

Undersea Defense Development Strategy Facing the AUKUS Alliance in Maintaining National Defense in the Indonesian Archipelago Sea Route II

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Abstract

This study discusses the Navy's underwater defense development strategy, especially that of Koarmada II, to overcome challenges in maintaining national security in the ALKI II region, especially the submarine threat in connection with the formation of the AUKUS alliance. This research uses a qualitative method approach based on case studies. Quantitative methods will be used to assign weights to the internal and external factors affecting the development of the Navy's strength, using these weights, this research will identify the best strategy that can be used by Indonesia in facing these challenges. Data for this research will be collected through interviews, document analysis, and literature review. There are seven main informants, namely, the Operations Assistant of Koarmada II; Commander of Koarmada II Escort Ship Unit; Commander of Koarmada I Escort Ship Unit; Commander of Koarmada II Submarine Unit; Commander of KRI Raden Eddy Martadinata-331 Koarmada II Escort Ship Unit; Commander of Banyuwangi Navy Base; and Commander of KRI Ardadedali-404 Koarmada II Submarine Unit. SWOT analysis is used to identify and formulate several strategies for developing the strength of the Navy. SWOT analysis is used in the development strategy integrated with the threat corridor around the ALKI II region. The data validation process used is the Content Validation Index (CVI), to provide an analysis of the results in the SWOT questionnaire.

1. Introduction

Given the abundance of potential marine wealth and strategic geographical position, Indonesia can cement its position in geopolitics through enhanced maritime defense. It is important for Indonesia to adopt the view that it is a maritime nation. A nation whose sea territory is guarded like its land territory. The main focus of the Indonesian nation should be the sea, which will be supported by air and land defense forces. Although the country has not currently defined neighboring countries as threats, it should not be forgotten that in the classic geopolitical perspective, threats from other countries remain relevant, and the country should not ignore potential enemies. Indonesia's geopolitics is uniquely characterized, as it does not fully follow existing norms. In the Indo-Pacific, Indonesia has the largest size, but in terms of defense it is still inferior to several neighboring countries (Sartono, 2019).

In the past two years, Indonesian fishermen have found seaglidors three times. At the end of 2020, a fisherman found a seaglider floating in the sea around 07.00 WITA in the waters of Manjapahit Village, Selaya Islands. Similar incidents were also recorded in the same year in the waters of Masalembu, Sumenep, Madura, and on Tengger Island, Riau Islands, in 2019. Of the three locations where seaglidors were found, 2 seaglidors were found around ALKI II. This repeated discovery indicates a potential lack of surveillance or monitoring under the surface of the Indonesian sea, especially in ALKI II. In this context, large swathes of water may not be well monitored or supervised, raising questions about Indonesia's maritime security and sovereignty.

Indonesia has many gaps to enter through the waters, and all of these gaps are not all covered by the Indonesian Navy. gaps or choke points that are on the surface are partly monitored by the surveillance radar around the coast. Of all the choke points, not all have been covered. As for underwater choke points, until now there have been no sensors installed to detect submarines or other underwater objects. The following is a picture of Choke points scattered throughout Indonesia (Figure 1).



Figure 1. Choke Points in Indonesian Waters

Source: Processed by Researcher, (2024)

In Figure 1 is the position of the choke point that can be used to enter Indonesian waters. The choke point in the white sea is a sea that has a depth of more than 70m, so submarines can pass through the area. While the choke point in the bit-colored sea is a sea that has a depth of less than 70m so that submarines are unlikely to cross the choke point. Around ALKI II has a white choke point so the possibility of submarines entering and passing through the area is large. Therefore, researchers took the ALKI II locus because ALKI II has many choke points that may be passed by foreign submarines and underwater objects such as seaglidars.

In addition to threats to foreign submarines and UAVs, other underwater threats require attention, namely threats to underwater cyber security. Underwater cyber threats are cyber threats that originate from cyber threats in the form of hardware from underwater optical cables. The backbone of the internet that now exists is from the underwater optical cable network, but the security of underwater cables is protected by UNCLOS law as in article 51 regulating the limitation of the sovereignty of island States over submarine cables in their archipelagic waters, a provision is stated that confirms the obligation of Island States to respect submarine cables installed by other States and passing through their territorial waters without involving land.

