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Information System Interoperability Strategy to Support Command and Control of Border Security Operations in the North Natuna Sea

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ABSTRACT: In order to maintain the superiority of effective control over the entire territory of Indonesia, especially in disputed areas, Indonesia through the Indonesian National Armed Forces (TNI) conducts Border Security Operations between countries. The purpose of this study was to analyze the interoperability of the TNI information system in the Border Security Operation in the North Natuna Sea and the TNI information system interoperability strategy to support the Border Security Operation code in the North Natuna Sea. The method used in this research is descriptive qualitative data through observation, interviews and documentation. The findings of this study are that the information system, both software, hardware, and brainware is not optimal in responding to threats at the border. Regulations at the technical level are not yet precise, flexible, interoperable, besides that there are different regulatory perceptions between forces, there is no standardization of regulations, as well as sectoral egos. Blueprints and grand strategies are mandatory, as well as knowledge management in determining priorities, coupled with the use of artificial intelligence in the TNI information system to realize the efficiency of TNI information system personnel.

KEYWORDS: interoperability, Border Security Operations, North Natuna, TNI

INTRODUCTION

The sovereign territory of an archipelagic state, one of which is regulated in the 1982 United Nations Convention On The Law of the Sea/UNCLOS, which states that a country consisting of many islands is limited by drawing a line between the outermost islands so that the waters within it. Besides that, 12 Nm from the outermost island boundary is the territorial area of the country concerned and 200 Nm is the EEZ (Exclusive Economic Zone) where the area is the authority of a country to utilize its natural resources (Arief et al, 2021). The continental shelf of a coastal State may not exceed the limits as specified in Article 76 paragraphs 4 to 6 of UNCLOS 1982 (UNCLOS, 1982), it turns out that there are several border areas that are still being debated. Territorial boundaries with the Philippines have been well resolved, but maritime boundaries with nine other countries are still in the process of negotiation between countries. The character of the border area which is still a territorial dispute between countries has more strategic value such as major international shipping lanes and is rich in natural resources such as the Andaman Sea, the Malacca Strait, the Singapore Strait, the North Natuna Sea or the South China Sea, the Sulawesi Sea and the Arafuru Sea. In 2011, the Philippines filed a North Natuna Sea lawsuit to the arbitration court in The Hague, Netherlands. However, hearing the lawsuit from the Philippines, China could not reject the lawsuit and finally the Arbitration Court decided that the Philippines won the lawsuit and China lost the lawsuit (Arto et al, 2019). Six years later in 2017, a new dispute arose in the North Natuna Sea where the Indonesian state claimed the sea area as its territory and changed its name to the North Natuna Sea. However, again the Chinese state did not accept this, so the Chinese state lodged a protest against the Indonesian state (Novianto Rizal Dwi, Pratama Nauval Adi 2020).

Figure 1. North Natuna Chart

(**Source:** Jurnal Maritim, 2018)

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The North Natuna area is considered an area of very strategic value, however, the North Natuna Sea is an area with a high level of vulnerability regarding Illegal, Unreported, and Unregulated (IUU) violations, especially IUU fishing violations. Not to mention in the national airspace and especially in Natuna, there are many aviation violations that are also carried out by foreign ships. This vulnerable condition is increasingly vulnerable due to China's claims regarding the South China Sea territorial area, known as the Nine Dash Line. In this unilateral claim, the territory of Indonesia is included, where the Chinese state recognizes the northern region of Natuna as part of its territory (Angkasa Dipua et al, 2020).

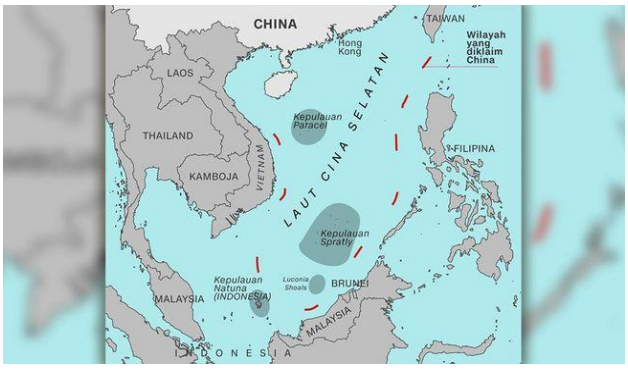

Figure 2. China's "Nine Dash Line" Concept
(**Source:** cnn Indonesia, 2015)

