A Preliminary Assessment of Indonesia’s Maritime Security Threats and Capabilities

Lyle J. Morris and Giacomo Persi Paoli
Indonesia is the largest archipelago in the world and is situated at one of the most important maritime crossroads in the Indo-Pacific region. Located between the Pacific and Indian Oceans, Indonesia provides a central conduit for global shipping via the Strait of Malacca – a major shipping channel through which 30 per cent of global maritime trade passes. It is also home to several other key maritime transit points, such as the Makassar, Sunda and Lombok Straits. Its geographic situation, surrounded by large bodies of water, exposes Indonesia to a wide range of maritime security challenges, including risks to national security interests and commercial shipping operating in these areas.

This report provides a description of current Indonesian policy and a preliminary assessment of its maritime capabilities, security priority areas and threats affecting Indonesia. The report concludes with a set of short- to medium-term policy recommendations for consideration.

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Abstract

Indonesia is the largest archipelago in the world, located in a strategic position at the crossroads of the Indian and Pacific oceans. This location both imposes an obligation to protect vital sea lines of communication (SLOC) and presents an opportunity to utilise the abundant marine resources at Indonesia’s disposal. In recent years, Indonesia has re-conceptualised its identity as a maritime nation whose livelihood both derives from and depends upon the sea, evidenced by President Joko Widodo’s Global Maritime Fulcrum and Sea Policy proposals. This study identifies the threats and priority areas for Indonesia in the maritime security domain as a first step in an overall assessment of capability requirements and gaps. RAND’s preliminary assessment suggests that Indonesian policymakers are attending to the threats that the country faces in the maritime domain, which include: smuggling; illegal, unreported, unregulated fishing; piracy; illegal immigration; and terrorism. As a result, the government of Indonesia has put into place regulatory, administrative, legal, and material changes that will put the country on a path to better managing and governing its vast maritime spaces. However, matching such changes with long-term, sustained action, resources, and metrics for progress remains a key challenge for Indonesian policymakers.
Executive summary

In 2014, newly elected Indonesian President Joko Widodo, known as ‘Jokowi’, unveiled his Global Maritime Fulcrum (GMF) vision to the world. Jokowi’s message was simple, yet profound: Indonesia’s livelihood both derives from and depends upon the sea. It was time for the country to reinvigorate its maritime economy to match its status as the largest archipelago in the world.

His vision also articulated a fundamental truth that in order to transform its maritime economy and become a maritime power, Indonesia has to properly secure its maritime borders. In the context of Jokowi’s GMF initiative, this report seeks to identify the threats and priority areas for Indonesia in the maritime security domain as a first step in an overall assessment of capability requirements and gaps. The study should be regarded as a preliminary assessment for policymakers and academics within and beyond Indonesia who are interested in understanding the nature of maritime threats facing Indonesia and the regulatory, administrative and material assets at the country’s disposal in meeting those challenges.

The study found that Indonesia faces a daunting set of maritime security threats. These include smuggling; illegal, unreported, unregulated (IUU) fishing; piracy; illegal immigration; and terrorism. Of these threats, IUU fishing appears to be an area of increased priority under the Jokowi administration. Some reports estimate that Indonesia loses over US$3bn a year due to IUU fishing. To address this particular concern, a specialised task force called the Indonesian Presidential Task Force to Combat Illegal Fishing (SATGAS 115) was created to employ administrative, legal and maritime law enforcement (MLE) tools within the Indonesian bureaucracy to combat the threat. Another notable maritime security challenge for Indonesia is piracy. Indonesia’s expansive maritime areas present vulnerabilities that pirates and other criminals at sea can exploit. Ensuring sufficient assets and domain awareness to regulate such areas remains an ongoing challenge for Indonesian authorities.

The report identifies eleven state actors that play a role in addressing maritime threats to Indonesia. Coordinating the large number of MLE actors remains a key challenge as these entities must coordinate their activities across the vast expanse of water under Indonesia’s jurisdiction. They also must coordinate policies at the ministerial level to avoid duplication of effort and to ensure that resources and assets are meeting demands.

The report found that Indonesian authorities have made efforts to address the threats that they face. For example, Indonesia has enhanced the roles of various coordinating ministers and special task forces, such as the newly formed Indonesian Maritime Security Agency (BAKAMLA) and SATGAS 115, which employ interagency models to address maritime challenges. Furthermore, as of 2017, Indonesia has begun
to invest in infrastructure development and procuring additional MLE capabilities to deal with maritime threats and capacity constraints.

Finally, while the GMF and recently released Sea Policy document offer a set of priorities and goals for Indonesian maritime security, they ultimately fall short on operational guidance for ministries and MLE actors regarding the scope, coordination and execution of their missions. As a next step in the policymaking process, the report recommends the development of an executive-level interagency coordinating body to monitor progress towards these goals. Such a body should develop metrics for measuring the effectiveness of MLE actors in achieving their stated missions, including whether ministries and other agencies/taskforces are meeting, exceeding or falling short of the priorities outlined in the abovementioned strategy documents. While recent Indonesian policies have mitigated the proliferation of maritime security threats, much work remains for policymakers to effectively regulate and deter crime at sea. As a follow-on effort, the report recommends a systematic assessment of the types of assets, operational metrics and levels of funding required to address the threats Indonesia faces and the priority areas it has identified in the maritime realm.

1 This is a white paper which provides a more detailed set of policies and identifies ministries to carry out the GMF mission.
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<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Full Form</th>
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<tbody>
<tr>
<td>ABF</td>
<td>Australian Border Force</td>
</tr>
<tr>
<td>BAKAMLA</td>
<td>Indonesian Maritime Security Agency</td>
</tr>
<tr>
<td>BASARNAS</td>
<td>The Indonesian Search and Rescue Agency</td>
</tr>
<tr>
<td>BDC</td>
<td>Directorate General of Custom and Excise (Direktorat Jenderal Bea dan Cukai)</td>
</tr>
<tr>
<td>BRIC</td>
<td>Brazil, Russia, India, China</td>
</tr>
<tr>
<td>CAPP</td>
<td>RAND Center for Asia Pacific Policy</td>
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<tr>
<td>CMMA</td>
<td>Coordinating Ministry for Maritime Affairs</td>
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<tr>
<td>Ditjen PSDKP</td>
<td>Directorate General of Marine Resources and Fisheries Supervision (Direktorat Jenderal Pengawasan Sumber Daya Kelautan dan Perikanan)</td>
</tr>
<tr>
<td>DOTMLPF</td>
<td>Doctrine, Organisation, Training, Materiel, Leadership and Education, Personnel, and Facilities</td>
</tr>
<tr>
<td>EEZ</td>
<td>Exclusive Economic Zone</td>
</tr>
<tr>
<td>FRONTEX</td>
<td>European Border and Coast Guard Agency</td>
</tr>
<tr>
<td>GCI</td>
<td>Global Competitive Index</td>
</tr>
<tr>
<td>GMF</td>
<td>Global Maritime Fulcrum</td>
</tr>
<tr>
<td>HADR</td>
<td>Humanitarian assistance and disaster relief</td>
</tr>
<tr>
<td>HF</td>
<td>Human factors</td>
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<tr>
<td>Hubla</td>
<td>Directorate General of Sea Transportation</td>
</tr>
<tr>
<td>ILO-MLC</td>
<td>International Labour Organization Maritime Labour Convention</td>
</tr>
<tr>
<td>IMO</td>
<td>International Maritime Organization</td>
</tr>
<tr>
<td>INDINDO CORPAT</td>
<td>India–Indonesia Co-ordinated Patrol Naval Exercise</td>
</tr>
<tr>
<td>ISPS Code</td>
<td>International Ship and Port Facility Security Code</td>
</tr>
<tr>
<td>IUU</td>
<td>Illegal, unreported, unregulated</td>
</tr>
<tr>
<td>JCLEC</td>
<td>Jakarta Centre for Law Enforcement Cooperation</td>
</tr>
<tr>
<td>KKP</td>
<td>Ministry of Marine and Fisheries</td>
</tr>
<tr>
<td>MDA</td>
<td>Maritime domain awareness</td>
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1. Introduction

1.1. Contextualising the issue of maritime security in Indonesia

Indonesia is arguably one of the most important maritime states in the world. Geographically, it is located between the Pacific and Indian Oceans and provides a central intersection for global shipping via the Strait of Malacca—a major shipping channel through which a large share of Asia’s trade flows. Roughly thirty per cent of global maritime trade passes through the Strait, making it a crucial artery for trade and cargo fleets. Indonesia is also the world’s largest archipelagic state, with at least 14,000 islands, nearly eight million square kilometres of sea area, and the second longest coastline in the world. The importance of Indonesia’s geopolitical position is also reflected in the government’s maritime strategic thinking, encapsulated in President Joko Widodo’s (hereafter: ‘Jokowi’) launch of the GMF concept in 2014. Developed as guideline on policy priorities for maritime security and economy, the GMF embraces the significance of Indonesia as a maritime nation and asserts its importance in deciding ‘the future of the Pacific and Indian Ocean region’.

