

7-1-2021

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Recommended Citation

Dwicahyono, Taufik; Octavian, Amarulla; Bura, Romie Oktavianus; Hendrantoro, Gamantyo; and Widodo, Pujo (2021) "Maritime Asymmetric Warfare in Archipelagic States; The Indonesian Phenomena," *Journal of Strategic and Global Studies*: Vol. 4 : No. 2 , Article 5.

DOI: 10.7454/jsgs.v4i2.1045

Available at: <https://scholarhub.ui.ac.id/jsgs/vol4/iss2/5>

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Maritime Asymmetric Warfare in Archipelagic States: The Indonesian Phenomena

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ABSTRACT

Defending sovereignty within an island nation is relatively more complex than doing so for a continental state. The number of scattered islands makes straits and seas more penetrable, vulnerable points and targets of asymmetric threats at sea. The aim of this research is to illustrate threats at sea and provide solutions in guarding and monitoring Indonesian coastal borders, which currently require more ships and radar technology as well as other sensing equipment due to longer beaches. The results reveal that firstly, potential asymmetrical threats at sea include former WWII mines, underwater fibre cables, floating ports, and nuclear submarines belonging to foreign countries such as America, Russia and China. Secondly, problems related to welfare include theft of natural resources like coral reefs and fish, and drug smuggling activities, all which add to the burden and duties of various parties. Thirdly, asymmetrical Narcoterrorism is very prominent in Colombia where drugs from Cannabis plants are sold to buy weapons. This is also happening in the Philippines and in Aceh, Indonesia. Narcotic activities are also increasingly worrying – particularly their effects on younger generations. Lastly, coordination by affiliated parties that help guard the sea is highly expected. Adequate maritime border patrol management must be carried out so that together, different marine security institutions can maintain the sovereignty of the state. Therefore, the following are recommended: a) regional diplomatic cooperation within ASEAN, b) ensuring of military capability, power, and readiness for placement, and c) the utilization of unmanned technology to aid in securing the archipelagic state.

Keywords: asymmetric, maritime, sovereignty, and unmanned border patrol.

1. Introduction

Indonesia is the world's largest archipelagic state. According to Cribb and Ford (2009), the archipelago consists of 18,108 islands, distributed between Breueh in the West and Sibir Island in Humboldt Bay in the East, and between Miangas in the North and Dana in the South. Its population contains a wide variety of cultures and languages, with an estimated 262,787,403 inhabitants (indexmundi.com, July 2018). If Indonesia's Exclusive Economic Zone (EEZ), which stretches beyond the archipelago is included, Indonesia's sea area expands up to 7,9 million km². Territorial issues require bilateral agreements with neighboring countries because Indonesia is comprised of 2.8 million km² of water (including 92.877 square kilometers of non-

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EEZ inland waters) and 1,826,440 square kilometers of land (Cribb & Ford, 2009), and demands of sovereign territories will overlap.

In the maritime context, Octavian (2019) argues that security threats, especially in the Malacca Strait and Singapore, are diverse. There, approximately 70,000 ships pass annually and every day, 150-200 create threats related to navigation and piracy. The waters are also associated with drug and human trafficking, arms smuggling, illegal fishing, illegal logging, terrorism, and kidnapping. Additionally, pollution is also a threat to Indonesia's maritime environment. Evidently, continuous monitoring is vital in protecting the area, but can only be done effectively using remote sensing techniques and sophisticated remote modelling.

To govern and defend sovereignty within Indonesia is relatively more challenging than it is for a continental state. The number of scattered islands makes the waters more penetrable during asymmetric war, and requires extensive sensory equipment in response. The Indonesian Sea shares borders with 10 countries, namely: India, Thailand, Malaysia, Singapore, Vietnam, the Philippines, Palau, Papua New Guinea, Australia, and Timor Leste (RDTL). Shape, location, natural conditions, and sources of wealth demand that Indonesia possesses strong national defense (Kompasiana, June 2015), to maintain its integrity as a country. In doing so, guarding and patrolling national borders is necessary, but requires more ships, radar technology, as well as other sensing equipment, because the lengths of coastal line are longer.

The formulation of this study generates one question: How should the Indonesian Government maintain maritime sovereignty and security in the face of an Asymmetrical Warfare threat? In response to this, this study proposes a multifaceted approach which includes:

1. Accounting for existing threats, such as remaining World War II mines, theft of natural resources, and the smuggling of goods and narcotics
2. Utilizing both novel technology and existing technology in novel ways for the anticipation and management of the threats
3. Ensuring cooperation between the relevant stakeholders in the anticipation and management of the threats

2. Literature Review

2.1 *Asymmetric Warfare*

The term ‘Asymmetric Warfare’ was used by the U.S. Government and academia in the late 90s, but diminished in 2003 and is now almost avoided (Buffaloe, 2006). Essentially, asymmetric warfare is violent action by the “have-nots” against the “haves”, where the have-nots seek to cause significant impact in every aspect, from tactical to strategic, by employing their strengths against the weaknesses of their opponents (Thornton, 2007).