CNN Indonesia recently reported that on April 8, 2021, an F18 Hornet fighter belonging to the United States passed over the Natuna waters as a result of the heating up of the South China Sea conflict conditions. Not only once, this violation by foreign aircraft often occurs, the National Defense Command at least noted that there were more than 800 violations that occurred in the national airspace and most of them were detected passing over Natuna waters (Harris et al, 2019). The number of violations committed in the North Natuna marine airspace recorded in 2019, is presented in the following table;

Table 1. Number of National Airspace Violations in 2020

NEGARA	JAN	FEB	MAR	APR	MEI	JUN	JUL	JUMLAH
SINGAPORE	177	119	161	112	123	126	30	848
CAYMAN								
PRANCIS								
FHILIPINA								
MALTA				1				1
AUSTRALIA			1					1
USA	1	6	1	1	2	2		13
ETHIOPIA								
NEW ZEALAND								
THAILAND								
SAN MARINO								
JEPANG								
SWISS								
QATAR			1					1
CHINA								
FILIPINA			1					1
BERMUDA								
X								
TOTAL	178	125	165	114	125	128	30	865

(**Source:** Data Kohanudnas, 2020)

Table 2. Foreign Aircraft Violations in North Natuna in 2019

1	Singapura	101 planes	3 PESUD F-16, 3 kali oleh 18 Pesud RSAF, 16 dan 60 kali oleh RSAF di MTA2, 2 F-16 dan 2 Heli Sea hawk, 10 kali oleh 43 RSAF
2	Maldives	1 plane	Pesawat sipil A321
3	China	2 planes	Pesawat China (HF-J303), Pesawat China (HFJ304)
4	Australia	1 plane	diduga MRH-90 onboard HMAS Canberra
5	Cayman Island	1 plane	Gulfstream G200 Galaxy

(**Source:** Data Kohanudnas, 2019)

Meanwhile, data shows that in the North Natuna region, the violation of the maritime border area is quite high. These violations often occur until now and in recent years have not experienced a significant decrease. Koarmada I noted that during 2019 and 2020 several violations in North Natuna were carried out by foreign ships. In detail, these violations are presented in the table below.

Table 3. Violations by Foreign Ships in North Natuna Year 2019 – 2020

2019			2020		
1	Malaysia	3 battleships	1	Malaysia	9 Battleships
2	Vietnam	1 battleship			9 miscellaneous ships
		9 fishing boats	2	Vietnam	1 fishing boat
3	Amerika	1 battleship			2 miscellaneous ships
4	Singapura	1 Government ship	3	India	1 ship
5	China	1 ship CCG	4	China	6 CCG kapal ships
					4 miscellaneous ships

(**Source:** Data Kohanudnas, 2019-2020)

The Border Security Operations held must be well integrated and able to provide information quickly and accurately so as to make it easier for decision-making officials to carry out several important initiatives and anticipatory steps to maintain effective control over disputed areas and prevent effective control over disputed areas by other countries. To realize good integration and coordination, information system interoperability is needed as an optimal support for Border Security Operations (Junaidi et al, 2021).

Interoperability is the ability of a system, unit or force to provide services to and receive services from other systems, units, or forces and use the services that are exchanged to enable them to operate effectively together. While technically, interoperability can be interpreted as a condition achieved between electronic-communication systems or electronic-communication equipment systems when information or services can be exchanged directly and satisfactorily between them and or their users (Kasih Prihantoro et al, 2019).

Advances in information technology in combat have become something vital today because technological developments encourage the creation of modern war. Today's modern war requires all defense equipment to be integrated with the Network Centric Warfare (NCW) system. With equipment that uses sensors and electromagnetic waves, remotely controlled and interconnected automatics will provide effectiveness and efficiency in gathering information and speeding up decision making by the Commander or Commander. Such an advanced communication technology system is capable of realizing interoperability of all operating combat elements. In other words, good communication technology not only increases the effectiveness of the implementation of operational missions, but is also able to optimize the role of defense equipment owned (Kasih Prihantoro & Lukman Yudho Prakoso, 2021).

Hura, et al (2000) stated that at the strategic level, interoperability creates the possibility for the development of integrated work between dimensions. At this level, the main issue in interoperability is the harmonization of views, strategies, doctrines and power structures of each dimension. Interoperability is considered as the willingness/willingness of each dimension to work together in the long term to achieve and maintain common interests in the face of threats.