However, Indonesia’s strategic position as a large, archipelagic nation exerts pressure on its bureaucratic capabilities in governing such dispersed maritime spaces. In some areas, its strategic position has had a negative effect on its maritime development, as littoral states along well-trafficked sea lanes incur high costs of maintaining and protecting sea lanes, in many cases without receiving substantial economic returns on their investments in maritime security. High costs and low benefits from maintaining maritime security are a key challenge for Indonesia. It has been unable to develop effective port infrastructure to aid its coastal development and its ranking remains well below many other countries in Asia in terms of port infrastructure quality. The low efficiency of port infrastructure can have the effect of

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1 Rider (2014, 3); also see Supriyanto (2016, 3).
5 MMAF Briefing (2015). Canada has the longest coastline in the world. The last survey conducted in 2012 by the Indonesian government registered only 13,466 islands. However, the government is in the process of revising this estimate, possibly increasing this number. See Bland (2017).
6 Supriyanto (2016, 9).
7 Rider (2014, 3).
8 Ajie Maulendra (2017). The article cites statistics from the Global Competitive Index (GCI), published by the World Economic Forum, which ranks Indonesia 75 out of 148 countries surveyed in terms of port infrastructure quality, well below Singapore, Thailand and Malaysia.
making Indonesia unattractive to international shipping companies and may prevent Indonesian consumers from enjoying low-cost imports.\(^9\) At the same time, Indonesia’s geopolitical location means it is more susceptible to maritime threats such as piracy and IUU fishing, requiring a balance of international cooperation and protection of sovereign borders. Incidents of trafficking in human beings and illegal goods on foreign fishing boats operating in Indonesian waters highlight the consequences for human welfare when criminality at sea goes unchecked.\(^10\)

Such internal and external factors put tremendous pressure on the government, policymakers, MLE agencies and the Indonesian Navy (TNI-AL), all of whom are tasked with monitoring, patrolling and ensuring the efficiency and lawfulness of maritime activities. While Indonesia’s renewed focus on its maritime domain supports a recent trend for countries and regional blocs to ‘reflect on the maritime dimension [of] their development and security’, the challenges confronting archipelagic nations like Indonesia remain significant.\(^11\)

### 1.2. Conceptualising maritime security in Indonesia

The broadening of state security agendas to incorporate ‘maritime security’ as part of an overall national security strategy in the last three decades marks a conceptual shift towards non-traditional threats and the role of non-state actors.\(^12\)

Academic research on Indonesian maritime affairs highlights a trend towards a more comprehensive conceptualisation of maritime security, threats and capabilities. For example, a growing body of literature emphasises the increasing influence of the BRIC states (Brazil, Russia, India, China) as evolving maritime powers,\(^13\) ongoing maritime territorial disputes such as those in the South China Sea,\(^14\) and the role of twenty-first century navies in addressing traditional and non-traditional threats.\(^15\) Whereas traditional conceptualisations of maritime security capabilities incorporate geopolitics, military strategy and vessels, a more diversified literature has emerged that considers issues such as piracy,\(^16\) IUU fishing,\(^17\) conceptualisations of port security\(^18\) and the privatisation of maritime security.\(^19\)

In order to understand the extent to which this shift is applicable to Indonesia’s administrative policies, it is first important to assess the organisational structure of Indonesia’s maritime security. Chapsos and

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\(^9\) Rider (2014, 3).
\(^12\) Chapsos & Malcolm (2017, 59–78).
\(^13\) de Vivero & Mateos (2010, 967–78).
\(^14\) Kraska (2015).
\(^15\) Till (2013).
\(^16\) Murphy (2009); Shortland (2012).
\(^17\) Octaviana (2014).
\(^19\) Liss (2016).
Malcolm conducted a ‘training needs analysis’ of key Indonesian state maritime security actors, identifying ten government bodies, such as relevant ministries and state agencies that in one way or another contribute to assessing maritime security threats and setting the prioritisation agenda. As part of the first phase of a multi-stakeholder project, their study revealed a general awareness of maritime security as a concept but lower awareness among state actors as to their specific mandate relating to maritime security.

Another indication of a more comprehensive approach to maritime security is the Jokowi administration’s GMF initiative. The GMF outlines five main clusters of priorities, namely: (1) maritime boundaries, maritime space and maritime diplomacy; (2) maritime industries and connectivity; (3) natural resources industry and maritime services, as well as management of marine environment; (4) maritime defence and security; and (5) nautical culture. The GMF lays out a total of 24 policy priorities and identifies dozens of programmes across these five clusters.

The multifaceted organisational structure, coupled with President Jokowi’s broader conception of maritime opportunities and threats, signals a more comprehensive maritime security agenda in Indonesia. Indeed, Jokowi’s GMF represents a fundamental reorientation in Indonesia’s conception of its national interests, emphasising for the first time that Indonesian interests should be more firmly rooted in a maritime-centric view of the world, its own security environment and its economic interests. According to Chapsos and Malcolm, the GMF offers the potential for a more comprehensive maritime security agenda to take root in Indonesia, which will require continued strategic and policy focus on the maritime domain, together with an emphasis on partnership building, both within the state and between state and non-state actors. Finally, in March of 2017, Jokowi released the long-awaited Presidential Regulation (PERPRES) No. 16 of 2017 on Indonesian Sea Policy, designed to facilitate and operationalise the GMF. While offering more details and analysis of the GMF and relevant governmental authorities tasked with carrying out the policy, the Sea Policy document nonetheless leaves substantial questions unanswered about how the GMF policy should be executed. These include questions of how each ministry should coordinate their activities with other agencies involved with maritime security, and by what standards the success of ministries and agencies should be measured.

Overall, the versatile and comprehensive nature of Indonesian maritime strategy demonstrates a willingness on the part of the government to look beyond a narrow conceptualisation of security in the maritime domain. Rather than being based solely on military threats and the defence of the state,

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20 These are discussed in detail below.
21 Marzuki (2017).
Indonesia’s strategy takes a broader view of maritime affairs that includes a range of economic and scientific opportunities, as well as both state-based and non-state threats.26

1.3. Note on terminology: Defining the concept of capability

For the purpose of this study, capability is defined as the ability to achieve a desired objective by performing tasks, under specified conditions, to an agreed minimum level of performance.27

This study therefore seeks to identify threats and priority areas for Indonesia in the maritime security domain as a first step in an overall assessment of capability requirements and gaps. More information on how the concepts of threats, objectives and capabilities are linked and mutually dependent is provided in Appendix A.

1.4. Purpose and structure of this report

The purpose of this report is to provide an overview of Indonesia’s current maritime security threats and capabilities in order to identify areas for improvement and development. This report is not intended to provide a rigorous capability assessment. Rather, it offers a preliminary scoping of existing capabilities to respond to the identified threats. The report is structured as follows:

- **Chapter 2** focuses on Indonesia’s maritime security priorities and identified threats, and provides an illustrative example of responses to IUU fishing.
- **Chapter 3** provides a preliminary assessment of Indonesia’s maritime capabilities, mapped across four different components (regulatory frameworks, organisational structures, human factors, and technology and infrastructure).
- **Chapter 4** summarises our main observations and indicates a set of potential actions for consideration by the government of Indonesia.

To complement the main chapters, Appendix A provides additional information on the process of setting up and conducting a capability assessment process.

1.5. Summary of study methodology and caveats

In conducting this study, we applied two main methodologies. First, we conducted a review of relevant literature. This included academic sources, government documents, and media reports in both Indonesian language and English. This methodology was used to gather data on the context of maritime security in Indonesia, as well on the wider issue of capability assessment.

We also conducted field research, including in-person semi-structured interviews in Jakarta in December 2016 with representatives of the Indonesian government charged with overseeing the management of

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maritime security. These include representatives from the following bureaucracies: BAKAMLA, POLAIR, Indonesia Directorate of Custom and Excise (Bea and Cukai), and SATGAS 115.