Another interpretation of Asymmetric Warfare is unconventional warfare (Bunker, 1999). It is defined as conflict, aside from traditional wars, initiated by a nation’s institutions. It also happens mostly undercover, enacted at low intensity by parties such as guerrilla groups, drug cartels, or even special force divisions of regular armed forces. Perpetrators of asymmetric war include Sun Tzu, Lenin, Mao, and guerrilla leaders like Che Guevara and Marighella (Bunker, 1999; Bhonsle, 2004).

In terms of maritime security and public welfare, Indonesia shares its national objectives with its neighboring countries, Malaysia and the Philippines, and the three countries have an alliance called the Indomalphi Trilateral Maritime Patrol. This initiative proved effective when its use of asymmetric warfare prevented the kidnapping of Indonesian and Filipino fishermen by the extremist Abu Sayyaf Group (ASG). A similar initiative that has also proved effective was formed between Indonesia, Malaysia, and Singapore (Malsindo), who ran a joint maritime task force in 2005 (Primayanti, 2020).

2.2 *Sovereignty*

International law illustrates sovereignty as a state’s power being independent from any other power, both regarding external and internal matters (Kosco, 2016). A sovereign state is limited only by sovereign rights of the other states, universal law, and accepted international commitments. Henrikson (2014) maintains that sovereignty involves universality – the ability to account for all entities in an area, regardless of their respective social groups.

Sovereignty is a dynamic phenomenon; changes occur when the meaning itself differ between various professions, disciplines, and political/legal groups (McDougal, 1967). Furthermore, the concept is also impacted by globalization (Held, 2002). Globalization is defined in relation to its effects on sovereignty – it operates on the understanding that sovereign borders have become

penetrable due to the global flow of goods, services, people, and communications. As an example, current facts show that the South China Sea ownership case has violated international law. Despite this, China remains unable to acknowledge concurrent outcomes, such as the International Court of Justice's decision on the Spratly Islands joint ownership with the Philippines. Cases such as this requires settlement through international diplomacy to reestablish sovereignty on the country's borders.

2.3 Maritime security

Maritime security incorporates both precautionary and responsive procedures to protect the seas against threats and premeditated unlawful acts (Wise Pens International, 2012). It involves the protection of a state's territory, infrastructure, economy, environment, and society from harmful actions at sea (Klein, 2011). It includes the protection of national interests through proactive management of risks at sea, in order to strengthen welfare and resilience, and to help forge a stable world (The UK National Strategy for Maritime Security, 2014).

Maritime security concerns the state of affairs in global waters, in which both international and national laws are enforced, freedom to navigate is ensured, and citizens, infrastructure, transport, the environment, and marine resources are protected (European Union Maritime Security Strategy, 2014). Maritime Security Operations (MSO) are carried out to help protect sovereignty in the maritime domain, which is important in managing national threats. Counteracting these threats helps protect the nation, strengthen global stability, and secure freedom of navigation globally (Naval Warfare, 2010).

Currently, Indonesia faces a lack of maritime sovereignty and security from the threat of fish theft and acts of terrorism. This is due to several factors, such as the extent of its oceans, the limited number of maritime security personnel, the lack of security technology, and the lack of budget support in post-guard development. In response, this study proposes that an advanced concept of joint patrol with neighboring countries is actualized and applied.

3. Research Methodology

The employed research method involved literature reviews as well as observations, interviews, and document studies with three relevant sources, focusing on particular aspects of maritime security. This included the topics of piracy, terrorism, theft of natural resources, and narcotics smuggling activities. This study used a mixed phenomenological approach by raising

contemporary issues such as violations of maritime sovereignty and security in Indonesia's sea areas, while also reflecting on relevant past events and proposing potential future solutions.

4. Results

4.1 Asymmetric Maritime Threats in Indonesia

There are many examples of potential threats at sea, but several of them have become increasingly more prominent for the officials who handle them. This includes the spread of narcotics, which is discussed and addressed further in this study.

4.1.1 World War Mines

Potential asymmetric threats at sea include former World War II mines, particularly active sea mines, which are difficult to monitor. These mines even continue to pose danger to seaweed/algae cultivation farmers of Pantai Amal Village, East Tarakan, North Kalimantan.

Economic Intelligence refers to “something that results from, evaluates, analyzes, integrates and interprets all available information, to support the decision-making process related to organizational goals, support, security and later development” (Elshamy, 2012). Along with the Navy, this concept was applied by Tarakan to anticipate unwanted incidents within the community – by conducting announcements specifically dedicated to warn locals of the hidden sea mines originally intended for warships (Mongabay.co.id, August 2014). Several years ago, the Mine Action Training Task Force II from the Navy also neutralized an area by detonating World War II remnants in the Tarjun Waters, Kotabaru, South Kalimantan (Republika.co.id, October 2017). These activities were part of a movement by the Indonesian government, and Intelligence Cooperation such as these require dialogue between the intelligence apparatus and the public.