At the tactical level, Hura et.al (2000) states that interoperability strategies must go hand in hand with interoperability technology to shape the environment, manage crises, and win wars. The advantage of interoperability at the tactical level can be obtained from the equivalence / interchangeability of each element of the dimension. Interoperability reflects the interaction between the organization and the system. The focus of interoperability is on communication and computerization of data, and also involves

technical system capabilities and compatibility between the system and the data owned by each dimension/unit (Kusuma et al, 2021).

The interoperability gap of the TNI information system that supports the implementation of the Border Security Operation that has been described previously is a fact that also affects the security condition of the North Natuna Sea border area. In order to overcome various threats and challenges in law enforcement and border area security, the interoperability of the TNI information system needs to be optimized through appropriate and effective strategies. Based on the description that has been presented, the researcher seeks to examine the interoperability strategy of the TNI information system as support for Border Security Operations in order to provide recommendations to support optimal coordination and synergy of the TNI in conducting Border Security Operations in the North Natuna Sea in order to be able to improve security and maintain state sovereignty, so that drew the title of the research "Interoperability Strategy of TNI Information Systems to Support the Operational Command for Border Security in the North Natuna Sea"

THEORY AND METHOD

Theory

1. Theory of National Defense Strategy

In accordance with Law number 3 of 2002 article 1, that Indonesia applies a universal war strategy as a national defense strategy. According to Hillestad (2010), the components of the national defense strategy planning can be guided by applying the Revolution Military Affair (RMA). The core responsibility of the Department of Defense is to defend the United States from attack upon its territory at home and to secure its interests abroad. The U.S. Armed Forces protect the physical integrity of the country through an active layered defense. They also deter attacks upon it, directly and indirectly, through deployments at sea, in the air, on land, and in space.

Strategy is also defined as a tool to achieve goals. So that the national defense strategy can be defined as a plan of action involving targets and policies to prevent, protect, and defend national interests from various kinds of violence and attacks by other parties (La Ode et al, 2021).

2. Interoperability Concept

The Federal Research Division as quoted in (John Kim and Natalie (2020) defines interoperability as the capacity to exchange information between, across people, processes, and negotiations characterized by a common understanding of the information exchanged, this capacity depends on the equipment and integrated resources, agreed and documented procedures, and alignment across cultures, languages, motivations, and politics.

Interoperability cannot be separated from the use of existing technology, as in Presidential Instruction No. 3 of 2003, there are two activities that are directly related, namely;

a. Data processing, information management, management systems and work processes electronically,

b. Utilization of advances in information technology so that public services can be accessed easily and cheaply by people in all regions of the country.

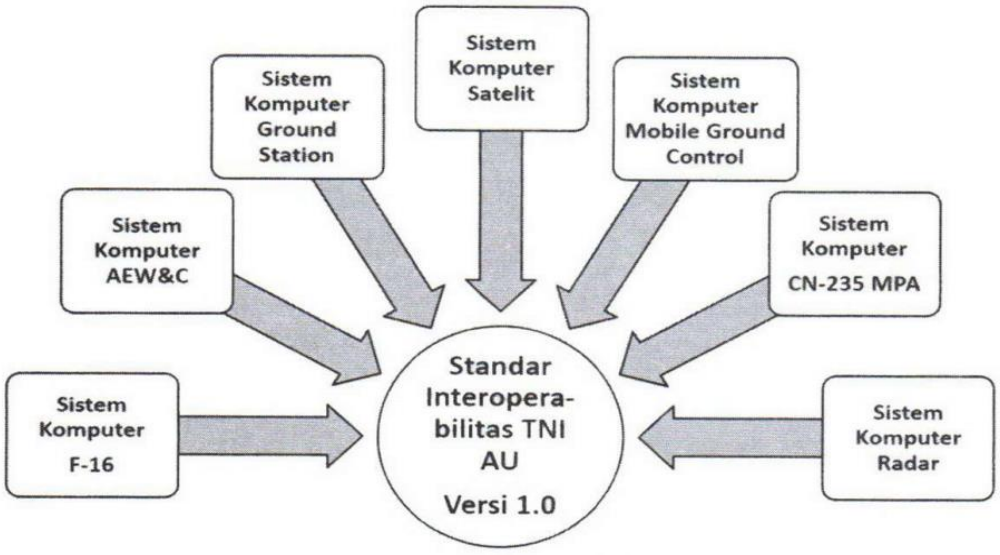

Figure 3. Indonesian Air Force Interoperability Standards as a Reference Document for System Interoperability in the Indonesian Air Force Alutsista

