, an Information Sharing Centre was opened in Singapore. The agreement and the centre, at its time was an innovative intergovernmental mechanism. Yet, its primary function was the sharing of information between countries and its mandate limited to piracy, rather than the full spectrum of MDA activities. For one of the major origins of broader regional MDA attempts, we have to look to the Mediterranean Sea.

Following a 2002 agreement at a regional sea power symposium for the Mediterranean Sea to improve maritime security, the Italian navy started a pilot project to exchange data between 20 countries of that region. In 2006, the Virtual Regional Maritime Traffic Centre (V-RMTC) was launched with a Data Fusion Centre based in Santa Rosa, close to Rome. The centre was initially created to exchange shipping data of countries in the Mediterranean – an important resource, before satellite based AIS made such data more readily available. Through the network, incident data was also shared and such data was compiled into reports made available to the network members. As a core feature, the V-RMTC enabled a range of new communication channels on the basis of secured real-time transmission of text messages from sender to receiver (chat) and encrypted email. This provided the capacity to work in different informal configurations. The centre shares data in what is called 'communities', which include different countries. In order to join a community a formal request needs to be approved by all participating states. The centre operates four such communities. The largest community launched was the Trans-Regional Maritime Network. In addition to the 24-member wider Mediterranean Community, five states joined the network, that is Argentina, Brazil, Peru, Singapore, and South Africa (followed by India in 2018). Singapore signed a data sharing agreement with the network in 2010.

When the IFC was initiated in 2009 it drew on the experience of the Italian model. Yet, as explained in detail across the different chapters of this volume, it combined it with a major innovation that would complement the virtual data exchange: the physical presence of Liaison Officers. These officers would provide an additional resource, both for the exchange of information, and for interpreting maritime incidents in the light of national data and perspectives. The officers were not the least an important instrument, given that many countries in the Southeast Asia did not possess the full capacities to make governmental data available electronically. With this

structure, the IFC became a template for similar endeavours in other regions, in particular the Western Indian Ocean. To understand the impact of the IFC we also need to see it in the context of what kind of activities it inspired.

THE IFC AS A TEMPLATE AND THE EMERGING NETWORK OF CENTRES

In East Africa and the Western Indian Ocean region, MDA capacities were developed as part of counter-piracy operations. A structure that followed the ReCAAP model was initiated in 2009, facilitated by the International Maritime Organization. The Djibouti Code of Conduct concerning the Repression of Piracy and Armed Robbery against Ships in the Western Indian Ocean and the Gulf of Aden aimed at installing an information sharing network for the states of Eastern and Southern Africa and the Arab Peninsula, based on three regional information sharing centres. Following the ReCAAP model, the objective was to share information on piracy through the network and analyse it in the three centres. Yet, in practice this structure never became fully operational, since the core information sharing functions were provided by the internationally operated Maritime Security Centre Horn of Africa, part of the European Union's counter-piracy mission Atalanta, and its communication platform, the chat system Mercury. Faced with the lack of traction and progress within the Djibouti Code of Conduct, the European Union was peering towards an alternative structure which could take over the EU run and work in the long run. As part of the programme, known as MASE, an MDA centre to be based in Madagascar was funded. As discussed in greater detail in the contribution by Antoine Jeulain (Chapter 4), the Regional Maritime Fusion Center in Madagascar draws on a similar model as the IFC concerning its focus on broader maritime security issues, and also the Liaison Officer model. Moreover, the Area of Interest of the new center was designed in a way that it borders that of the IFC, stretching to Maldives in the east.

In a more recent development, the government of India launched a regional MDA centre in 2018. Based on the Indian Navy's Information Management and Analysis Centre operative that collects and shares shipping data since 2014, in December 2018 the country launched an Information Fusion Centre (IFC-IOR) which is projected to support the members of the Indian Ocean Naval Symposium. With an Area of Interest that stretches

from Western Africa to Japan and Australia, the geographical focus overlaps with both the centres in Madagascar and the IFC. India expressed an invitation to countries to send International Liaison Officers and hence aims at following the IFC template. In December 2018, India also joined the Trans-Regional Maritime Network.

These are two examples of regional MDA structures that have significantly drawn on the IFC experience. There are further structures and centres under development, which includes a centre developed in Peru, and a Fusion Centre developed by the Pacific Islands Forum. Both these platforms are heavily influenced by the IFC, and will further expand the global network of regional centres.

CONCLUSION

In summary, the IFC is part of a global movement towards MDA. Within the history of developing centres, it has a core status as an innovator, and hence has inspired other MDA constructions around the world in different ways. The new range of centres and systems not only raises the question of how the IFC will learn from the experience of others in the future, it also brings attention to the increasing proliferation of centres and how these can work productively together in a structured and coherent manner to provide knowledge for maritime security and ocean governance for the benefit of all coastal states.