Creating a Marine Defense Technology System in Maintaining Maritime Security

Leo Rasiddin
Marine Defense Strategy Study Program, Faculty of Defense Strategy, Universitas Pertahanan Republik Indonesia, Bogor Regency, West Java Province, Indonesia
Email: leorasiddin7@gmail.com

Abstract
Criminal pressure at sea continues to this day, including the arrival of the Covid-19 pandemic which is expected to spread quickly and can be transmitted to members if they are on duty at sea. Corona virus should be one of the country's priorities. The Indonesian state as an area that must be considered in maintaining maritime security in the region is a measure of the independence of the Indonesian state against various forms of maritime criminal pressure. Technology of the Indonesian National Maritime Security Agency in responding to and predicting maritime security threats. The Indonesian Navy must be able to maintain and defend the nation's maritime sovereignty through achieving Indonesia's maritime security. Various activities can be carried out through synergy with maritime safety agencies by combining the strengths and talents of various maritime institutions at sea.
Keywords: Defense Technology Systems, Indonesian Maritime Security

INTRODUCTION

The State of Indonesia has 17,504 islands1 and a long coastline of 108,000 km2 and is surrounded by vast waters. So the State of Indonesia is an archipelago with 2/3 of Indonesia's territory consisting of waters based on its geographical location. Indonesian waters are one of the tropical waters with a large natural carrying capacity, therefore this condition attracts the attention of every country that has an interest in trying to control it legally or illegally.

Indonesia is the largest country in Southeast Asia. In addition, Indonesia is also the largest archipelagic country in the world with a very wide maritime area. The coastline is about 81,000 km. Indonesia has more than 17,000 islands and its sea area covers 5.8 million km² or about 70% of the total area of Indonesia. Indonesia's sea area consists of 3.1 million km² of sovereign sea area and 2.7 million km² of the Indonesian Exclusive Economic Zone (ZEEI). From these data it can be calculated that the total area of Indonesia's sea is 64.97% of the total area of Indonesia. It includes the dimensions of defense and security. The determination of national jurisdictional boundaries always encounters obstacles, especially those experienced by archipelagic countries which have an interest in obtaining marine natural resources, both marine products such as fisheries and products below the bowels of the earth such as oil and gas. The Sipadan and Ligita cases, the Timor Gap, the Ambalat Sea, the South China Sea and others are real examples of problems with national maritime boundaries. This can trigger C and increase tensions (disputes) and conflicts (conflicts) between countries.

Indonesian waters are one of the tropical waters with a large natural carrying capacity, therefore this condition attracts the attention of every country that has an interest and wants to try to control it legally or illegally. According to A. Octavian (2019) "Maritime security is a significant measure of a nation's capacity to protect its national interests, since it is linked to sovereignty, freedom of navigation, economic growth, and political stability in the area" 3 Maritime resource managers require maritime security in the maritime environment to have

confidence that their demands can be met. Consistency in realizing maritime security in Indonesia cannot be separated from the responsibility of the State to promote and prioritize the development of maritime security forces.

Indonesia's biggest problem, especially in the field of maritime resource management, is society's slow adjustment in facing globalization, especially how people use digital technology as a supporting value in carrying out work activities in the fisheries and marine sector (Ridho & Sudirman, 2020). Information technology itself is a tool that will help the performance of fishermen, but it still faces many obstacles, such as limited information technology infrastructure and community capabilities. So cooperation from various parties is needed for the implementation of a technology-based fishing community environment.

Burger (2014) suggests 3 important frameworks for formulating the concept of maritime security, namely: maritime security matrix, maritime securitization framework, security practice user groups (Security Practice and Communities of Practice). Through a matrix maritime security framework, an entity can map out how it will formulate its maritime security in four dimensions, namely national security, economic security, human security, and the maritime environment. The dimension of national security is based on a traditional perspective which views national security as an effort to protect the sustainability of the state so that sea power represented by naval forces is the dominant force related to maritime matters. Thus, in this dimension maritime security is identical or related to the use of naval power.