(**Source:** Datumaya Wahyudi. Meraih Interoperabilitas TNI AU. 2017)

However, what needs attention is to understand three things about interoperability well. First, interoperability is not integration. Because basically interoperability changes a freely connected system to be stronger, and the system does not need to be connected all the time because there are times when certain systems will only be used to support certain operations (Muhammad Risahdi et al, 2019). Second, interoperability does not demand homogeneity, meaning that one system and another do not need to be unified because they have similar or similar programmed devices. The use of interoperability theory is to analyze the gap between ideal information system interoperability conditions and real conditions in the field.

3. The Concept of National Precautions

National vigilance is an attitude related to maintaining and maintaining nationalism. This attitude arises because it is built from a sense of care and responsibility as a citizen from threats to the survival of society, nation and state. As revealed by Joko (2017) that national alertness is a quality of preparedness owned by the Indonesian people to detect, anticipate early and take preventive action against various forms and nature of potential threats to the Unitary State of the Republic of Indonesia.

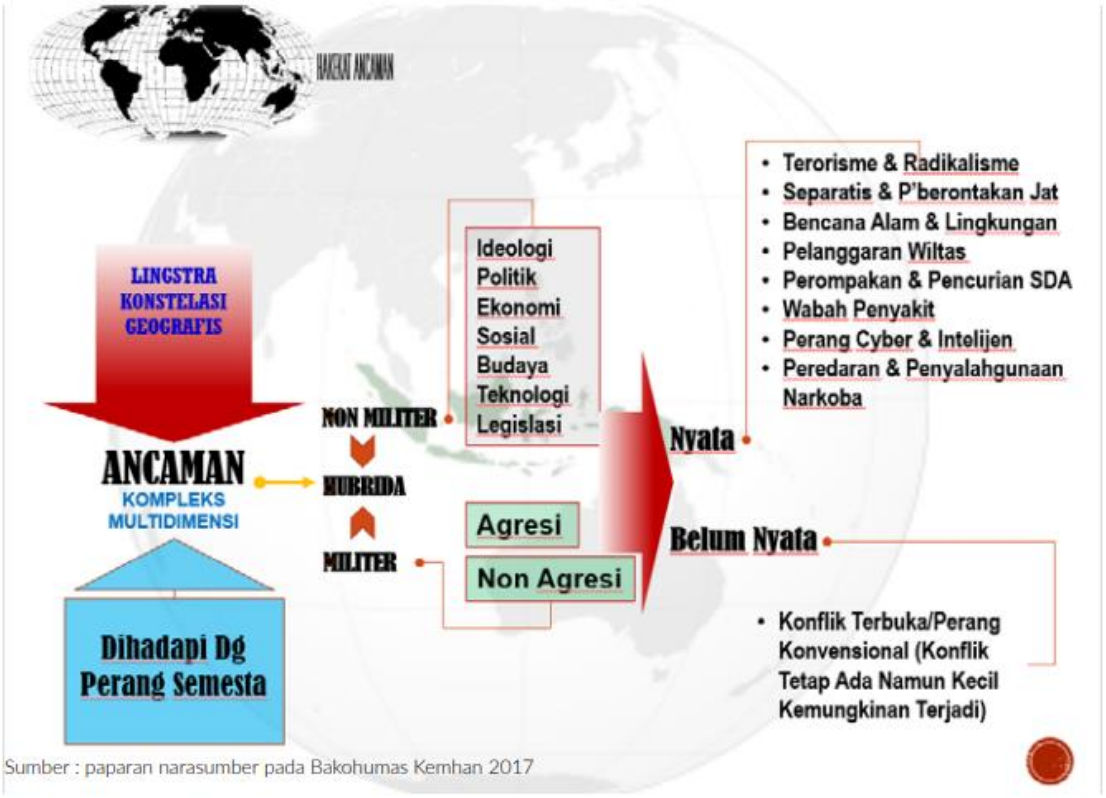

Figure 4. The Nature of the Threat
Source: Buku Putih Pertahanan Indonesia 2015

National vigilance regarding a functioning national security system, Joko (2017);

a. Fostering legal certainty
b. Fostering peace and order in society
c. Law enforcement and justice
d. Build defense ability
e. Protecting the people from various disasters (natural, intentional, negligent) including the protection of people's rights

4. National Security Concept

Collins (2003) suggests “The advantage of focusing on identity security is that it enables us to examine 'soft' security matters, such as providing for the reproduction of language and culture through, for instance, education, rather than being solely concerned with the use of force by and against ethnic groups.” Al Araf and Ali Abbas, 2007 (Susetyo, 2008, p. 2) In the traditional approach, the state becomes the subject and object of efforts to pursue security interests.