The Indonesian Navy has the main task of maintaining the sovereignty and security of the country's seas, as well as contributing to maintaining stability in this challenging region. The AUKUS Alliance is a defense pact consisting of the United Kingdom, the United States and Australia established on September 15, 2021. The AUKUS agreement is a trilateral cooperation whose main objective is to deepen diplomatic, defense, and security collaboration among the three countries.

The purpose of establishing AUKUS is to increase the integration of knowledge, industrial base, technologies such as cyber capabilities and Artificial Intelligence (AI), quantum technology, defense supply chain, and nuclear-powered submarine capabilities that have longer range cruising capabilities (Brooke, 2021).

The AUKUS treaty is a step taken by the hegemonic state, and this treaty is intended as a Threat Strategy aimed at China, to prevent the dominance of the third-world power in the international arena (power, 2022). Being on the sidelines will be an influential factor in the dynamics of sea defense in the Indo-Pacific region. The AUKUS alliance has the potential to affect the balance of power in the region and cause reactions from other countries, because the true purpose of the formation of the defense pact of the three countries is still not known. In the north, there is a conflict between Taiwan and China, as well as South Korea and Japan which will greatly affect the Indonesian economy because China, Japan, and Korea are the largest investors in Indonesia and will affect the conditions of security stability in the Indo-Pacific region. Meanwhile, if a conflict occurs, Indonesia cannot avoid it because of its position in the middle of the two parties. This is an important point to be researched more deeply.

In the research carried out previously, many discussed the Indo-Pacific conditions which included the formation of the AUKUS alliance which developed nuclear submarines and technological cooperation to the defense supply chain. Meanwhile (Zou, 2023) in his research explained that, although there are different views among various parties in Indonesia regarding relations with China, both in terms of investment and security issues, both are still trying to maintain the level of military deterrence and avoid military conflict, but if conditions are cornered or put the position of one of the countries, war conditions will be very likely to occur. In his research (Wirth, 2016) says that there is a "power shift" towards China and "Asia" dominating power in the Indo-Pacific region and the global order. The East Asian Ocean is the main stage where this shift occurs. From this statement, the world's influence will shift to the Asia-Pacific which causes world tension, especially the US.

Facing the complexity of security and geopolitical changes in the Indo-Pacific region, especially in ALKI II, this research aims to identify factors that influence the development of Indonesia's underwater defense in the presence of the AUKUS alliance which is developing its nuclear submarine force. After determining these factors, the researcher will connect them with Indonesia's underwater defense development plan. To develop an underwater defense system, the state needs to carry out adequate planning. As an important part of the national defense system, the development of the Navy's strength cannot be separated from the defense

planning process itself.

The Indonesian government implements defense development planning through Minimum Essential Forces (MEF) which is divided into three components, namely Threat Based Planning (TBP), Capability Based Planning (CBP), and Flash Point Based Planning (FPBP). FPBP is a defense planning method that focuses on the division of Indonesia's territory identified as areas with high potential for the occurrence of various actual threats. This becomes the main basis for determining priorities in the development and deployment of MEF gradually and sustainably. (Adaptation from reference source: Regulation of the Minister of Defense of the Republic of Indonesia Number 19 Year 2012).

In developing the Navy's defense forces in the form of Minimum Essential Forces, the government uses the three concepts above. However, the main difference between this research and previous research is that there has been no research that unites the existing underwater threats in the ALKI II region with the TNI Navy's force development strategy. Although the current model for developing military equipment (alutsista) is based on threats, these threats are still not clearly defined. Therefore, the development of defense equipment is still not fully in accordance with the threats faced. This research aims to identify factors that constitute threats, opportunities, as well as strengths and weaknesses possessed by the country. This will enable the development of a more appropriate force strategy in accordance with existing threats and strengths and weaknesses.

2. Research Method

This study discusses the Navy's underwater defense development strategy, especially that of Koarmada II, to overcome challenges in maintaining national security in the ALKI II region, especially the submarine threat in connection with the formation of the AUKUS alliance. This research uses a qualitative method approach based on case studies. Quantitative methods will be used to assign weights to the internal and external factors affecting the development of the Navy's strength, using these weights, this research will identify the best strategy that can be used by Indonesia in facing these challenges. Data for this research will be collected through interviews, document analysis and literature review to identify changes in Indonesia's defense policy and steps taken to face regional security challenges.