4.1.2 Underwater Fiber Optic Cable

An example of the Underwater Fiber Optic Cables contributing to marine threats is the ‘South East Asia – Middle East – Western Europe 3’ cable (often called the SEA-ME-WE-3), where Indonesian telecommunications going through this channel was tapped by foreign parties in a likely attempt to impair Indonesian sovereignty. The ramifications would be critical if classified state information relayed through this cable was obtained. Regarding this, the

Indonesian Ministry of Information promised not to remain silent, and further clarification to all involved parties was promised (Saputra, 2013).

The sea hosts a combination of risks to be managed and opportunities to be utilized. An example involving risks was the uncovering of illegal optical fiber network problems in Tarempa (Anambas) and Penarik (Natuna). Indonesian Military operations discovered a violation by a foreign company that illegitimately built a docking station for optical fiber installations. The company was supposed to communicate with the government but instead installed underwater cables without doing so. This unsupervised act was considered a violation of sovereignty, and Armed Forces investigated whether the installation posed a strategic threat (Kompas.com, April 2017).

4.1.3 Ports

As an entry point for foreigners and goods, ports host many asymmetrical threats. They often require cooperation from various forces such as Port Authority, Water Police, Indonesian Navy, Coast Guard, and the Ministry of Transportation, because unscrupulous parties smuggle both goods and people. From a National Defense point of view, smuggling firearms, munitions and explosives are also common cases.

Serving as a country's points of access, ports must be managed correctly and thoroughly. One of the areas of concern when it comes to ports is potential health hazards being carried in, and per the start of this year in particular – Covid-19. This virus penetrated Indonesia at the beginning of March and has since been spreading. On an international level, public attention has been drawn to two incidents, occurring near Japan and the United States, where outbreaks of Covid-19 took place on two separate Princess Cruise ships (The New Yorker, 2020).

To anticipate the virus spreading through Indonesian ports, the Ministry of Transportation have reminded Port Operators to perform their duties according to current requirements (Hubla, 2020), including identifying all ships that arrive from abroad, especially if they have visited Coronavirus-infected countries. The ministry also demands Port Operators apply Standard Operating Procedures (SOPs) in accordance with those issued by the World Health Organization (WHO). Excellent cooperation is also needed from other stakeholders, such as the Port Health Office, the Quarantine Office, and government agencies.

Various technology has been tested and deployed for port security by several countries. This includes unmanned airborne technology, tested at several European ports to determine its benefits and risks. The port of Amsterdam operated a drone detection trial to improve understanding of the device. This technology is predicted to bring positive repercussions to maritime operations in the future (rivieramm.com, 2020) including stopping Covid-19. In fact, in China, where the outbreak originated, technology such as disinfecting robots, smart helmets, and facial recognition software have been utilized to combat the virus (BBC.com, March 2020). Chinese media reported that this technology was deployed by the government to decrease the risk of Covid-19 transmitting from person to person (Deezen.com, February 2020). In addition to utilizing existing technology such as these, this study also argues that innovations should be made to help cater specifically to maritime security, particularly in Indonesia and its neighboring countries. For example, as a part of this research series, a separate proposal for a novel technological system is being developed by the same research team. It is a Ferrocement-based autonomous buoy system, and can be used as a “virtual gate” to be implemented at borders, choke points, straits, or port entrances. It is expected to complement existing technology in responding to threats in the archipelagic state.

4.1.4 Piracy and Terrorism

Due to its geography, the Malacca strait is where most global trade passes through, and is susceptible to piracy. It connects Europe, the Suez Canal, Persian Gulf countries, and East Asia, and pirates evade capture easily due to its small islands and branching rivers. Consequently, Malacca Strait security (both the Transportation and Communication Sea Lines) requires strengthening via the cooperation of ministries and government agencies in terms of intelligence information, diplomacy with neighboring countries, and military operations.

Transportation and Cargo vessels need crew members who understand the danger of terrorism, as the sea is a common means of transportation for terrorists. Terrorist groups on the Indonesian, Malaysian, and Philippian (‘Indomalphi’) sea borders often target abduction victims from the port, but so far, the Indomalphi collaboration has only been cooperative and has not penetrated further because each country has different interests. However, strengthening security through diplomacy and peace is expected to unite the interests of all parties.

The sabotage of fuel depots and port facilities are further asymmetrical threats at sea, as they disrupt port traffic and activities. Vessels that harbor at port are most likely stocked with fuel and water, and sabotage may render the vessels inoperable, obstructing traffic and active loading. Collaboration with Intelligence is consequently needed, to prevent collisions and terminations of active ships. Thus, strengthening security with the assistance of military operations and inter-institutional diplomacy is necessary.

4.1.5 Theft of Natural Resources

Welfare-related problems also arise at sea, such as natural resource theft and feuds between countries regarding sea borders (especially with differences in understanding of the EEZ problem). Recently, Chinese fishing vessels had to be escorted out by the Coast Guard (Detiknews, January 2020), as the fleet came approximately 130 nautical miles of Natuna Island (BBC, January 2020). Without providing permits to fish within the Indonesian EEZ, this means they violated a significant 70 nautical miles from the point they should have stopped. Corresponding diplomatic activities between Indonesia and China are often executed, but China insists that the nine-dash line region is part of its territory.