Another dimension, economic security focuses attention on the oceans as one of the main sources for economic development so that it is vital. Trade routes, the benefits of marine products, underwater mining, and so on have enormous commercialization values so that they play an important role in the economic development of not only a state entity but also the world. This dimension emphasizes that maritime security is closely correlated with maritime security. In the dimension of human security, maritime is closely related as a center for human food as well as human populations who live on the coast and in the middle of the waters (islands). Through this dimension, maritime security can be considered closely related to human security. The last dimension, the maritime environment, pays attention to the concept of maritime safety which includes elements of ship traffic safety, supporting installations, to the protection of the maritime environment as a result of disasters arising from natural or man-made processes such as oil spills in the ocean. The maritime securitization framework tries to define the concept of maritime security through how an entity or actor relates and formulates the nature of his threat to the maritime sphere. The security practice user group framework explaining the concept of maritime security can be approached by looking at how certain entities or factors carry out activities related to what they call maritime security. The Navy is the main component of Indonesia's national defense which must maintain, protect and realize Indonesia's maritime security through its duties at sea.

Definition of State Defense

As a country that has a strategic position which is located between two continents and two oceans, Indonesia will face sovereignty dangers. Indonesia should have strong diplomacy with the Indonesian Navy in the event of a conflict with a neighboring country. This is necessary not only to maintain maritime sovereignty and wealth as well as to maintain shipping safety and maritime security for all Indonesian ships and ships of other countries sailing in Indonesian waters from piracy, piracy and navigational hazards.

Protecting the sovereignty of the state, the territorial integrity of the state and the safety of the entire nation is the goal of national defense. As the name suggests, national defense includes all actions taken to protect the sovereignty of the Indonesian state, territorial integrity, and general welfare from external threats. itself to ensure the survival of the state and the Indonesian state.

Defense can be said to be the main instrument of a state to create national security, even though the term national security has developed since the late 1940s which considers territory, sovereignty and individual citizens. The obligation and authority of the state to create national security makes defense an important element of the public sector. Funding for national security has a special status because it provides the prerequisites for national stability, economic and social progress, politics, health, and a democratic system.

Maritime Definition

A country is considered maritime if most of its land area is water. In addition, land is smaller than water. The sea state really provides movement in the mindset, attitude and behavior of the archipelago for the country. Maritime security terminology gives a variety of very diverse meanings to people and organizations depending on how the interests of the organization and suggest 3 important frameworks for formulating the concept of maritime security, namely: maritime security matrix (maritime security matrix), maritime securitization framework (securitization framework), security practice user groups (Security Practice and Communities of Practice). Through a matrix maritime security framework, an entity can map out how it will formulate its maritime security in four dimensions, namely national security, economic security, human security, and the maritime environment. The dimension of national security rests on a traditional perspective which views national security as an effort to protect the sustainability of the state so that sea power, represented by the navy, is the dominant force in matters of maritime affairs. Thus, in this dimension maritime security is identical or related to the use of naval power. The strategic environment as an environment in the macro category can be analyzed using PESTEL tools (Politics, Economy, Social-Culture, Technology, Environmental, Legal).

Speaking of maritime security, Indonesia is a large maritime country that has a variety of potential energy sources, especially marine energy sources which have a very high level of biological diversity. This is evidenced by the term Indonesia as the largest Marine Mega-Biodiversity in the world (Izra, Chipta, Pertiwi, & Rostikawati, 2021). Indonesia has about 8,500 species of fish, 555 species of seaweed and 950 species of coral reef biota. Thirty-seven percent of fish species in the world can be found in Indonesia and some of these fish species have high economic value. Fish with high economic value such as tuna, skipjack, shrimp, mackerel, snapper, squid and reef fish such as grouper, rabbitfish and lobster. Meanwhile, the potential for marine capture fisheries is around 6.5 million tons/year, brackish water aquaculture reaches 2.9 million hectares and the potential for marine cultivation reaches 12.55 million hectares (Budiono & Purba, 2020).