The use of the concept of national security in this research is as a support in providing an overview of the concept of national security. Thus, it is hoped that the information system interoperability strategy to support Border Security Operations in the North Natuna Sea in this study can support the system pattern and the main agenda of national security.

5. Military Campaign Concept

Military campaigns as described in the Decree of the Dansesko TNI Number 363 of 2020 concerning the Manuscript of the Military Campaign Department, are referred to as art that connects battlefield strategy (tactics) with operational strategies designed to achieve both military strategic objectives (national strategy) and military operations objectives. carried out in a predetermined space and time.

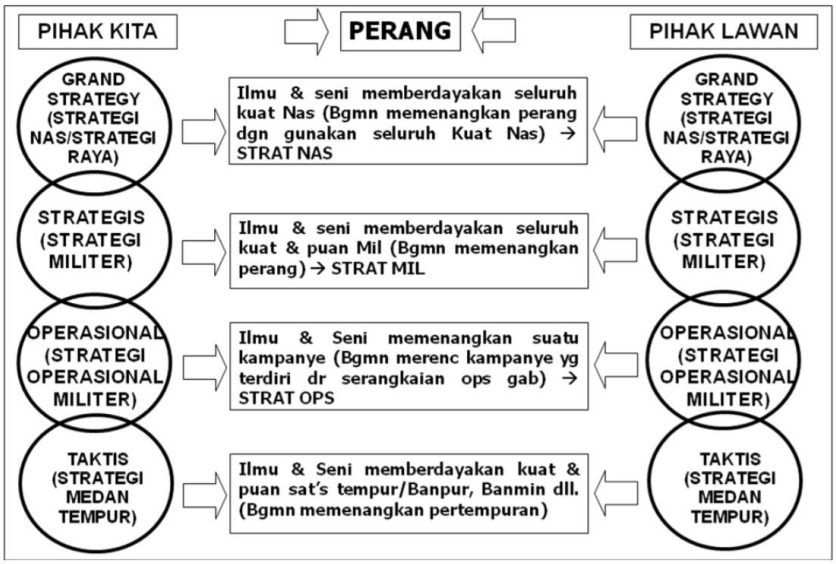

Figure 5. Position of Military Campaign in War Strata
(**Source :** Naskah Departemen Kampanye Militer, 2020)

The formulation of the military campaign cannot be separated from the phenomenon faced, namely the development of enemy scenarios that will invade the Republic of Indonesia. The scenario predictions developed are formulated based on three assumptions, first, namely the interests of military campaigns faced with the possibility of attacking other countries, secondly, namely the interests of military campaigns formulated to face the enemy before invading the territory of the Republic of Indonesia and the third, namely the interests of military campaigns to overcome enemies who successfully invaded and control part of the territory of the Republic of Indonesia. The formulation of the interests of the military campaign is faced with enemy scenarios as shown below.

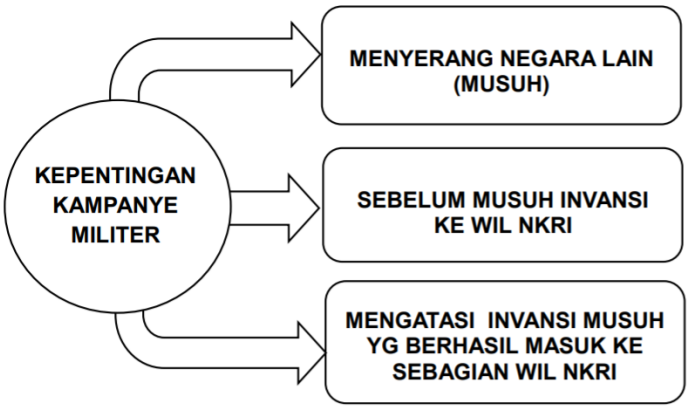

Figure 6. Military Campaign Scenario
(**Source:** Naskah Departemen Kampanye Militer, 2020)

The use of the military campaign concept in this study is to support understanding and analyzing the components of support in carrying out military operations by the TNI as a strategy and part of the military campaign in border areas, especially in North Natuna.