This internally funded project is intentionally limited in scope and is meant as a precursor for further work assessing maritime security threats and responses in Indonesia. We acknowledge that the views expressed during the interviews do not necessarily represent all perspectives on the issue of maritime security across all relevant stakeholders in Indonesia.
2. Assessing Indonesia’s maritime security priorities and related threats

This section identifies the Jokowi administration’s key maritime security policy priorities, as well as the main maritime security threats facing Indonesia and their role in challenging the realisation of the country’s goals in this domain. These serve as an initial step in framing the assessment of required maritime security capabilities, and provide background information on a framework against which additional objectives can be set and capabilities can be developed and fielded. In addition, this chapter provides a brief overview of the intervention strategies implemented by the Indonesian government, particularly in relation to tackling IUU fishing.

2.1. Identification and prioritisation of maritime security priorities

The GMF (described in section 1.2) provides a comprehensive policy framework, but does not lay out in detail the method of implementation. To fill this gap, the recently unveiled Sea Policy document was designed to expand on the five GMF pillars by offering seven maritime policy priorities, or ‘pillars’, which provide the foundation for an ‘Action Plan’ involving 34 ministries and the implementation of 425 activities. The Action Plan is meant to offer a more detailed roadmap linking Indonesia’s maritime security priorities with ministries and bureaucracies that have specific responsibilities for implementation.

However, while executive branch white papers such as the Sea Policy document and the GMF seek to set the overall strategy and associated policies, there is no single body tasked with monitoring the execution of these policies across agencies. This presents a challenge when attempting to assess the efficiency and effectiveness of policy initiatives.

Based on feedback from RAND interviews and literature reviews on Indonesia’s maritime security, we highlight eleven state actors that play key roles in assessing maritime security priorities and addressing any

28 Laksmana (2017a).
29 The seven priority maritime priority areas are the following: 1) marine and human resource development; 2) naval defense, maritime security, and safety at sea; 3) ocean governance institutionalization; 4) maritime economy, infrastructure, and welfare; 5) environmental protection and ocean space management; 6) nautical culture; and 7) maritime diplomacy (Humas, 2017).
30 For a helpful graphic that depicts these ministries and activities, see Laksmana (2017b).
maritime threats to Indonesia. The list should not be regarded as comprehensive, but rather a selection of agencies identified as important in implementing and executing maritime policies and regulations in Indonesia. These include:

- Coordinating Ministry of Maritime Affairs (Kementerian Koordinator Bidang Kemaritiman – Kemenko Kemaritiman);
- Coordinating Ministry of Politics, Law, and Security (Kementerian Koordinator Bidang Politik, Hukum, dan Keamanan – Kemenko Polhukam);
- Indonesian Maritime Security Agency (Badan Keamanan Laut – BAKAMLA);
- Indonesian Navy (TNI-AL);
- Indonesian Water Police (POLAIR), under the National Police;
- Directorate General of Sea Transportation (Hubla) (Under the Ministry of Transportation);
- Directorate General of Custom and Excise (Direktorat Jenderal Bea dan Cukai – BDC) (under the Ministry of Finance);
- Directorate General of Immigration (Dirjen Imigrasi) (Under the Ministry of Law and Human Rights);
- Directorate General of Marine Resources and Fisheries Supervision (Direktorat Jenderal Pengawasan Sumber Daya Kelautan dan Perikanan – Ditjen PSDKP);
- Ministry of Marine and Fisheries (KKP)
  - Indonesian Presidential Task Force to Combat Illegal Fishing (SATGAS 115);
- The Indonesian Search and Rescue Agency (BASARNAS).

A breakdown of the functions of each ministerial-level actor noted above is provided in Figure 2.1, while Figure 2.2 presents the agency-level actors.

**Figure 2.1 Ministries and key functions**

<table>
<thead>
<tr>
<th>Ministry</th>
<th>Key functions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coordinating Ministry of Maritime Affairs</td>
<td>The key functions of this ministry are to coordinate, synchronise and control the Ministry’s responsibilities in Maritime affairs, such as policies, maritime infrastructure, maritime state resilience development and maritime resources management.¹</td>
</tr>
<tr>
<td>Indonesian Navy</td>
<td>The Indonesian Navy is primarily a defensive force to protect Indonesia’s sovereignty over its waters with the main focus on law enforcement due to having the largest assets among all MLE agencies in Indonesia.²</td>
</tr>
<tr>
<td>Ministry of Maritime Affairs &amp; Fisheries (KKP)</td>
<td>The main goals of KKP are: (1) optimise the utilisation of marine resources and fisheries; (2) increase the added value and competitiveness of marine and fishery Products; (3) support and ensure the environmental quality of marine and fisheries resources.³</td>
</tr>
<tr>
<td>Coordinating Ministry of Politics, Law &amp; Security</td>
<td>The Indonesian government ministry in charge of planning and policy coordination, as well as synchronisation of policies in the fields of politics, law and security.⁴</td>
</tr>
</tbody>
</table>

Sources:
¹ Parameswaran (2017).
² MLE senior officials, interview by authors, 5–9 December 2016.
³ Ministry of Marine Affairs and Fisheries Republic of Indonesia (n.d.).
⁴ POLHUKAM (n.d.).
### Figure 2.2 Selected agencies and key functions

<table>
<thead>
<tr>
<th>Agency</th>
<th>Key functions</th>
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</thead>
<tbody>
<tr>
<td>Indonesia Search and Rescue Agency (BASARNAS)</td>
<td>- To assist the President in government affairs in the field of search and rescue (SAR), such as formulation and coordination of public and technology policy in the field of SAR; deployment and control of potential SAR; education, training and human resource development; research and development and others.³¹</td>
</tr>
<tr>
<td>Directorate General of Sea Transportation</td>
<td>- To command the Indonesia Sea and Coast Guard (Kesatuan Penjaga Laut dan Pantai: KPLP), which assumes some local security and patrol responsibilities.³²</td>
</tr>
<tr>
<td>SATGAS 115</td>
<td>- To combat IUU Fishing with a focus on law enforcement.³³</td>
</tr>
<tr>
<td>Directorate General of Immigration</td>
<td>- To formulate and implement policies and technical standards in the field of immigration, such as norms, standards, technical guidance, etc.³⁴</td>
</tr>
<tr>
<td>Maritime Security Agency (BAKAMLA)</td>
<td>- To utilise assets and personnel from other MLE agencies in a joint task force arrangement.</td>
</tr>
<tr>
<td>- To provide “domain awareness” to other MLE agencies through the constellation of land-based radar systems.³⁵</td>
<td></td>
</tr>
<tr>
<td>Indonesia Directorate of Customs &amp; Excise</td>
<td>- To protect Indonesia from the import of dangerous goods.</td>
</tr>
<tr>
<td>- To protect particular domestic industries from illegal imports from foreign industries.</td>
<td></td>
</tr>
<tr>
<td>- To carry out law enforcement and regulation of goods and people flowing into land borders and maritime borders (24 nautical miles).</td>
<td></td>
</tr>
<tr>
<td>- To collect import duties and taxes for state revenue.³⁶</td>
<td></td>
</tr>
<tr>
<td>Indonesia Water Police (POLAIR)</td>
<td>- To prosecute all violations of maritime laws based on domestic law.</td>
</tr>
<tr>
<td>- To formulate policy for maritime patrol, security, safety and supervision of civilian use of seas within Indonesian territory, to include navigation, disaster prevention, underwater projects and infrastructure.</td>
<td></td>
</tr>
<tr>
<td>- To inspect vessels for seaworthiness.³⁷</td>
<td></td>
</tr>
</tbody>
</table>

Source:
³¹ BASARNAS (2017).
³² Jane’s (2018).
³³ SATGAS senior officials, interview by authors, 7 December 2016.
³⁵ BAKAMLA senior officials, interview by authors, 7 December 2016.
³⁶ Indonesia Directorate of Customs and Excise senior officials (BDC), interview by authors, 7 December 2016.
³⁷ POLAIR senior officials, interview by authors, 9 December 2016.