The South China Sea encompasses many countries in Southeast Asia, and according to US estimations, possesses lucrative fisheries, oil and gas reserves equivalent to those in Mexico, and possibly the second largest oil reserve following Saudi Arabia. There is international pressure on Indonesia to support the Indo-Pacific Command and Belt Road Initiative regarding the interests of the South China Sea, which requires the cooperation of ASEAN Intelligence, Diplomacy and Operations in tackling every dispute and conflict.

The South China Sea has been crucial for the economic survival of neighboring countries such as Vietnam, Malaysia, Brunei, and the Philippines. In addition, the Natuna Sea fishery area bordering the South China Sea possesses natural gas reserves important to Indonesia. Despite this, Beijing claims more than 95 percent of the South China Sea and depends on the region to provide 85 percent of China's crude oil imports. Small islands in the area have also been claimed by China, and 1,300 hectares of land have been built to maintain military infrastructure, including lengthy runways to assist bombers (VoA, 2020). China does not solve problems using international law, but through diplomacy, namely international politics bilaterally. Indonesia as the most populous country in ASEAN should conduct diplomacy with ASEAN countries and resolve disputes and conflicts in the south China sea by peaceful means.

4.1.6 Nuclear submarines

Submarines from foreign countries can potentially pass-through Indonesian waters illegally. In the case, despite the opposing parties both being states, the phenomenon would be considered asymmetric warfare because they are of unequal size or strength.

The Indonesian Archipelagic Sea Channel (ALKI) is a designated international shipping channel in Indonesian territory. ALKI connects three free waters – the Indian Ocean, the South China Sea, and the Pacific Ocean. The application of archipelagic sea lane rights is regulated by international sea law conventions. These routes are utilized by foreign ships and airplanes when crossing Indonesian seas and airways. The establishment of ALKI was to enable direct and quick international shipping, without it being obstructed by Indonesian territory. However, Naval patrols occasionally detect foreign submarines passing through ALKI points. The problem is, warships cannot monitor continuously because they must periodically return to base.



Figure 1. Indonesia's Neighboring Countries and Archipelagic Sea Lane

Source: Puspitawati, 2016

The tension between several ASEAN countries, China, and the US regarding the South China sea affects regional power balance, and will increase if the conflict between China and India at their border is brought into a wider scope. Increasing tension in the Indian ocean would complicate Indonesia's position, as it is geographically and figuratively caught in the middle of two superpowers.

In times of peace, Chinese submarines would have to enter the Indian Ocean via the Strait of Malacca, preferably at surface level, to make their presence known. China might do so to make a point, but it would be out of limited utility in an operational setting where submarines would want to conceal their presence. In times of war, they could discretely sail through the Sunda or Lombok Strait, as they pass between the chain of Indonesian islands that separate the Pacific and Indian Oceans.

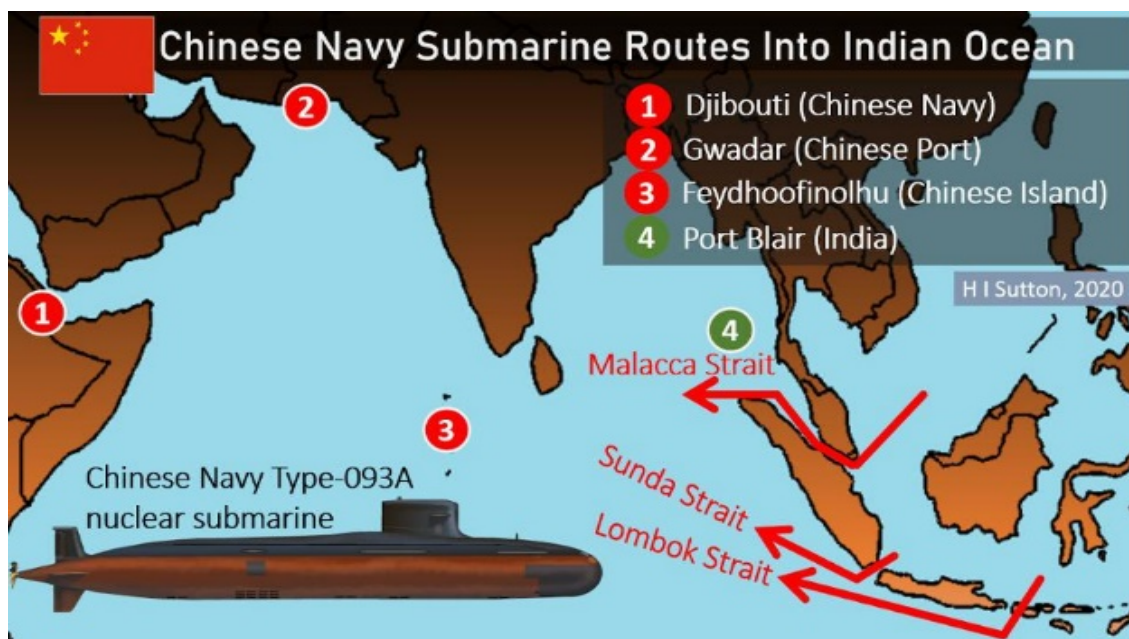


Figure 2. Available routes into the Indian Ocean for Chinese Submarines

Source: forbes.com, 2020

One advantage of taking the Malacca Strait, which flows past Singapore, is that it can lead the submarines to the deep Eastern Indian waters. From there, they can take less visible routes to their destinations.