Methods

The research method in this study used a qualitative descriptive approach. This approach describes and describes existing phenomena, both natural and human engineered. Descriptive research does not manipulate or change the variables studied, does not

give treatment, but describes a condition as it is, and pays more attention to the characteristics, quality, interrelationships between subjects (Syaodih, 2011). Qualitative descriptive data collection was done through observation, interviews and documentation. Then analyze in depth the object of research with the theories and concepts used. Researchers also analyze the core problems and phenomena under study and then provide recommendations for thinking in the form of findings or research results on the problems studied.

This study focuses on the theme of the TNI's information system interoperability strategy, so that the subject is not appropriate if quantified but needs to be translated and interpreted the phenomenon. A strategy is certainly not appropriate if measured through quantification. One of the selections of a descriptive approach is because the phenomenon under study is described as it is and will pay more attention to the interrelationships between the subjects studied.

Purposive sampling technique was used in this study because the informants selected to explain the subject under study were based on a specific purpose. The object of this research is the TNI information system interoperability strategy which includes regulations for supporting TNI information system interoperability, software, hardware and brainware support, as well as problems and obstacles encountered in realizing this interoperability.

DISCUSSION

1. Analysis of TNI Information System Interoperability in Border Security Operations in the North Natuna Sea

Information system problems in Border Security Operations currently lead to border areas in the North Natuna Sea. There is a need for information explaining the condition of the TNI information system in Border Security Operations, as well as various repair and improvement efforts that can be carried out by realizing interoperability of information systems between TNI operations task forces, between elements or TNI defense equipment used in Border Security Operations, in particular. applied to the North Natuna Sea, where the area is vulnerable to territorial disputes between Indonesia and regionally neighboring countries.

Settlement of border area disputes between countries prioritizes peaceful problem solving solutions that are carried out through the negotiating table. However, if the negotiations carried out sometimes have not resulted in a solution to the settlement of border disputes, then this problem will be brought to the International Court of Justice as the next peaceful solution. Based on several territorial dispute decisions made by the International Court of Justice so far, three main considerations can be formulated by the International Court of Justice in deciding border area disputes between countries (Suhirwan et al, 2020).

The three main considerations are previous agreements between countries, posidentis upi and effective control (effective occupation). In order to maintain the superiority of effective control over the entire territory of Indonesia, especially in disputed areas, Indonesia through the Indonesian National Armed Forces (TNI) held an Inter-State Border Security Operation. The Border Security Operations that are held are well integrated and able to provide information quickly and accurately, making it easier for decision-making officials to carry out several important initiatives and anticipatory steps to maintain effective control over disputed areas and prevent effective control over disputed areas by other countries with the interoperability of information systems.

Interoperability is a collaboration between software, hardware, and brainware to support the command and control of border security operations in order to maintain the sovereignty of the Republic of Indonesia. Interoperability which means cooperation between all dimensions of the TNI is a strategy and effort to achieve the vision that has been made. The function of interoperability is to simplify things and speed things up, without reducing the value of delivering the message. cooperation of all elements is needed in carrying out especially technological rejuvenation in software and hardware, as well as improving the quality of brainware. Trimming the convoluted bureaucracy by simplifying the use of technology is a relatively expensive thing, but in terms of securing the territory of the state's sovereignty, of course, this effort must be done. The slogan of the Unitary State of the Republic of Indonesia is fixed and will be heard if there are cases or problems, especially in securing the area which in the last 2 decades have been heard, starting from the islands of Sipadan and Ligitan, the North Natuna Sea, to the problems in Ambalat. Indonesia which has an area with the 3rd largest coastline in the world, it is natural that the concept of interoperability in terms of information technology is needed.