Struggle for the Maritime Territory in Indonesia

As an archipelago with oceans, Indonesia is bordered on all sides by neighboring countries. The islands share land borders with the following countries: Papua New Guinea, Australia, Republic of Palau, Timor-Leste, Malaysia, Singapore, Thailand, India, Philippines and Vietnam. To safeguard Indonesia's independence and the rule of law, a comprehensive maritime boundary assessment is essential. Determination of maritime boundaries is regulated by the requirements of the International Law of the Sea.

The government stipulates the control, management and utilization of land, sea and air areas as well as the natural resources contained therein for the greatest prosperity of the people of 251 million people in the 1945 Constitution and other laws and regulations. the condition of the territory with clear boundaries between countries, the existence of a large number of people living and working in the region, the existence of a sovereign state government, recognition of other countries and citizens internationally, especially with the passing of the 1982 KHL law which is binding internationally, further reinforces the unified status of the Republic of Indonesia in this world.

Indonesia has joined maritime administration diplomacy since the First and Second United Nations Conferences (1958). The United Nations Conference (1960) did not produce the expected results. For this reason, Indonesia carries out diplomatic activities as a form of increasing close relations between neighboring archipelago countries so that they can fight for the values of the archipelago's principles so that they can be accepted by all international citizens. In addition, Indonesia has carried out an approach process to recognize Indonesia as an archipelagic country. Cooperation between archipelago countries will continue to be carried out through diplomatic channels within the framework of the Third United Nations Conference on the Law of the Sea.

Fundamental issues along the maritime border must be addressed and agreed upon by the two nations. not by occupying one another's sea territories or ships. Indonesia must be more proactive in setting maritime boundaries because it is an archipelagic country; This can be achieved if Indonesia wants to become a strong maritime country.

Problem Solution

As border cases in Indonesia are rife, Indonesia can use the following steps to reduce maritime border conflicts:

1. As soon as possible establish various sea and land boundaries with neighboring countries through bilateral or trilateral agreements, as well as by handing over the points and baselines of the Indonesian archipelagic sea to the United Nations (already deposited).
2. Refinement of laws and regulations related to ALKI in Indonesia, especially East-West ALKI.
3. Fulfill various legal requirements in Indonesia regarding maritime territory and authority, and sea borders, including determining the location of Indonesian internal waters, understanding the straight baselines of islands registered with the United Nations, determining the boundaries of Indonesia's outermost continents, and protecting Indonesia's rights at sea. and in the depths of the oceans around the world.
4. Strengthen the capabilities of the Indonesian government in the fields of law enforcement, defence, marine scientific research, science and technology so that it can utilize marine natural resources and protect the marine environment for the sake of Indonesia's economic growth and development.

RESEARCH METHODS

This research is qualitative in nature. In qualitative research, process concerns are prioritized, and it is expected to offer qualitative information, descriptive analysis, and meaningful research without compromising quantitative data or forms. Researchers obtain various facts and related information related to the research subject. Apart from technological constraints, Indonesian people are now faced with various global concerns, such as climate change as a result of the expansion of globalization (global climate change), transnational crimes and regional conflicts. The position of the researcher who serves as the main tool in

this investigation The purpose of this research is not to test theory, but to present the findings as research findings.

Data collection in this study is using primary and secondary data sources. Where data is taken from journals, books, previous research, scientific articles, literature and news from official sites. As a basis for material analysis, the author uses several basic ideas in the form of laws and regulations, the Presidential Decree on Maritime Policy and theories that have correlation or relevance related to the discussion in this writing. Besides that, as a reference library used previous research that has relevance. The researcher's research methodology consisted of three steps. To highlight this issue, a literature review on maritime importance was selected. Second, this research is still ongoing as an analytic model is being developed that is intended as a testable writing system for data.