4.1.7 Smuggling of Goods and Drugs

Narcotics is a real threat to every country, and these countries regulate and create corresponding laws based on various things, namely the importation, manufacture, distribution, selling, planting, and use of various narcotics (Desroches, 2005). Narcotics activities are increasingly worrying, particularly their effects on young generations. Asymmetrical Narcoterrorism is very prominent in Colombia where drugs from Cannabis plants are sold to buy weapons. This also happens in the Philippines and in Aceh, Indonesia, and these mugging activities add to the burden and duties of various parties.

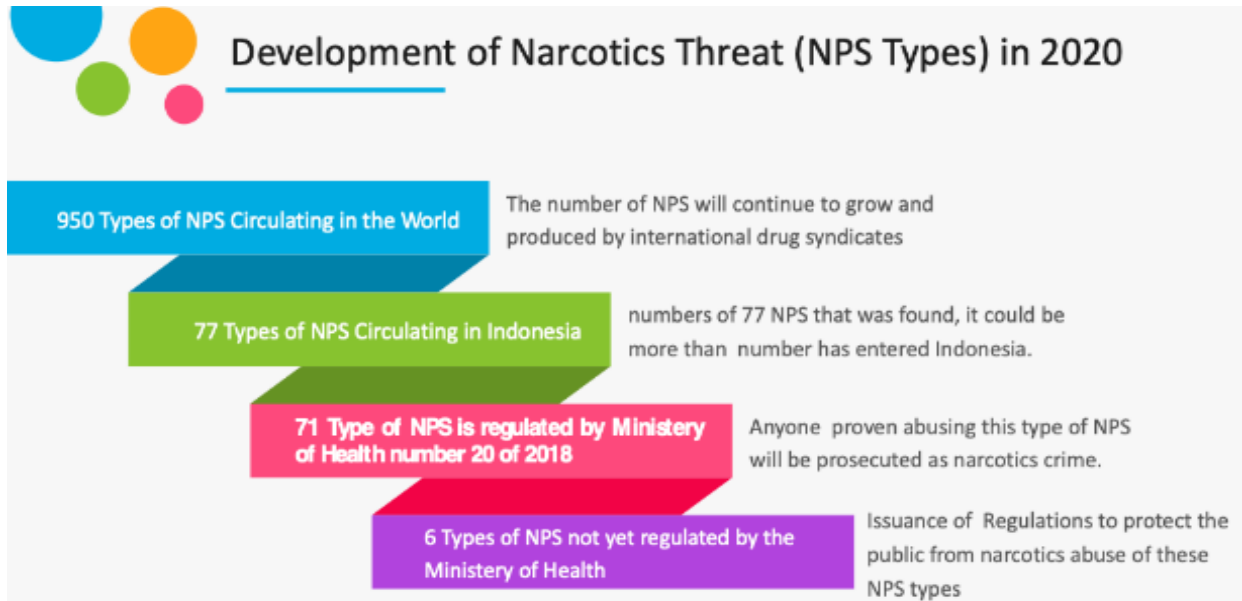


Figure 3. NPS Types in the world
Source: BNN, 2020

Until today there is persistent debate over the motives behind substance abuse, which has resulted in two general presumptions. Firstly, people use drugs and alcohol to seek pleasure, and secondly, people do so to alleviate existing states of anxiety or depression (Kassel, 2010), despite drug abuse potentially exacerbating psychological, physical, and spiritual conditions. Ultimately, smuggling narcotics is a big challenge worldwide, and users come from every level of society, from working-class people to public figures.