The results of the Interoperability analysis found that the condition of the Border Security Operations information system can be classified into two main components, namely the Early Warning Information System and the Threat Response System, both of which include Software, Hardware, and Brainware in each information system. The findings found are also in the realm of policy and regulation which are contained in the results of the Nvivo analysis as a research synthesis shown in the figure, which is as follows:

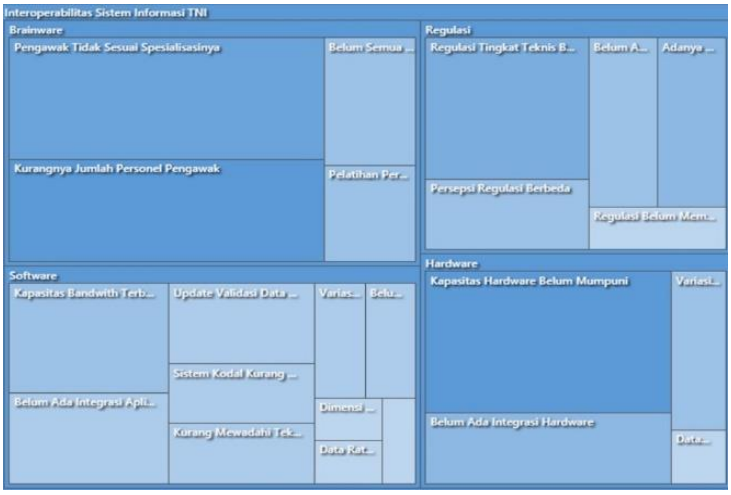

Figure 7. Results of the Nvivo . Qualitative Analysis
(Source: processed by the researcher, 2022**)**

Based on the results of the NVivo software analysis, several findings were obtained which prioritized problem solving from the four main problems.

a. regulation.

1) Technical level regulations are not yet precise, flexible, interoperable.
2) The perception of regulation is different.
3) There is no standardization of regulations.
4) There is a sectoral ego.

b. Software.

1) Limited bandwidth capacity.
2) There is no application integration yet.
3) Update manual data validation.
4) The Kodal system is less powerful.

c. Hardware.

1) The hardware capacity is not yet qualified.
2) No hardware integration yet.
3) High hardware variety.
4) Database and server are still physical.

d. Brainware

1) The crew does not match their specialization.
2) Lack of crew personnel.
3) Not all personnel are computer literate.
4) Personnel training is not centralized.

From the four analysis results, it was found that many system components in supporting interoperability still have their own problems, both in terms of regulation, hardware, software, and brainware.

2. Analysis of the TNI Information System Interoperability Strategy to Support the Operational Command for Border Security in the North Natuna Sea

In order to realize the government's vision for the development of national defense, the strategic objectives of national defense are to create a national defense capable of facing threats; realizing a state defense capable of handling maritime area security, land area security, and aerospace area security; realizing national defense capable of playing a role in creating world peace; create a strong, independent, and competitive defense industry; and create awareness of state defense for Indonesian citizens.

The national defense development policy in Presidential Decree no. 97 of 2015 describes the development of border areas and outermost/frontier small islands, as well as the development of technology and information and communication systems in the defense sector. Based on this, the policy for guidelines for formulating strategies and efforts to solve the problems in this paper is to obtain an interoperability strategy for border area security based on the findings and results of research in the previous subchapter regarding the findings and results of research based on Nvivo analysis covering regulations, software, hardware and brainware. , then the strategies that can be implemented and initiated are as follows**:**

a. Realizing interoperability of TNI information system regulations through improving regulations at the technical level that is appropriate, flexible, interoperable, then equalizing regulatory perceptions, compiling standardization of regulations and eliminating sectoral egos. The interoperability of the regulation of the TNI information system will be the basis for realizing the interoperability of software, hardware and brainware of the TNI information system.

b. Realizing interoperability of TNI information system software through increased bandwidth capacity, application integration, automation of data validation updates and strengthening of the Kodal system. The interoperability of the regulation of the TNI information system will be the basis for realizing the interoperability of software, hardware and brainware of the TNI information system. This will support the realization of up-to-date information sharing and communication between the early detection and threat response units and the Operations Command and Control Center so that operations leaders can clearly know the conditions and situations of the battlefield in real time. So that the military's early detection capability to identify violations of state sovereignty and sovereign rights and the ability to quickly respond to violations of sovereignty and sovereign rights can be improved in TNI operational units.

c. Realizing interoperability of TNI information system hardware through hardware capacity enhancement, hardware integration, hardware standardization, database and server improvement through the use of cloud storage. It also supports the realization of up-to-date information sharing and communication.

d. Realizing the interoperability of the TNI's information system brainware through the placement of personnel according to their specialization, increasing the quality and quantity of crew personnel, increasing the capabilities of crew personnel through IT and computer education or courses as well as organizing centralized personnel training. This also supports the realization of information sharing and communication that is appropriate and up to date.