RESEARCH RESULTS AND DISCUSSION

A country's ability to understand and manage its geographical conditions and the surrounding environment has a significant impact on the nation's ability to maintain its existence and vitality. The geopolitical perspective of national entities also has an impact on the growth and development of national life. In his 1965 inauguration address at the Indonesian National Defense Research Institute, Ir. Sukarno, the first president of the Republic of Indonesia, underlined that national defense can only be carried out perfectly if it is based on an understanding of the geopolitics of the archipelago.

On the basis of these three reasons, the Indonesian nation has developed a geopolitical worldview based on historical values. There are problems with the maritime and archipelagic status of Indonesia, including:

1. Indonesia does not have a national maritime axis security strategy and detailed rules.
2. Awareness and understanding of the meaning and purpose of the Indonesian nation. Indonesia lacks a strategic strategy for state security along the maritime axis and coordinated surveillance.
3. Weak national defense and resilience in the maritime dimension, which includes:
   a. In order to maintain the integrity of the state and the state, maritime defense and security is still not optimal.
   b. Increased terrorist activity, piracy, and fishing theft.
   c. Very ineffective police enforcement against lawbreakers.

CONCLUSION

Based on the characteristics of the Indonesian State, Indonesia is an archipelagic country with abundant wealth of marine resources and a key position along regional trade economic routes. Illegal and unbalanced management and utilization is a danger to the security of the Indonesian State's sea; Therefore, the Indonesian Navy needs synergy with other national maritime forces and cooperation with the fleets of surrounding countries to support the Indonesian Navy's main mission. The size of the fleet is determined by operational needs, taking into account Indonesia's maritime characteristics.

BIBLIOGRAPHY

Gunawan Y, 2012, "Penegakan Hukum terhadap Pembajakan di Laut Melalui Yurisdiksi Mahkamah Pidana Internasional", Jurnal Media Hukum, Vol. 19 No. 1, hlm. 72- 86.

Heryandi, 2015, Hukum laut internasional dalam pengembangan, Hukum laut internasional. Volume 3 no 8, halaman 118. Irwan Gesmi, 2018, Memahami Wawasan Nusantara, Pendidikan Kewarganegaraan Vol 6, No 4,

Iva Rachmawati, 2017, Karakter Diplomasi Publik Indonesia Terhadap Malaysia, Jurnal Hubungan internasional vol.6 , no. 1,

Jenderal Evan A., Iis Gindarsih, and Andrew W. Mantong (2018). Menempatkan politik luar negeri Indonesia pada masa Jokowi sejalan dengan visi diplomasi pertahanan laut poros maritim dunia. Halaman. 2. Rubah, William. T.R. & Buzan, Barry. (1985).

Marsetio. 2014. Manajemen Strategis Negara Maritim Dalam Perspektif Ekonomi Dan Pertahanan. makalah ilmiah Program Pasca Sarjana STIMA IMMI Jakarta.

Marsetio. 2014. TNI AL Berkelas Dunia: Paradigma Baru. Jakarta: Markas Besar TNI AL.

People, States and Fear: Isu Keamanan Nasional dalam Hubungan Internasional. Dalam Jurnal Internasional (Vol. 40, No. 4). Halaman. 76.

Supandi, Ade. 2015. Pembangunan Kekuatan TN IAL Dlaam Rangka Mendukung Visi Indonesia Sebagai Poros Maritim Dunia. Jurnal Pertahanan Volume 5, Nomor 1, Agustus 2015, 14.

Tingkat, Abdul. (2015). Pengelolaan maritim dengan Indonesia sebagai poros maritim dunia. Jurnal Keamanan Nasional, hal. 431.

Yustitianingtyas, Levina. (2015). Penemuan Alur Laut Kepulauan Indonesia telah menghasilkan peningkatan keamanan dan penegakan hukum di perairan Indonesia. (ALKI). Pandecta: Jurnal Penelitian Hukum, 10(2), hlm. 144.