While the GMF and Sea Policy documents have set out the top-level goals and maritime security priorities, the agencies listed above also run independent internal prioritisation processes. For example, the Indonesian Water Police reassesses threats on an annual basis during its planning meetings with the Ministry of Transportation.³¹ Likewise, the SATGAS 115, under the KKP, meets annually with the KKP

³¹ POLAIR senior officials, interview by Europe, 9 December 2016.
Minister to assess priorities and operations related only to IUU fishing. A similar prioritisation process occurs during annual meetings between the Directorate of Customs and Excise and the Ministry of Finance, based on national-level priorities and on data from the Directorate General of Custom and Excise (BDC) on illegal activity that occurred the previous year. Finally, an assessment of operations and priorities also occurs between the recently created Maritime Security Agency (BAKAMLA) and the Coordinating Minister for Political, Legal and Security Affairs, who sets policy based on guidance from the President. While there are numerous internal processes, the expectation is for individual agencies’ priorities to align with the government’s vision on matters of maritime security. However, in reality, there are no standardized goals by which agencies are measured.

Some interagency coordination does take place through the coordinating minister’s offices, which will be addressed in the next chapter, as well as during MLE principals’ meetings. For example, the BDC director meets occasionally throughout the year with other MLE agency principals or directors to discuss how to synergise their efforts. During these meetings, requests for assistance can be made for personnel, vessels, or simply the sharing of data and intelligence on illegal activity. This is typically done on an ad hoc basis.

2.2. Current threats and related responses

2.2.1. Several threats to maritime security currently exist in Indonesia

Having conducted interviews with four of the abovementioned eleven Indonesian maritime security actors, a number of common perceived threats were identified. These are described in Figure 2.3 below.

**Figure 2.3 Perceived maritime security threats in Indonesia**

<table>
<thead>
<tr>
<th>Perceived maritime security threats in Indonesia</th>
</tr>
</thead>
<tbody>
<tr>
<td>• IUU fishing, including related crimes such as corruption, fraud, tax crime, illegal transaction of fuel, money laundering;</td>
</tr>
<tr>
<td>• Smuggling in the maritime domain (drugs, people, weapons, counterfeit products, agricultural goods and commodities);</td>
</tr>
<tr>
<td>• Illegal immigration;</td>
</tr>
<tr>
<td>• Piracy and maritime armed robbery;</td>
</tr>
<tr>
<td>• Terrorism;</td>
</tr>
<tr>
<td>• Human rights violations, e.g. child labour, poor living conditions, unfair employment conditions, etc.</td>
</tr>
</tbody>
</table>

Source: RAND analysis based on interviews with Indonesian officials. It should be noted that threats from state actors themselves, such as China’s assertion of sovereignty over island and maritime zones in the South China Sea, were not highlighted as a threat by any interviewees. This is most likely due to fact that the interviewees were based in ministries that focus on civilian and/or non-traditional security threats within Indonesian waters.

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32 Presidential Task Force 115 senior officials, interview by authors, 7 December 2016.
33 BDC senior officials, interview by authors, 5 December 2016.
34 BAKAMLA senior officials, interview by authors, 2016.
35 MLE senior officials, interview by authors, 5–9 December 2016.
Almost all MLE actors identified illegal fishing as one of Indonesia’s biggest challenges. Some reports estimate Indonesia loses US$3bn a year due to IUU fishing.\textsuperscript{36} With its recent aggressive crackdown on IUU fishing, SATGAS 115 seeks to employ all available tools of administrative, legal and maritime law enforcement to combat IUU fishing, which involves not only fishermen but also fishing licenses, fishing vessels (foreign and domestic), and regulations regarding types and sizes of fish that can be caught.\textsuperscript{37} SATGAS 115 also identifies threats associated with IUU, such as corruption, fraud, tax crime, illegal transaction of fuel and money laundering, as well as human rights violations related to working conditions on the fishing vessels. Human rights violations include child labour, poor living conditions and unfair or illegal employment conditions (e.g. forced labour without pay, excessively long hours and abuse). IUU has also been widely discussed in the literature as a core maritime security threat for Indonesia.\textsuperscript{38}

Most MLE actors identified smuggling in the maritime domain as another key threat, encompassing human trafficking (including refugees), as well as smuggling of drugs and other illicit substances and commodity goods. For example, academic sources suggest that there is a need to develop indigenous capacity within Indonesia to address the issues of human trafficking and forced labour. The transnational nature of the problem illustrates the importance of improving domestic coordination at all levels to ensure effective cooperation with other states.\textsuperscript{39}

Academic sources also highlight a number of other threats related to the large number of islands to administer, combined with Indonesia’s geopolitical position as a major transit point for commercial shipping. Such threats include ‘unfriendly activities in Indonesian waters from hostile foreign elements’\textsuperscript{40} and the growing threat of foreign-assisted separatism in ungoverned spaces.\textsuperscript{41} Maritime terrorism was identified as one of the key threats the Indonesian Water Police may have to consider more seriously in the future.\textsuperscript{42}

Another notable maritime security challenge for Indonesia is piracy, which was highlighted by most agencies as a major threat. Furthermore, as will be discussed below, the lack of resources to patrol the entirety of Indonesia’s sovereign borders hinders the state’s ability to tackle piracy and associated crimes.

As Figure 2.4 illustrates below, Indonesia bears the brunt of piracy incidents among Malaysia, Indonesia, Taiwan and Singapore – four countries that historically experience a large share of total piracy incidents in East and Southeast Asia. Between 2000 and 2014, there was an average of 100 piracy events each year within Indonesia waters, one of the highest totals of any country in the Asia-Pacific region.\textsuperscript{43}

\textsuperscript{36} Heriyanto (N.d.).
\textsuperscript{37} Presidential Task Force 115 senior officials, interview by authors, 7 December 2016.
\textsuperscript{39} Chapsos & Malcolm (2017, 180).
\textsuperscript{40} Anwar (1996, 4–6).
\textsuperscript{41} Supriyanto (2016, 7).
\textsuperscript{42} POLAIR senior officials, interview by authors, 9 December 2016.
\textsuperscript{43} START (2015).
Finally, these threats are compounded by the vast size of the area Indonesian maritime authorities have to patrol. As Figure 2.5 illustrates, Indonesian maritime security and law enforcement authorities have identified several focus areas for patrolling, outlined in red circles (from right to left). These are: (1) the southwestern shore of Sumatra; (2) the southern part of the South China Sea; (3) the southern shore of Java; (4) the Sulu Sea; (5) the northern shores of Ambon and Sulawesi islands; (6) the sea area between the Tanimbar Islands; and (7) the southwestern shore of Merauke on Papua island. During interviews with Indonesian MLE agencies, Indonesian authorities noted that in recent years they have focused on threat areas 1, 3, 4 and 5, which have been the location of much of the piracy and illegal fishing activity.
2.2.2. *Indonesian authorities have launched a series of intervention strategies to address perceived maritime challenges*

In general terms, intervention strategies can be categorised under three main operational objectives for controlling maritime threats to Indonesia: *monitoring and evaluation, deterrence and prevention, and disruption and defeat.*\(^44\) These are defined as follows:

- **Monitoring and evaluation** aims at exploiting intelligence and information networks to collect, share and analyse as much information as possible on maritime threats to Indonesia’s security and interests.

- **Deterrence and prevention** aims at undermining a maritime threat actor’s willingness or ability to commit a crime, violation or infraction.

- **Disruption and defeat** aims at disrupting maritime threats.

In this context, Indonesian authorities have made efforts to address the myriad threats emanating from the maritime domain. This has involved a multi-pronged approach. First, the executive branch has issued a series of policy documents, such as the GMF, outlining a rationale for re-orienting Indonesia toward a focus on maritime security and trade. Second, Indonesia has established or enhanced various coordinating ministries and special task forces, such as BAKAMLA and SATGAS 115, specifically to address issues of maritime concern. Finally, as of 2017, Indonesia has begun to invest in infrastructure development (see section 3.4) and procurement of additional MLE capabilities to deal with maritime threats and capacity constraints.

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\(^{44}\) For more information on how these operational objectives relate to the wider capability assessment process, please refer to *Appendix A.*
Countering IUU fishing: An example of Indonesia’s threat mitigation strategy

Indonesia’s decision to adopt a robust approach to countering IUU is best described by following quote from Susi Pudjiastuti, Minister of Marine Affairs and Fisheries:

*One of the reasons I prioritise the eradication of illegal fishing is not only because we are losing trillions of rupiah due to illegal fishing, but also because illegal fishing is often a vehicle for other crimes, such as people smuggling, drugs smuggling and slavery.*

Minister Susi has made similar linkages between corruption and IUU fishing in the past, saying, for example, that corrupt government officials at both the national and provincial levels are involved in the IUU fishing trade.