The stages of this research start from identifying the problem, conducting a literature review, obtaining the problem gap, making preliminary conclusions,

designing the use of data, compiling the use of data using a theoretical framework, collecting data, codifying, obtaining new information, theory construction, theory confirmation and finally obtaining a new theory construction (Bungin, 2020). There are seven main informants, namely, the Operations Assistant of Koarmada II; Commander of the Koarmada II Escort Ship Unit; Commander of the Koarmada I Escort Ship Unit; Commander of the Koarmada II Submarine Unit; Commander of KRI Raden Eddy Martadinata-331 Koarmada II Escort Ship Unit; Commander of the Banyuwangi Navy Base; and Commander of KRI Ardadedali-404 Koarmada II Submarine Unit. SWOT analysis is used to identify and formulate several strategies for developing the strength of the Navy. SWOT analysis is used in the development strategy integrated with the threat corridor around the ALKI II region. The data validation process used is the Content Validation Index (CVI), to provide an analysis of the results on the SWOT questionnaire. This approach is used because it can provide validation results on questionnaires that use few expert opinions.

3. Results and Discussion

Swot Analysis

Based on the results of structured interviews with resource persons, internal factors that become strengths and weaknesses and external factors that become opportunities and threats in developing underwater defense strategies in ALKI II are obtained.

Strength

Owning a Diesel-Powered Submarine

Indonesia has 4 submarines that can operate throughout Indonesian waters KRI Cakra-401, KRI Nagapasa-403, KRI Ardadedali-404, and KRI Alugoro-405, each of which has a strategic role in maintaining Indonesia's marine security. This type of diesel-electric submarine is the best choice to complete the defense equipment owned by the Indonesian Navy because this submarine is suitable for most Indonesian waters due to the contour conditions of Indonesian waters which vary greatly.

Having an Underwater Detection Capable KRI

The Sonar device will send out subsurface sound waves and then listen to the returning echoes. The sound data is then relayed to a human operator through a loudspeaker or a display on a monitor. The sonar equipment is installed on KRIs that have anti-submarine capabilities. The Indonesian Navy has several classes

of KRIs that have anti-submarine capabilities, namely the PKR type KRI and the Sigma class KRI. KRI PKR is equipped with XBT equipment to determine the temperature of the surrounding sea so that it can determine the direction of propagation of the Sonar sound. Sonar propagation is influenced by several factors, namely salinity, temperature, density of seawater. To maximize the ability of sonar must know these factors. Sonar that has features that can calculate all these factors is only owned by sonar owned by submarine hunting type ships. If Indonesia wants to develop its underwater defense capabilities, it must add KRIs that have underwater capabilities, both in Fleet I, Fleet II, and Fleet III.

Underwater Technology Research

At the FGD held at Fleet II in November on "Operational Strategy for Archipelago Sea Defense Facing Modern Threats by Utilizing Local Excellence", one of the discussion materials explained that there is underwater detection research being developed by ITS through BRIN in collaboration with the TNI in developing underwater detection equipment, namely UWASN (Underwater Acoustic Sensor Network) which can be installed in narrow straits in ALKI II sensor network system developed as shown in Figure 1 below.

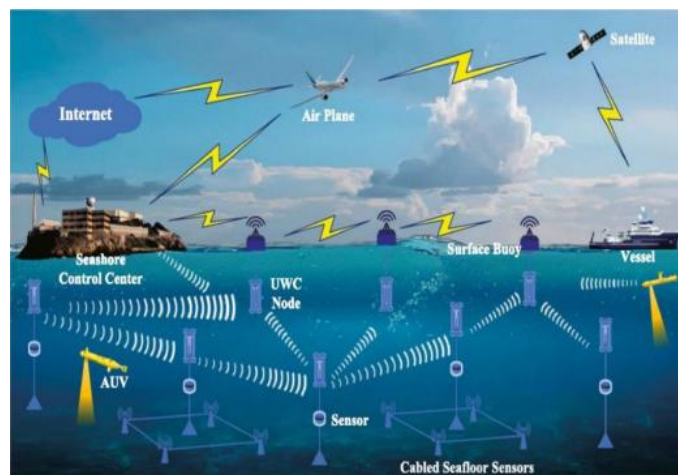


Figure .1 Underwater Acoustic Sensor Network

Source: Processed by Researcher, (2024)

In Figure 1, it can be seen that there are several sensors placed in the strait that are interconnected and can be received by the KRI operating in the region. The network created to integrate the data received by the sensors is processed at the control center and then sent to each KRI that is operating.