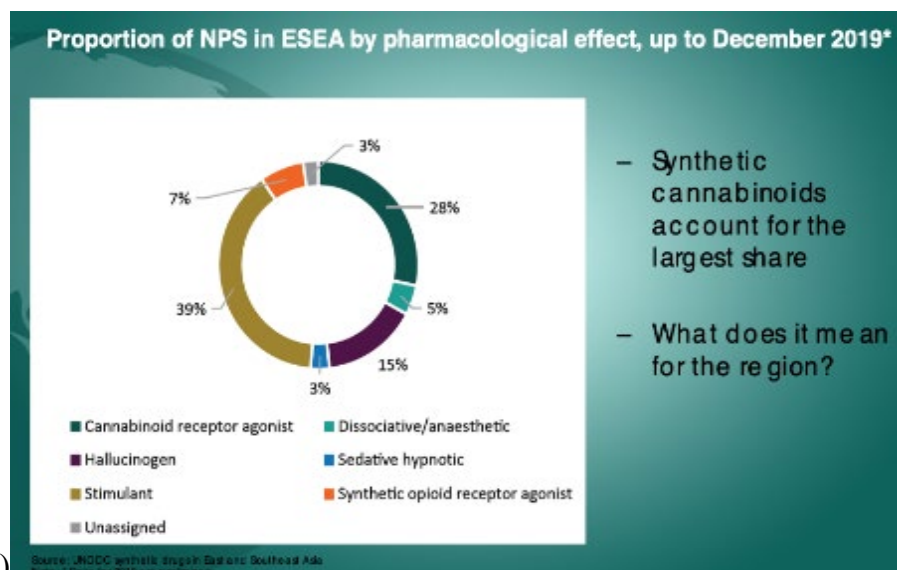


Figure 4. Proportions of new psychoactive substances in East and Southeast Asia
Source : UNDOCS, 2019

The development, distribution, and abuse of illegal narcotics are transnational crimes, because producers, couriers, and users come from different countries. Massive and integrated international cooperation is needed to tackle this crime and cannot be executed by one country alone (Kemlu, April 2019). Illustrated above, the types of narcotics that enter East and Southeast Asian countries are very diverse, but Synthetic Cannabinoids accounts for the largest share.

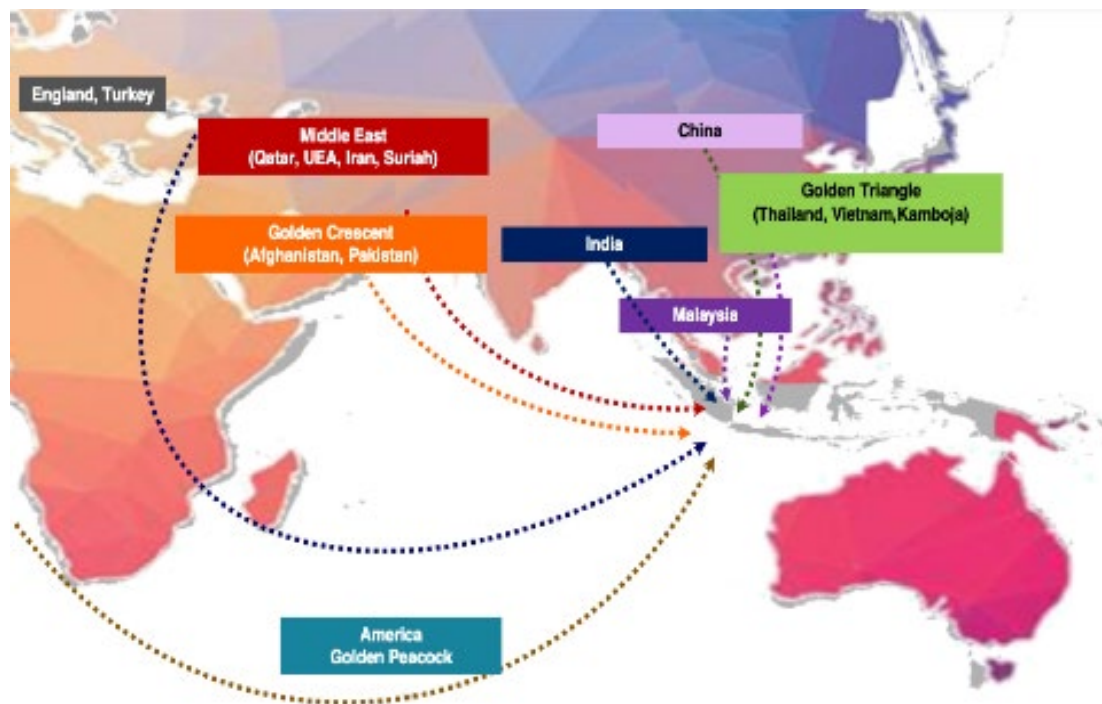


Figure 5. Sources of Narcotics to Indonesia
Source: BNN, 2020

Given its geographical and demographic conditions, Indonesia has become one of the destination countries for narcotics distribution (figure 5), and 80% of narcotics smuggling into Indonesia is done via sea (Lemhanas, July 2019). The majority of these seas are used by syndicates to smuggle drugs from abroad, by transshipment (figure 6) and using small boats to enter the islands (Winarko, 2020). As the largest archipelagic state in the world, the extensive coast line makes Indonesia porous, allowing smugglers to use unconventional and often small pathways as alternative entrances into the country, locally known as *jalan tikus* (“rat roads”). Consequently, Indonesia considers drug trade a high-risk crime and handling it requires extraordinary efforts.