There is limited evidence with which to determine the overall impact of this IUU fishing mitigation and response strategy and its specific activities. However, it appears to be quite comprehensive, encompassing all three elements (monitoring and evaluation, deterrence and prevention, and disruption and defeat) introduced at the beginning of this section. These activities included:

- **Monitoring and evaluation:** increased interagency patrolling activity in Indonesian territorial waters.
- **Deterrence and prevention:** (1) adopting a multi-sector approach to enforcement by deploying the full force of legal and administrative capabilities against the IUU fishing threat, including fisheries, taxation, customs and sea transportation laws, and industrial and environmental law such as the United Nations Convention on the Law of the Sea (UNCLOS); (2) application of the principle of corporate criminal liability to include criminal liability for companies and their associates who engage in IUU fishing; and (3) adoption of stricter punitive measures, including the demolition of confiscated vessels that violate Indonesian laws.
- **Disruption and defeat:** (1) recovery of losses through taxation and fines in order to transfer funds back into the economy and the maritime security sector; (2) with assistance from SATGAS 115, the sinking of 236 illegal fishing vessels and the apprehension of a further 781, of which 204 were apprehended by TNI-AL, 380 by POLAIR, 20 by BAKAMLA and 177 by KKP.

Despite its success, SATGAS 115 remains a standalone initiative linked with the vision of Minister Susi and President Jokowi. It should not be regarded as an indication of systematic reform within Indonesia that is achieving across-the-board results in combatting all types of maritime threats. The sheer number of

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47 Binowo & Dalimunthe (N.d.).
48 Binowo & Dalimunthe (N.d.).
49 Binowo & Dalimunthe (N.d.).
50 Idhom (2017).
51 Idhom (2017).
actors and diffuse nature of law enforcement policy still creates inefficiencies within Indonesia’s maritime security establishment that hinder effective operations.
3. Preliminary assessment of Indonesia’s current maritime capabilities

In most cases a state’s capability is the combination of a range of component parts (e.g. units, pieces of equipment, infrastructure, personnel), rather than one specific element. For example, the US Department of Defense identifies seven elements that constitute a state’s defence capabilities: Doctrine, Organisation, Training, Materiel, Leadership and Education, Personnel, and Facilities (DOTMLPF).52 A simplified version of this includes four main elements, which are illustrated in Figure 3.1.

![Figure 3.1 Capability elements and related definitions](image)

This chapter presents the findings of a preliminary mapping exercise of Indonesia’s current maritime capability elements as described above. As such, it should be viewed as an initial scoping exercise in developing a broader understanding of Indonesia’s maritime security threats and capabilities. Follow-on work based on these preliminary findings could be conducted, for example, based on the methodology outlined in Appendix A.

52 TRADOC (2013).
3.1. Regulatory framework

The principal components of the regulatory framework that Indonesia has put in place to meet its maritime security objectives are the GMF of 2014 and the Sea Policy of 2017. These set out Indonesia’s strategy for prioritising maritime interests. While the Sea Policy document proposes integration of existing policies and programmes across ministries and agencies, it does not provide operational guidance for ministries and MLE actors regarding the scope, coordination and execution of their missions. This needs to be addressed with the development of an organisational structure for coordinating the various actors, placing limits and contingencies on actions, and providing evaluative and corrective mechanisms. While the desired end state is to link the vision of the GMF and the Sea Policy to the goals of individual ministries and agencies, the main challenge lies in aligning pre-existing programmes, budgets and strategies to fulfill the future maritime security policy of Indonesia.

In this context, the programme cluster given highest priority under the GMF is ‘Resource Industry, Ocean Services and Environmental Management’. Unsurprisingly, IUU fishing and trafficking are two areas that have seen a large share of regulatory developments in recent years, including: (1) a ban on transshipments; (2) a ban on the use of unsustainable fishing gear; (3) the strengthening of auditing and licensing practices; and (4) the development of a more rigorous legal framework that has contributed to improving the governance of the fishery business (see Figure 3.3).

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53 As one analyst put it, ‘There is no single authoritative agency to corral the ministries or agencies into concerted action. The (Sea Policy) document continues to leave the planning, budgeting, and execution of the various programs to the respective ministries and agencies’ (Laksmana, 2017a).
54 Min. Reg. 57/2014.
55 Min. Reg. 02/2015.
56 Binowo & Dalimunthe (N.d.).
57 Binowo & Dalimunthe (N.d.).
On the law enforcement side, two prominent regulatory developments have been created which have impacts on Indonesian maritime security governance. The first is the establishment of the SATGAS 115 Presidential Task Force in 2015 under PERPRES No. 115 to combat fisheries crimes. The second is the establishment of BAKAMLA in December 2014, under Indonesian Law No. 32/2014 and PERPRES No. 178/2014 to synergise law enforcement across the various MLE agencies.

Administered under the KKP portfolio, SATGAS 115 seeks to strengthen administrative and legal sanctions against illegal fishing in Indonesian waters. For example, the Task Force has thus far revoked 291 licenses, suspended 261 licenses and issued 48 warning letters since its establishment. \(^{58}\) BAKAMLA is a new coordinating MLE agency set up to utilise (e.g. through secondment or temporarily re-assignment) assets and personnel from other MLE agencies and naval counterparts in a joint task force arrangement to monitor, detain, inspect and work with the proper legal authorities to prosecute violations of Indonesian maritime law. Another important function of BAKAMLA is synergising information and intelligence across MLE agencies within Indonesia. \(^{59}\) However, due to BAKAMLA’s mandate as a coordinating body, it lacks the authority to order or command other MLE agencies to serve BAKAMLA’s needs. Its legal status does not supersede or abolish previous laws and authorities of other MLE agencies. As a result, it must work cooperatively with other agencies to carry out its mission. Despite constraints, both SATGAS 115 and BAKAMLA have leveraged increased regulatory and legal powers to more aggressively combat maritime security threats.

On the international level, Indonesia has become party to a number of maritime treaties that have enhanced its standing in maritime law protocols, such as the UN Convention against Transnational

\(^{58}\) Binowo & Dalimunthe (n.d.).

\(^{59}\) BAKAMLA senior officials, interview by authors, 7 December 2016.
Organized Crime (ratified in April 2009),\(^{60}\) the International Labour Organization Maritime Labour Convention (ILO-MLC, ratified in June 2017, will enter into force on 12 Jun 2018),\(^{61}\) and UNCLOS (ratified in February 1986).\(^{62}\) Five Indonesian ports have also passed the International Ship and Port Facility Security Code (ISPS Code), set under the International Maritime Organization (IMO), on minimum security arrangements for international ports and government agencies.\(^{63}\)

Finally, the recent decision taken by Indonesia, Malaysia and the Philippines to conduct joint counter-piracy patrols in the Sulu Sea represents a possible new trend toward multilateral approaches in the region.\(^{64}\) The concept of ‘sharing’ regulatory and operational approaches among regional states to combat shared maritime security issues may now be regarded among policymakers in Indonesia as a viable solution for addressing regional maritime security challenges.

### 3.2. Organisational structures

While the functions of the selected 11 agencies responsible for maritime security were addressed in Chapter 2, this section attempts to provide an overview of how these agencies and ministries fit into the larger executive and interagency governmental structure, outlined in Figure 3.4 below. For any state, the office of the President and executive branch should, in theory, provide a sufficient mechanism for effective top-down policy execution, such as implementation of guidelines outlined in the GMF and Sea Policy. However, based on the interviews conducted for this study and on media reports and academic literature, the plethora of agencies and governing bodies in the case of Indonesia could create fragmentation of responsibilities and increase governance costs of effectively monitoring Indonesia’s vast maritime space.\(^{65}\)

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\(^{61}\) Parameswaran (2016).

\(^{62}\) UNCLOS (1982).

\(^{63}\) TRANSAS (2006).

\(^{64}\) Jacinta Olobre & Romero (2017).

\(^{65}\) See also: Febrica (2017); MLE senior officials – interview by authors, December 2016; Parameswaran (2015); Salim (2015); Supriyanto & Rusdi (2013).
Indonesia’s national administrative authorities have struggled with a plethora of agencies with overlapping missions and/or legal authorities. To address this issue, maritime policy coordination was identified as one of the organisational areas of focus during President Jokowi’s 2014 election campaign. The GMF and Sea Policy documents were created in part to centralise maritime priorities across various agencies and ministries, and are a step in the right direction. But with no single point of authority to coordinate efforts and ensure continuity, these frameworks have instead served primarily to aggregate existing structures without necessarily producing effective integration across the government’s maritime policy bureaucracy.