Get to know the environment

Underwater conditions are very important in submarine navigation, for example underwater currents, types of underwater surface contours, salinity, seawater density. Indonesia is more familiar with environmental conditions because the Indonesian Navy, in this case Pushidrosal, routinely conducts surveys of all water areas, which will be used in training or during operations. KRI often conducts operations and exercises throughout Indonesian waters. By knowing the conditions well, it can predict from where submarines enter Indonesian waters, and where suitable locations are used to carry out submarine operations, which do not endanger the condition of their ships, and are difficult to detect by the enemy.

Utilization of Local Power

The local power referred to here is everything that can be used in supporting national defense, whether supporting in the form of materials, services and manpower, or thoughts. Supporting materials here does not provide materials that are fully owned for defense purposes, but can provide a ride or lend or can use together. For example, the use of BMKG radar or radar owned by the airport can be used together in supporting the air defense of the archipelago's airspace. This does not harm the party that owns the equipment, can still use the equipment, and can assist in monitoring air defense activities.

Another utilization of local power is by utilizing fishermen who fish in the sea which is spread throughout the region. By using many fishermen, detection equipment can be placed both surface detection and underwater detection devices such as portable sonar so that bottom and surface detection data can be obtained by relying on local forces, with the limited number of ships operating in the territorial waters of the archipelago. Utilizing the potential of local forces is very helpful with various limitations.

Weakness

Geographical Location Between AUKUS and China

Indonesia's geography has a significant duality, where one side provides advantages while the other side creates vulnerabilities. The advantages are manifested in its natural resource potential and strategic position in the Indo-Pacific region. On the other hand, weaknesses arise because Indonesia is at the center of a battlefield between two major powers in the region. Although Indonesia is not directly involved, it cannot be denied that the country will

experience impacts, both directly and indirectly, which can be detrimental in various aspects such as economy, politics, and regional security. Therefore, Indonesia's role in regional dynamics is becoming increasingly important to consider. A deep understanding of these geographical conditions is key to designing the right policies to manage the challenges and opportunities that exist.

Points with Direct Borders with Other Countries

Currently, the Indonesian government, particularly the Ministry of Defense, has not designated any of the countries bordering Indonesia as a concrete threat (Marsudi, 2023). This creates a dynamic where defense development is still not a top priority. The development of the Main Armament System (alutsista) for defense has only reached 60% of the Minimum Essential Force (MEF) program planned until 2024. Development is carried out mainly on essential aspects, while some other aspects have not received maximum attention. The importance of determining bordering countries as potential threats can provide a clear direction in defense development, so that priorities and resource allocation can be arranged more effectively. By defining potential threats, the government can focus more on developing defense equipment that meets strategic needs and addresses potential security risks in the future.

Lack of Underwater Detection Technology

For underwater sensors, the Indonesian Navy only has sensors installed on KRIs, but not all KRIs have the Sonar. Only KRIs that have anti-submarine capabilities are equipped with sonar sensors and there are no more than fifteen KRIs that have sonar. This number is very insufficient to monitor all of Indonesia's underwater activities. So far, the absence of objects captured by KRI does not mean that there are no underwater activities carried out by other countries in Indonesian waters, this can happen because the equipment owned is not enough to cover all Indonesian waters so that it cannot capture a single object underwater. One of the reasons for the lack of sonar owned by the Indonesian Navy is that the price of these sensors is much more expensive than radar sensors.

Having Multiple Entrances in the ALKI II Region

According to UNCLOS 1982, the right of passage in ALKII waters is granted only through the strait of Lombok. All ships, whether merchant or military, even submarines must pass through the strait, even submarines are allowed to pass with the condition that they must appear on the surface. However, in reality,

submarines entering Indonesian waters have never surfaced and no one knows which strait they came through, so the many gaps in the southern ALKI II make one of Indonesia's weaknesses, which causes many gaps that must be monitored. Indonesia has the Lombok Strait, Alas Strait and Sapo Strait that can be used as a route to enter Indonesian waters, with several straits as entrances, it will increase the possibility of entering unknown underwater objects. The straits in ALKI II are one of Indonesia's geographical weaknesses. Because it is a weakness, it can be utilized by other countries for their interests. So that these weaknesses must be addressed with other strategies to be able to cover up these weaknesses, so that these weaknesses are not exploited by other countries.