Figure 6. Major Sea routes of Narcotics to Indonesia
Source: Liputan 6, 2020

There is an extraordinary number of available paths into Indonesia. A few examples of areas notorious for narcotics smuggling:

1. North Kalimantan Province (Kaltara). There are 1,400 *jalan tikus* for smuggling, mostly in territorial waters.
2. *Jalan tikus* also exist in the Riau Province region. Here, there are 84 of them. Like in Kaltara, they also exist in territorial waters.
3. 80 percent of drug trafficking in Indonesia enters through Aceh. There are 29 *jalan tikus* spread along the east coast of Aceh in the Malacca Strait Lane, allowing drug entry from Europe, China, Malaysia, Thailand, Vietnam, and others (Tribunnews, February 2019).

Other provinces such as Jambi, which borders Riau and Malaysia, can be taken as an example of how narcotics enter the mainland through beaches and rivers after transshipments in the middle of the sea. The Directorate of Narcotics Investigations (Ditresnarkoba) of the Jambi Regional Police has mapped the waterways that are entry points for international drugs in Jambi. There are at least 27 detected pathways that pass through the waters of Tanjung Jabung Barat Regency alone. The route is arduous to access by land, is difficult to comb over, and the path directly penetrates into the sea so that the dealer may elude detection.

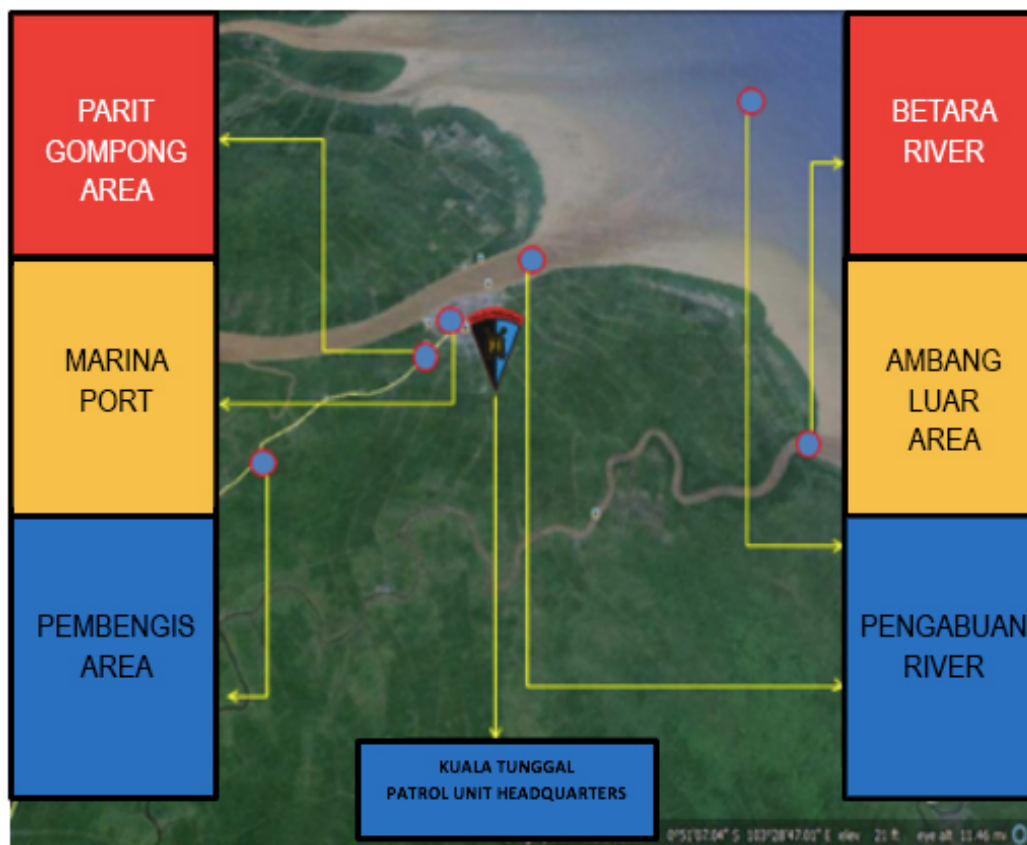


Figure 7. One of the area prone to drug smuggling in Jambi province
Source: Jambi Regional Police

The prevention of smugglers entering Indonesian territorial borders invites several challenges. Firstly, synergy among the stakeholders in prevention efforts must be optimized. Secondly, autonomous sensing technology is needed but not yet available in some areas. When smuggler ships enter Indonesia's waters and turn off their AIS (Automatic Identification System), its command center sometimes cannot detect their geolocation. These are some of the reasons why smuggling is still rife in our waters (Irawan, 2020).

In addition to the geographical condition of the Jambi Province, it is also adjacent to the Malacca Strait, which is the international sea channel of *jalan tikus*. Harbors and small rivers located in the Tanjung Jabung Barat reGENCY and Tanjung Timur provide many landing spots. However, there are limited personnel, facilities, and equipment (e.g., high-speed crafts) – this allows the boundaries of regions/countries to be breached. Besides the hectic traffic flow, the territory's vastness, unauthorized ports, and local communities are misused for ship-to-ship cargo transfer. The coastal community's economic levels are relatively low, and are used to accommodate illegal activities; its people often forced to transport drugs to the middle of the sea (Shantyabudi, 2020).