Another effort to address the problem was the creation of the Coordinating Ministry for Maritime Affairs (CMMA: Kementerian Koordinator Bidang Kemaritiman) in 2014 to promote interagency coordination in maritime policy. The Ministry’s portfolio includes maritime affairs, tourism, transportation, and energy and mineral resources. Like other coordinating ministries in Indonesia, one of the central tasks of the CMMA is to coordinate policy between the President and the various ministries in charge of maritime

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67 Laksmana (2017a).
policy. The CMMA’s remit is to focus on ‘coordinating, synchronising and managing’ implementation of policies such as the Sea Policy document.68

Finally, as touched upon earlier, to address inefficiencies in interagency coordination among Indonesia’s law enforcement bureaucracy, BAKAMLA was established in part to ensure greater command authority over and coverage of Indonesia’s large number of MLE agencies. BAKAMLA stands out as an important case study of institutional reorganisation efforts initiated by the executive branch of the Indonesian government to address the stove-piping of overlapping authorities and patrol areas within Indonesian waters. A key function of BAKAMLA, as outlined earlier in this report, is to synergise operations, including the sharing of resources and manpower, across all 11 MLE agencies and BAKAMLA itself. For example, officers from several other MLE agencies often board BAKAMLA vessels to undertake law enforcement operations at sea, and vice versa.69 Furthermore, most of these agencies send officers to BAKAMLA’s headquarters as permanent liaison officers to coordinate patrols.70 Officers from these agencies, which include the Navy, can also request assets or personnel from BAKAMLA to investigate or patrol an area of interest, and vice versa. However, due to the limited capacity of BAKAMLA and the low number of personnel at its disposal, it is usually BAKAMLA that is in the position of requesting assets and personnel from other agencies.71

3.3. Human factors

Human capital remains one of the most important dimensions of effective civilian and military maritime governance. The same holds true for the bureaucracies in charge of Indonesian maritime security. During RAND interviews conducted in Indonesia, the issue of higher education and technical skills of new recruits and civilian personnel was raised as a gap in capability. While officers of MLE agencies undergo training in various law enforcement academies, education levels among recruits remains an ongoing issue for many MLE agencies.72 One initiative being pursued is the integration of training across different MLE agencies in order to formalise standard operating procedures for MLE actions. For example, SATGAS 115 emphasises the importance of training and capacity-building programmes with the creation of its FishFORCE Academy, established in collaboration with the Jakarta Centre for Law Enforcement Cooperation (JCLEC), in order to standardise knowledge and procedures for fisheries management and laws.73 Other agencies also emphasise the need for additional funding to improve existing personnel performance and increase personnel capacity. While an additional US$56 million was included in BAKAMLA’s 2015 budget, further resources and infrastructure are needed to support its mission. The

68 See Humas (2017, 41).
69 BAKAMLA senior officials, interview by authors, 7 December 2016.
70 BAKAMLA senior officials, interview by authors, 7 December 2016.
71 BAKAMLA senior officials, interview by authors, 7 December 2016. Officials noted that their current assets and fleet were too small to carry out most BAKAMLA missions. At the time of writing, BAKAMLA operates 30 small to medium patrol boats and is awaiting 10 larger vessels to be donated by the Navy. See also Afrida (2015).
72 MLE senior officials, interview by authors, 5–9 December 2016.
73 Binowo & Dalimunthe (N.d., 72).
government subsequently passed a 30 per cent budget increase in 2016 and a 300 per cent increase in 2017, including a large increase in personnel – possibly indicating greater attention by the Indonesian government to the material and training needs of BAKAMLA.\(^{74}\)

Officers of the Indonesian Navy, on the other hand, are trained at the Naval Academy at Surabaya and the Navy Command and Staff School in Jakarta.\(^{75}\) In addition, the Indonesian Navy has initiated numerous joint training programmes involving inter-service exercises with the air force and army, as well as multilateral exercises with regional partners (see Table 3.1 for a sample of recent international engagement opportunities). Such exercises enhance professionalism and readiness within the Indonesian Navy for joint military environments and contingencies. These exercises are broken down below into military, domestic and bilateral categories.

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\(^{74}\) Rider (2014, 3).

\(^{75}\) Jane's (2018).
Table 3.1 Selected training programmes involving the Indonesian Navy

<table>
<thead>
<tr>
<th>Training type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Military</td>
<td>LAGTAB TNI 2008: large-scale exercises to test readiness and alertness in defending the state’s territorial integrity. The most recent iteration took place in 2014.</td>
</tr>
<tr>
<td>Domestic</td>
<td>Armada Jaya' annual or biannual manoeuvres: amphibious operations involving the army and air force. The latest exercise, conducted in September 2016, saw the participation of about 7,000 Indonesian Defence Forces (TNI) personnel and 39 naval vessels. Natuna exercises: In June 2016, the navy deployed five surface combatants, an auxiliary support vessel, and a maritime patrol aircraft to the Natuna islands region for a 12-day naval exercise near disputed waters of the South China Sea, representing one of the service’s largest dispatches of naval assets to Natuna in recent years.</td>
</tr>
<tr>
<td>Bilateral</td>
<td>Indonesia–US exercises: Since resuming military relations with the United States in 2005, the navy and marine corps engaged in numerous sailor-to-sailor small-scale exercises and training iterations. The largest of these are Cooperation Afloat Readiness and Training (CARAT) and Sea Survex exercises. Indonesia–India exercise: Known as the India–Indonesia Co-ordinated Patrol Naval Exercise (INDINDO CORPAT), the biannual joint coordinated patrol is held every year in April and October. INDINDO CORPAT has involved patrols against piracy, poaching, illegal immigration, drug trafficking and human trafficking. Indonesia–China exercise: Ships from China’s navy carried out drills of a newly ratified naval code with a vessel from the Indonesian Navy in June 2014 during a visit to Indonesia. The Code for Unplanned Encounters at Sea (CUES) was ratified unanimously by 25 Asia-Pacific countries at the 14th Western Pacific Naval Symposium held in China in April 2014. The protocol aims to improve communication at sea to prevent maritime tensions from flaring into conflict, and consists of standardised phrases for naval ships and aircraft to use in unexpected encounters.</td>
</tr>
</tbody>
</table>

Source: Jane's (2018).

Furthermore, in relation to international training, the Australian Border Force (ABF) has launched a combined maritime security enforcement training effort with Indonesia. The initiative was unveiled by ABF commissioner Roman Quaedvlieg during a visit to the Jakarta JCLEC on 25 August 2015. This initiative adds to a growing list of multilateral training initiatives to which the Indonesian Navy is party. Table 3.2 lists these initiatives.

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76 Rahmat (2015).
Table 3.2 Multilateral training programmes

<table>
<thead>
<tr>
<th>Training type</th>
<th>Description</th>
</tr>
</thead>
</table>
| Multilateral  | **RIMPAC:** the Rim of the Pacific Exercise (RIMPAC) is the world’s largest international maritime warfare exercise. The TNI-AL's landing platform dock KRI Banda Aceh, became the first navy ship to participate in the exercise in 2014. The 2016 iteration of RIMPAC saw the first deployment of a TNI-AL surface combatant.  
**KOMODO:** multilateral humanitarian assistance and disaster relief (HADR) exercise. The first event was held in Indonesia in 2014. In addition to the host country, 18 other nations participated in the exercise. The six-day exercise comprised three phases: a harbour phase, a sea phase, and a civic mission phase.  
**Milan:** biennial multinational exercise, ‘Milan’, involving navies from Southeast Asia, Asia-Pacific, and the Indian Ocean region. The exercise aims to enhance interoperability and standard operating procedures for disaster management.  
**SEACAT:** first conducted in 2002, the purpose of the Southeast Asia Co-operation Against Terrorism (SEACAT) exercise has been to improve sea-based information sharing and the coordination of maritime security responses in the region. The latest iteration, SEACAT 2016 commenced at the Republic of Singapore Navy’s Multinational Operations and Exercises Centre.  
**Sea Cooperation 2014:** this two-day multinational maritime joint operation involved warships from India, Pakistan, Bangladesh, Brunei, Singapore, and host country China. Drills involved SAR missions in addition to communications and coordination training. |

Sources: Commander of Task Force 73 Public Affairs (2016); Jane’s (2018).