ALKI II Passed by Arlindo Current

The use of Arlindo as a supporting factor in underwater detection is critical, especially in the context of evacuation which can be estimated by monitoring the movement of seaglidors. In addition, Arlindo can also be used to predict submarine movements. Seaglidors or other underwater devices can be utilized to monitor and collect data in areas deemed strategic. By releasing a seaglider over the island of Sulawesi and following the currents of the Indonesian Throughflow, estimates of the seaglider's movements can be compiled to facilitate effective evacuation or data recovery. Predictions of submarine movements can also be generated from understanding the currents of Arlindo, helping to identify areas that submarines tend to avoid or frequent. As such, it not only acts as a source of information, but is also a key element in the planning and execution of surveys, underwater detection, and submarine movement identification strategies.

Different salinity levels in Indonesian waters

The diversity of salinity is one of the weaknesses of Indonesia's marine environment. However, this diversity can be an opportunity for the Navy because of our sea area so that it can be more familiar with the salinity of its waters, by knowing the salinity level of the waters, the sonar that is owned will be more effectively used, although there are still several more factors that affect the propagation of sound waves under water. At least one of the factors can be mastered.

Opportunities

Indonesia Has Many Resources

Indonesia's mineral resources, including oil, gas, coal, tin, nickel, copper and

gold, have made a significant contribution to its economy. Extensive and not yet fully explored mineral reserves, both on land and in its marine areas, provide a competitive advantage compared to many countries whose geological resources are more limited. Indonesia's commitment to developing its mining and extraction industry, supported by a supportive regulatory environment and competitive tax incentives, makes it a key player in the global mining sector. In short, the abundance of mineral resources in Indonesia, including critical minerals and metals, has played a very important role in its economy and made it a major player in the global mining industry (EKONID, 2024).

Indonesia is the largest market in the Indo-Pacific region

Indonesia, as the largest country in the Indo-Pacific region, has the potential to become a potential market with promising investment opportunities. At the 2023 ASEAN-Indo-Pacific Forum (AIPF), Indonesia announced a list of concrete projects worth USD 56 million. AIPF aims to change rivalry in the Indo-Pacific region into cooperation that prioritizes the principle of mutual benefit. Some of the projects described in the AIPF include green infrastructure, supply chains, innovation, and digital transformation (KTT, 2023). Indonesia, as home to some of the fastest growing economies in the world, has a strategic location in the heart of the Indo-Pacific which places ASEAN as a major player. The AIPF is expected to make the Indo-Pacific region a more closely integrated and interconnected region, through better collaboration.

Sea Contours that Benefit Indonesia

Undersea contour or underwater morphology refers to the structure or shape of the earth's surface in the sea which has various variations. This change in shape is influenced by two main forces, namely endogenous and exogenous. The combination of these two forces creates a variety of relief on the seabed. Marine morphology has various forms which can be grouped into four categories, namely based on appearance, slope, depth and shape.

Apart from that, underwater contours are influenced by the movement of sea water, referring to the flow of water that occurs in the ocean, triggered by various factors. This movement of sea water can change the contour and structure of the underwater area, so that the underwater surface changes dynamically. One factor is wind, where wind movements on the sea surface produce waves which make the sea always in an unstable state. In addition, the impact of sea movements creates abrasion and sedimentation phenomena. An abrasion is a form of erosion, namely the process of wearing away the earth's surface by seawater. Meanwhile, sedimentation by seawater is the process of accumulation of sediment material

which occurs because the movement of seawater carries sediment particles.

The Indonesian Sea Territory is Passed by World Trade Routes

Of the total amount of world trade, as much as 90% of global trade routes are transported by sea, and as much as 40% of this trade involves Indonesia. This is considered a great opportunity for Indonesia to become a World Maritime Axis Country by improving its integrated maritime transportation system (Ministry of Transportation, 2018). Therefore, it is necessary to improve the integrated maritime transportation system because an integrated maritime axis is considered very important in organizing an optimal supply chain. In 2017, Indonesia was ranked 36th in global competition in the world, showing an increase from 41st in the previous year.