Issues such as lack of information, little support from coastal communities in monitoring drug networks, and weak sanctions for switching off ship AIS when entering Indonesian waters challenge the integrity and commitments in the field. Given the difficulty of maritime operations in Indonesia, the use of autonomous border patrol technology is urgently needed – prevention before trespassing occurs is relatively easier than tracing *jalan tikus*.

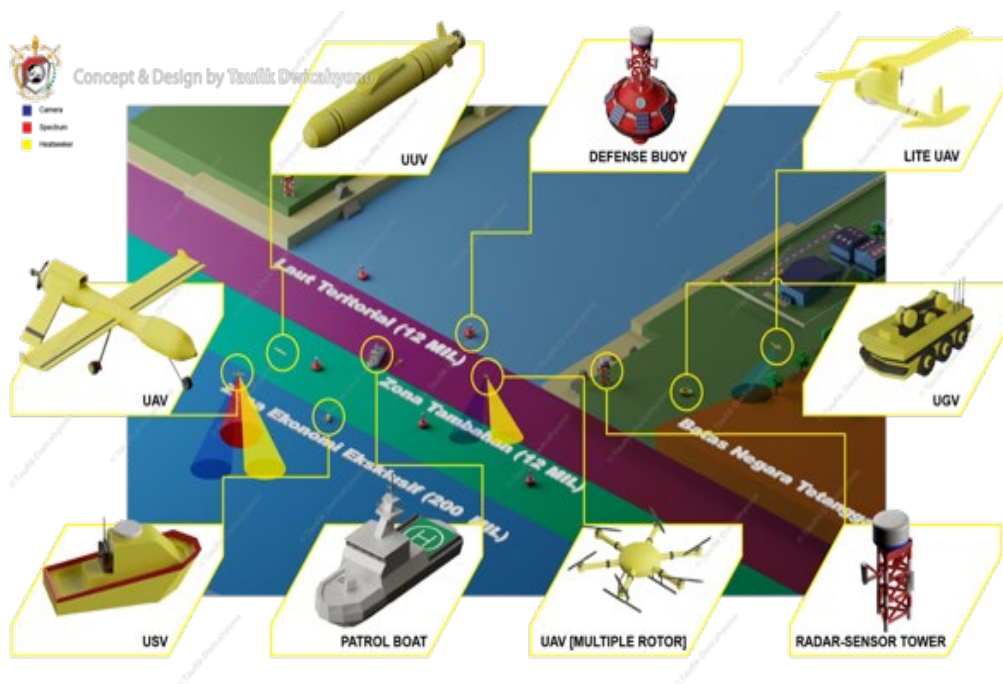


Figure 8. Suggested autonomous border patrol concept for archipelagic state of Indonesia (Designed by Dwicahyono)

Currently, this idea has been supported by ally countries to prevent the entry of narcotics through certain manufacturing sites (like the Golden Triangle). These efforts proved extremely fruitful, resulting in occasions such as the arrest of the biggest narcotics smuggling in Asia, executed by Myanmar officials. Approximately 18 tons of illicit narcotics that were supposedly meant for Indonesia were recovered, resulting in East and Southeast Asia's largest-ever “drug bust” (The Diplomat, May 2020).

The aforementioned evidence suggests that Southeast Asia has become the largest target market for narcotics consumers, which is one of the reasons this study maintains mastering asymmetric warfare to tackle narcotics smuggling requires international cooperation with neighboring countries, particularly ASEAN. To analyze and manage this phenomenon, cooperation of international police and support of the United Nations Office on Drugs and Crime is required.

5. Conclusion

As discussed, Asymmetric Warfare in archipelagic countries like Indonesia require a multifaceted and cooperative concept. This concept involves the use of both existing and novel technology, surveillance of natural resources theft and smuggling, and inter-stakeholder cooperation for the prevention of narcotics trafficking in Indonesia's sovereign territory, as well as its overall maritime security.

To control, supervise, and safeguard maritime sovereignty and security, sophisticated technology such as radar technology, ships, and weaponry is needed. This argument has been elaborated upon throughout this research as follows: firstly, potential Marine Asymmetric Threats include old WWII mines, underwater fiber optic cables, floating docks, and foreign nuclear submarines. Secondly, some threats concern welfare, such as the theft of natural resources and drug smuggling activities – all of which add to the burden and labor of relevant parties. Thirdly, like in Colombia, Asymmetric Narcoterrorism is happening in the Philippines and Indonesia, where drugs are sold to purchase weapons, thus drug activity has become an increasingly dangerous threat. The fourth point is that adequate coordination is highly needed between the affiliated parties that help guard the seas. Effective border patrol management must be achieved by relevant institutions, so as to maintain the country's sovereignty.

Presently, synergy has been executed by ministries along with regional government institutions, the military, and police. Besides this, cooperation is also maintained between Indonesia and United Nations countries, particularly China and the United States, as well as other ASEAN countries. This is expected to act as a necessary force to protect nations from threats, disturbances, and challenges pertaining territorial disputes and conflict in the Southern China seas.

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