3.4. Technology and infrastructure

Table 3.3 below highlights, in broad numbers, the total number of assets at Indonesia’s disposal for maritime security by agency.
Table 3.3 Information on existing assets

<table>
<thead>
<tr>
<th>Actor</th>
<th>Assets</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indonesia Water Police (POLAIR)</td>
<td>~200 vessels</td>
</tr>
<tr>
<td>Maritime Security Agency (BAKAMLA)</td>
<td>&lt;30 vessels: 2 ground stations, 14 marine security and safety monitoring stations, and 3 regional zone radar headquarters</td>
</tr>
<tr>
<td>Directorate of Customs and Excise (BDC)</td>
<td>~189 vessels</td>
</tr>
<tr>
<td>Indonesia Presidential Task Force to Combat Illegal Fishing (SATGAS 115)</td>
<td>~50 vessels and a few fixed-wing aircraft</td>
</tr>
<tr>
<td>Indonesian Navy</td>
<td>~236 vessels in active service and 75,000 active personnel</td>
</tr>
</tbody>
</table>

Source: MLE senior officials, interview by authors, 5–9 December 2016. It was pointed out that most of these vessels were under 1000 tonnes, thereby limiting their range and capacity.

Up until recently, Indonesia’s defence spending as a percentage of its GDP hovered around 1 per cent, well below the regional average of 2.2 per cent. This undercut the capabilities of the Navy and rendered inoperable some of its larger assets.77 Furthermore, difficulties in maintaining a constant presence in all its jurisdictional waters leave Indonesia particularly susceptible to crimes such as piracy. Many TNI-AL ships are more than 50 years old and are entering the end of their operational shelf life. This results in reduction of their reliability and availability as well as limited operational performance. Other issues related to maintenance, outdated armaments and a general shortage of spare parts also hamper the capability of TNI-AL.78 However, recent proposals from the Indonesian government include increased spending on the military, including on the Navy and other maritime-focused organisations. One driver of increasing defence spending is the bolstering of TNI-AL presence near Natuna Island, the waters of which overlap with China’s ‘nine-dash line’ claims in the South China Sea and are a source of ongoing tension in the region.79

As of March 2017, the Indonesian Navy possesses 21 bases with an additional 6 naval aviation facilities and 1 marine base. These bases are scattered across the archipelago to ensure effective coverage but at times may lack effective communications linkages (see Figure 3.5).

77 Rider (2014, 3).
78 Jane’s (2018).
79 Diela (2016). It should be noted that Natuna development plans have existed since the mid-2000s. Indonesia also recently renamed the waters near Natuna Island the ‘North Natuna Sea’. See ABC News (2017).
In fact, the tyranny of distance was highlighted by interviewees as an impediment to efficient communications, command and control between military and civilian MLE agencies. Coordination, both in terms of information and logistics, was identified as an issue of concern. For example, the Indonesian Water Police pointed out the need for intelligence fusion with other MLEs, and SATGAS 115 acknowledged a lack of efficient transportation channels.

Customs officials remarked that port security remains a problem, with a plethora of ‘unofficial ports’ along Indonesia’s inland islands that cannot be regulated by customs officials. These areas could prove a challenge as, at present, the Indonesian economy suffers from weak integration due to poor maritime infrastructure and the high costs of transporting goods between islands.

Addressing infrastructure gaps

To address the infrastructure gap, Indonesia plans to build 24 seaports and deep sea ports, including expanding five existing major ports – a total investment of approximately US$5.8bn. Indonesia is also looking to leverage an innovative maritime technology called ‘Fishing Watch’ – an online platform created by Google and two maritime organisations, Oceana and Sky Truth – which utilises satellite data to promote environmental maritime domain awareness (MDA). Indonesia is planning to use the platform to publicise data that it gathers through ‘vessel monitoring systems’ – information that can reveal more

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80 POLAIR senior officials, interview by authors, 9 December 2016; SATGAS senior officials, interview by Europe, 7 December 2016.
81 Presidential Task Force 115 senior officials, interview by authors, 5-9 December 2016.
82 Suryati (2016).
83 Rahadiana & Chatterjee (2014).
about what is actually happening on board than the currently deployed automatic identification system location data tracking system can provide.\textsuperscript{84}  

Furthermore, SATGAS 115 is slated to boost its detection capabilities, notably through combined surveillance patrols with the TNI, the KKP, police and BAKAMLA in both the western and eastern regions of Indonesia.\textsuperscript{85}  

Finally, the KKP signed a memorandum of understanding with the U.S. satellite technology company Spire in 2016 to boost maritime surveillance and reconnaissance using Spire’s constellation of nanosatellites.\textsuperscript{86} According to the announcement, the parties will:

[...] jointly test and evaluate how data provided by Spire’s constellation of nanosatellites can help Indonesia better monitor, supervise and manage vessels entering and operating in Indonesia’s 5.8 million square kilometers Exclusive Economic Zone (EEZ).\textsuperscript{87}  

\textsuperscript{84} The Economist (2017, 24).
\textsuperscript{85} Idhom (2017).
\textsuperscript{86} Spire (2016).
\textsuperscript{87} Spire (2016).
4. Conclusion

Based on the preceding analysis, this report finds that Indonesia has placed renewed emphasis on maritime security governance. It has done so first by issuing new policy guidelines, including the GMF and Sea Policy proposals. It has also put in place regulatory, administrative and legal changes to its maritime policy to enable it to better manage its expansive maritime space. For example, Indonesian efforts to combat IUU fishing stand out as a successful case of bringing all elements of maritime governance to bear to combat a maritime challenge. However, the overall effectiveness and impact of these efforts remains to be assessed.

More broadly, Indonesia faces challenges in achieving its goals of enhancing maritime security governance. Its limited infrastructure base, diverse set of MLE agencies and underdeveloped interagency mechanisms currently hinder progress in this regard. However, Indonesian policymakers are increasingly cognisant of the issues that constrain governance, and are enhancing existing policies and in some cases creating new ones to meet those challenges.

In the short-to-medium term, the following actions should be considered to accelerate progress in Indonesia’s maritime security management:

- **Conduct a comprehensive capability needs assessment**: A systematic assessment of available capabilities in relation to the identified threats or priority areas is suggested as a follow-on effort to this study in order to identify capability gaps, as well as capability surpluses or duplication of effort. A rigorous capability assessment could inform more ambitious reform programmes and lead to a more efficient use of available resources.

- **Develop operational guidelines and metrics for enhancing maritime security**: While the GMF and Sea Policy documents offer a set of policy priorities and goals for Indonesian maritime security, they fall short on specific operational guidance for ministries and MLE actors regarding the scope, coordination and execution of their missions. The next step in the policymaking process is to develop an effective interagency coordinating mechanism to monitor progress towards these goals. This includes developing metrics by which the performance of MLE actors and bureaucracies can be measured, including whether ministries are meeting, exceeding or falling short of the objectives stated in these policy documents. Offering clearly differentiated tasks and contingencies on actions across the spectrum of MLE actors in Indonesia would assist in the process of evaluating and adjusting implementation of maritime enforcement and regulation.
Overhaul BAKAMLA to give it greater authority. As of now, BAKAMLA has a limited mandate to coordinate with other MLE agencies. One step that may enhance management of Indonesian maritime law enforcement affairs would be to give BAKAMLA centralised power over all other MLE agencies. Such a reform would create one unified bureaucracy overseeing the various ancillary MLE agencies within Indonesia. Such a reform, which would involve the passage of new laws giving stronger authority to BAKAMLA, may streamline the interagency coordination process, leading to more desirable regulatory outcomes. A key factor in the success of this reform would be a major increase in human and physical resources to fulfill BAKAMLA’s supra-agency mission and mandate. This type of reorganisation would be in line with broader trends in Southeast Asia of states employing constabulary forces as opposed to navies to manage, regulate and enforce domestic and international maritime laws and conventions. Coast guards, in general, can present a less escalatory face of state power than navies and signal an intention on the part of the state to use civilian, rather than military, means to govern their own waters. Finally, coast guards offer a wider array of non-lethal means of enforcement that dampen the potential for inadvertent escalation to war in disputed waters such as the South China Sea.