Indonesia's Undersea Area Passes Through Many of the World's Optical Cables

The Indonesian Maritime Cable Communication System (SKKL) currently covers a length of 115 thousand km, including the Exclusive Economic Zone (EEZ) area which stretches for 55 thousand km. Indonesia has the potential to become a center connecting fiber optic networks in the east, west, north and south. For example, Indonesia's fiber optic network can be connected to the West and East Coasts of America. Additionally, connections via the Indian Ocean to Singapore or via Guam to Tokyo are also options that can be explored. So there is a need for increased collaboration from each stakeholder to support national interests, especially in implementing good governance. Indonesia needs to think together as a national entity that is open to foreign partners. Indonesia, as a Ring of Fire region, is vulnerable to damage to fiber optic cable networks due to volcanic eruptions on land and sea. Therefore, it is important to monitor volcanological maps when managing submarine cables, so that damage due to eruptions can be minimized.

Threats

Impartial or Neutral Indonesian Politics

Challenges of maintaining neutrality, free and active politics can pose challenges in maintaining neutrality in conflicts or tensions between countries. Not taking sides with any bloc can create difficulties in maintaining good relations with all parties involved in the conflict. Difficulty determining priorities, an impartial approach to any bloc can result in difficulties in determining priorities in foreign policy. Sometimes, focusing on too many global issues can make it difficult to

address pressing regional or national problems. Uncertainty in regional security, active free foreign policy can create uncertainty in regional security. Without attachment to a strong defense alliance, the question of how Indonesia will respond to regional threats or conflicts may become unclear. However, the success or lack of a foreign policy depends greatly on its implementation and the global political and security situation at a particular time.

Aukus and China Are Developing Their Military Power

China's military developments aim to secure national interests, strengthen territorial defense, and increase global influence. Its main focuses include improving military technology, modernization of the armed forces, and deterrence capabilities. In the Indo-Pacific region, China has become a new power that is shifting the US presence in the Indo-Pacific region. By shifting the presence of the US, of course China's threats will increase, therefore China is really pursuing its military development.

The AUKUS agreement not only includes the formation of a new alliance, but also has a significant impact on the development of military technology that can be used to face various challenges in the region. One of the key aspects of the technology developed was Australia's development of nuclear submarines. In addition, AUKUS is expanding its reach into the realm of cyber technology to ensure data security between AUKUS member countries. All these aspects illustrate that AUKUS is not just a conventional alliance, but is also an entity that integrates advanced technology and innovative defense strategies to answer the complex challenges emerging in the Indo-Pacific region, especially in the context of relations with China.

The existence of underwater activities by other countries

The discovery of a sea glider in Indonesian waters raises concerns regarding the transparency of underwater activities carried out by other countries. The use of sea gliders, autonomous underwater vehicles capable of collecting oceanographic data, further complicates the maritime security landscape. The existence of such an object indicates a sophisticated level of technology and the potential for covert operations, which can cause uncertainty in the maritime domain.

It is important for Indonesia and other countries to improve maritime monitoring capabilities to effectively detect and monitor underwater activities. International cooperation and information sharing mechanisms are essential to overcome the

challenges posed by undeclared underwater objects. This ensures a comprehensive understanding of the maritime environment and helps prevent unwanted escalation or misunderstandings between countries with shared maritime interests.

Weighting of Internal and External Factors

This factor weighting process can be monitored and represented through a structured table, providing clarity in interpreting the results of the SWOT analysis systematically. The following are internal factors consisting of (strength) and weaknesses (weakness) as shown in Table 1.

Table 1. Internal Factor Weighting

IFAS		RESPONDENT						Total	Weight
		R1	R2	R3	R4	R5	R6		
No	Strengths								
1	Has a Diesel Powered Submarine	3	4	4	3	4	3	21	0.206
2	Has a KRI capable of underwater detection	3	3	4	3	4	3	20	0.196
3	Underwater technology research	4	4	3	4	3	4	22	0.216
4	Get to know environmental conditions better	3	2	3	3	4	2	17	0.167
5	Utilization of local strengths	4	4	3	4	4	3	22	0.216
		TOTAL						102	
NO	Weakness	R1	R2	R3	R4	R5	R6		
1	Geographical location between AUKUS and China	4	4	5	4	4	4	25	0.177
2	Points that directly border other countries	4	5	4	4	5	4	26	0.184
3	Has many entrances in the water area	4	4	5	4	3	4	24	0.17
4	Underwater technology is lacking	3	4	3	3	4	3	20	0.142
5	ALKI II was passed by the Arlindo current	4	3	4	4	3	4	22	0.156
6	The level of salinity in Indonesian waters varies	4	3	4	4	5	4	24	0,17
								141	