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88 Morris (2017).
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Appendix A: Introducing a systematic approach to capability assessment

This appendix introduces key concepts and definitions that are the foundation of capability assessments in the broader context of maritime security. In addition, this chapter introduces a theoretical model for capability assessment. The purpose of the model is to provide a framework that illustrates the steps required to set up and conduct the assessment, and to identify vulnerabilities and possible measures to address them. The material presented in this appendix is based on work conducted by RAND Europe for the European Border and Coast Guard Agency (FRONTEX).

Capability is defined as the ability to perform assigned tasks to achieve desired objectives

For the purpose of this study, capability is defined as the ability to achieve desired objectives by performing tasks, under specified conditions, to an agreed minimum level of performance. The minimum level of performance is articulated in the form of minimum capability requirements, which define the minimum conditions that should be met in order to perform a given task.

The ability to perform assigned tasks and achieve desired objectives is based on a combination of different elements, referred to as ‘capability elements’, which that can be categorised as follows:

- **Regulatory frameworks (RF)**: RF include the full spectrum of regulations that are necessary to perform tasks and achieve objectives. They span international law, national legislation, plans and operating procedures. They set the parameters and conditions under which border management is conducted.

- **Organisational structures (OS)**: OS include all those organisational elements with specific responsibilities to perform or support assigned tasks. They can range from individual teams to interdepartmental agencies, including units and individual national departments.

- **Human factors (HF)**: HF can be further divided into two sub-elements:

90 Persi Paoli et al. (2015).
91 DHS (2007b); Hall, Persi Paoli et al. (2015). Elements and definitions are adapted from DHS (2007a).
Personnel: Includes paid and volunteer staff who meet relevant qualification and certification standards necessary to perform assigned tasks.

Training: Includes content and methods of delivery that comply with relevant training standards necessary to perform assigned objectives and tasks.

It is acknowledged that HF may include additional, less measurable, elements such as leadership, culture and motivation.92 These elements can certainly influence performance effectiveness, but are considered less relevant in the context of capability assessment.

- **Technology and infrastructure (T&I):** T&I include major items of equipment, supplies, facilities and systems that comply with relevant standards necessary to perform assigned objectives and tasks.

The theoretical model for capability assessment can be illustrated as a four-phase process

Having defined the concept of capability and related elements, it is now possible to design a capability assessment process. The assessment of operational capabilities includes four main phases: assessment set-up, assessment conduct, gap analysis and intervention (see Figure A.1).

**Figure A.1 Overview of the assessment model**

![Figure A.1](image)

The following paragraphs describe each phase in more detail.

**Phase one: Assessment set-up**

The set-up of the capability assessment is the first and arguably most critical phase of the analytical model. This phase entails a sequence of steps aimed at ensuring the validity and reliability of the assessment. Within the context of capability assessment for maritime security, operational capabilities should be linked to operational objectives, key tasks, threats and minimum capability requirements. This will ensure that the assessment is valid and reliable. These four key concepts can be defined as follows:93

- **Threat** is defined as a force or pressure acting on the external borders or within territorial waters.94

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92 Bradford et al. (2014).
93 Hall, Persi Paoli et al. (2015).
94 FRONTEX (2012).
Operational objective(s) are defined as the primary outcome(s) that need to be achieved to mitigate or counter the threat. While no strict rule exists to define the objectives, most of them can be grouped, in general terms, in one of the following conceptual categories:

- **Monitoring and evaluation** aims at exploiting intelligence and information networks to collect, share and analyse as much information as possible on the threat itself as well as on other relevant external factors.

- **Deterrence and prevention** aims at undermining the perpetrator’s willingness to commit the crime, violation or infraction; and

- **Disruption and defeat** aims at disrupting and defeating the threat.

**Key tasks** represent the tactical level of the breakdown – the activities and means necessary successfully to accomplish the objective(s).95

**Minimum capability requirements** define the minimum conditions that should be met in order to enable a given capability. These requirements should be tailored to each specific task and be articulated using the framework provided by the four capability elements set out above: regulatory frameworks, organisational structures, human factors, and technology and infrastructure.

These four key concepts are fundamental for framing and setting up a coherent capability assessment process, which can be structured in four main questions following a ‘top-down’ sequence illustrated in Figure A.2.

![Figure A.2 Overview of the assessment process set-up and transition to assessment conduct](https://example.com/image)


Note: The figure above illustrates the general preparatory steps that are required before an assessment can be conducted.

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95 Inspired by Cousins (2004).
Phase two: Assessment conduct

As illustrated in Figure A.2, after the determination of the minimum capability requirements, the next step is to assess current capabilities. Capability assessments should not be confused with performance evaluations. The focus, therefore, should be on what can or cannot be done, rather than on how well it is done. In a similar context, the United States Joint Chiefs of Staff express the distinction between different types of assessment using two questions: (1) ‘Are we doing the right things?’ (capability assessment); and 2) ‘Are we doing the things right?’ (performance evaluation). Capability assessments should focus on the first question. More specifically, they should ask: ‘Can we do the right things?’

Once the goal is identified, it is possible to plan and conduct the assessment itself. The assessment can be done internally or with the support of external actors. In the context of maritime security or border management, two main types of assessment – survey-based and exercise-based – are particularly relevant. The exercise-based assessment may also be used to obtain some indications of performance (i.e. how well a task is conducted). However, it cannot be used to replace a performance evaluation process that requires a rigorous determination of specific performance standards (quantitative and qualitative performance expectations for each key task), indicators (what is going to be measured to evaluate the performance against the standards), and metrics (how indicators are going to be measured).

Phase three: Gap analysis

Once the assessment has been conducted, the results are measured against the set requirements. It is in this phase that the gap between desired capabilities (expressed through the minimum capability requirements) and current capabilities is analysed.

Similar to assessments conducted by the North Atlantic Treaty Organisation (NATO) as part of its Defence Planning Process, the capability gap analysis allows for the identification of three categories of capabilities:

- **Capability surplus:** when the available capabilities exceed the requirements.
- **Capability shortfalls:** when the available capabilities do not meet the requirements.
- **Capabilities to be maintained:** when the available capabilities are sufficient to fulfil the requirement.

Assessing a capability provides an indication as to whether a task can or cannot be performed. Nevertheless, to allow for efficient and effective planning of interventions (further described in the next section), it is of fundamental importance that the gap analysis is conducted, for each capability that has been assessed, at the capability elements level to ensure that enough information is gathered about the impact of each capability element on the ability (or inability) to perform a given task.

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96 US Joint Chiefs of Staff (2011b); US Joint Chiefs of Staff (2011a).
97 NATOSHAPE (2014).
Phase four: Intervention

The last phase of the model builds on the results of the gap analysis to formulate concrete actions and, where relevant, measures to reduce vulnerability. Each intervention has to be tailored to the specific capability element(s) identified through the gap analysis as needing attention. Interventions may therefore span from the development or revision of a national law to the purchase of new equipment.

As discussed in the previous section, each of the three capability categories identified through the gap analysis can be used to determine other relevant factors. These include:

- **Reallocation of resources:** If the gap analysis identifies areas where there is a **surplus of capability**, maritime security authorities may want to consider the possibility of redistributing and reallocating resources.

- **Potential vulnerabilities:** As described in the Common Integrated Risk Analysis Model (CIRAM), a gap in operational capabilities is one of the three determinants of vulnerability. Identifying **capability shortfalls** may therefore provide useful information to national risk analysis units who can include such shortfalls in their overall risk analysis process. In addition, maritime security authorities can use this information to prioritise shortfall areas, and to plan and implement appropriate **measures** that may include the development or revision of standard operating procedures, investment in new equipment, or training of personnel.

- **Capability retention:** Identifying those capabilities that are aligned with the requirements is an important step for planning those activities necessary to ensure their retention. Taking into consideration the four capability elements and assuming that regulatory frameworks and organisational structures remain unaltered, in order to ensure **capability retention** it is important to address human factors such as skills retention, as well as technology and infrastructure issues such as equipment and infrastructure efficiency and obsolescence management.

Figure A.3 provides an overview of phase four.

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98 FRONTEX (2012).

99 ‘Skills retention’ can be defined as the maintenance or sustainment of skills as learned behaviours and procedures over long periods of time without practice (Schendel & Hagman, 1991).
Figure A.3 Overview of the intervention phase of the assessment model


Note: The figure above illustrates how the outputs of the gap analysis feed into the intervention phase. The far right of the figure includes a list of illustrative examples under each of the main types of intervention shown in the middle boxes.