Source: Results Processed by Researchers, (2024)

Based on Table 1 above, it can be seen that the weakness factor has a greater average weight than strength, Indonesia has many direct border points with

other countries, which is a fairly large weakness, namely having a value of 18.4%. Meanwhile, the strength factor that has the greatest value is the use of local strengths, namely by collaborating with domestic industry and collaborating with fishermen by installing detection equipment on every fishing boat operating to fish at sea. Next is the weighting for external factors consisting of opportunities and threats. The following is a tabulation of these factors, which can be seen in Table 2:

Table 2. Weighting of External Factors

EFAS		RESPONDENT						Total	Weight
		R1	R2	R3	R4	R5	R6		
NO	Opportunities								
1	Indonesia has many natural resources	4	5	4	3	4	4	24	0.220
2	Indonesia is the largest market in the Indo-Pacific region	3	4	4	3	3	4	21	0.193
3	Indonesia passes through many optical cables that connect the whole world	3	4	3	4	3	4	21	0.193
4	Indonesia's territory is traversed by world trade routes	4	4	4	4	3	4	23	0.211
5	Favorable sea contours	3	4	3	3	3	4	20	0.183
		TOTAL						109	
NO	Threats	R1	R2	R3	R4	R5	R6		
1	There are underwater activities of other countries	4	4	4	3	4	4	23	0.250
2	High underwater costs	3	3	4	4	4	5	23	0.250
3	Indonesian politics is neutral and does not take sides	3	4	4	3	4	4	22	0.239
4	AUKUS and China are developing their military	5	4	4	3	4	4	24	0.261
		TOTAL						92	

Source: Results Processed by Researchers, (2024)

Based on Table 2. above, it can be seen that the opportunities factor that has the greatest assessment from the respondents is that Indonesia has many natural resources. Meanwhile, the threat factor that received a high score from respondents was AUKUS and China which is developing its military, with a total score of 26.1%. It is clear that the formation of the AUKUS defense alliance is to counter China's dominating power in the Indo-Pacific Region.

Discussion of Selected Strategies

Based on the SWOT analysis diagram, there are seven strategies that will be implemented to develop underwater defense at ALKI II. The following is a

description of the strategy in table 3:

Table 3. SWOT Strategy Results

No	Strategy
1	Carrying out equipment rejuvenation/self-repair of sonar owned by the Indonesian Navy
2	Increasing research on underwater detection in collaboration with defense R&D, Indonesian Navy R&D with BRIN or capable universities.
3	Gradually purchasing portable sonar that can be used by any type of ship.
4	placement of KRI which has underwater detection to monitor possible points of entry for other countries' submarines.
5	Continuous and integrated data collection regarding big data underwater surveillance, so that data that has been obtained does not just disappear.
6	Carry out Arlindo research which can be used for underwater detection and submarine operations at ALKI II
7	Integration of all sonar on KRI with Puskodal so that underwater monitoring can be integrated.

Source: Results Processed by Researchers, (2024)

4. Conclusion

Based on the research results, the underwater defense development plan at ALKI II is planned for six years and is divided into several stages. In the first year, the focus of this strategy was on level V, namely underwater technology research, purchasing portable sonar, and Arlindo research. Strategy development continued in the second year so that the percentage of each strategy reached as follows, the Portable Sonar procurement project reached 70% of what was planned, while underwater technology research and Arlindo reached 70%. Meanwhile, during the transition period for the implementation of the second phase of the strategy, repairs and rejuvenation of underwater detection equipment began. So that in the third year strategies at levels three and four can be started until the fifth year. Meanwhile, in the last year, there was integration of all detection data on the KRI as well as from detection equipment placed in straits and shipping lanes. So that command and control become one and can facilitate control and decision making from leadership regarding threats from other countries' submarines.

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