CONCLUSION

Results:

a. To improve the interoperability of the TNI information system to support the command and control of border security operations in order to maintain the sovereignty of the Republic of Indonesia, it is necessary to increase the interoperability of regulations, software, hardware and brainware of the TNI information system.

b. Regulatory interoperability can be realized by improving regulations at the technical level that are appropriate, flexible, interoperable, then equalizing regulatory perceptions, compiling standardization of regulations and eliminating sectoral egos.

c. Software interoperability can be realized through increased bandwidth capacity, application integration, automation of data validation updates and strengthening of the Kodal system. The interoperability of the regulation of the TNI information system will be the basis for realizing the interoperability of software, hardware and brainware of the TNI information system.

d. Hardware interoperability can be realized through increased hardware capacity, hardware integration, hardware standardization, database and server improvement through the use of cloud storage.

e. Brainware interoperability can be realized by placing personnel according to their specialization, increasing the quality and quantity of crew personnel, increasing the capabilities of crew personnel through IT and computer education or courses as well as organizing centralized personnel training.

Recommendations that can be given include:

a. Formulating research on policy studies on interoperability between dimensions in order to synergize the main tasks and functions in guarding border areas, both land, maritime, and aerospace;

b. Develop analysis on national potential studies in land areas, maritime areas and aerospace areas in the form of regional potential analysis and defense potential analysis;

c. Formulating research related to static defense studies, especially in guarding border areas, which will involve regional components, including regional security guards;

d. The need for the preparation of a Blueprint, Grand Design or Strategic Plan that binds all efforts to build and develop Information System interoperability in the long term;

e. The need to develop a Knowledge Management System or Database System which is an inventory/repository of a collection of software and can be accessed through a secure network (VPN or Military Intranet) by all units that oversee Information Systems;

f. The need to determine the priority scale in the procurement of hardware supporting the interoperability of Information Systems.

REFERENCES

1) Arief, R., Prakoso, L. Y., & Risman, H. (2021). UNDERSTANDING NATIONAL IDENTITY TO CREATE LOVE AND PROUD OF BEING A PART OF THE INDONESIAN NATION. *Jurnal Inovasi Penelitian*, *1*(11), 2549–2556.

2) Arto, R. S., Prakoso, L. Y., & Sianturi, D. (2019). Strategi pertahanan laut indonesia dalam perspektif maritim menghadapi globalisasi indonesia's deep marine defense strategy maritime's perspective facing globalization. *Strategi Pertahanan Laut*, *5*(2), 65–86.
3) CNN Indonesia. 2015. https://www.cnnindonesia.com/tv/20210408190152-407-627638/video-jet-tempur-as-melintas-di-atas-perairan-natuna
4) Collins, A. (2003). Security and southeast asia: domestic, regional and global issues. Singapore: ISEAS (Syaodih, 2011)
5) Datumaya Wahyudi. 2017 Meraih Interoperabilitas TNI AU Sebuah Pendekatan Ilmiah Sederhana. Journal.
6) Dipua, A., Hermawa, R., Puspitawati, D., Harahap, N., Nurdiansyah, D. R., & Prakoso, L. Y. (2020). AN ANALYSIS OF THE SOUTH CHINA SEA CONFLICT: INDONESIA'S PERSPECTIVES, CONTEXTS AND RECOMMENDATIONS. *PalArch's Journal of Archaeology of Egypt/Egyptology*, *17*(4), 976–990.
7) Harris, A., Prakoso, L. Y., & Sianturi, D. (2019). Strategi Pertahanan Laut dalam Rangka Ancaman Keamanan di Alur Laut Kepulauan Indonesia II. *Journal of Social and Political Sciences, Vol.4 No.2 (2021)*, *5*(1), 15–30. https://doi.org/10.31014/aior.1991.04.02.283
8) Hillestead,T,X Chunyan, S A Haugland. 2010. Innovative Corporate Social Responsibility: The Founders role in creating a trustworthy corporate brand through green innovation. J Prod.Brand Management.
9) Hura, M. 2000. A Broad Definition of Interoperability. Dalam M. Hura, Interoperability: A Continuing Challenge in Coalition Air Operations (hal. 7-15). California: Rand Corporation.
10) Inpres No.3 Tahun 2003,
11) John Kom., Natalie McDaniel. 2020. Military Interoperability: Definitions, Models, Actors, and Guidelines. Library of Congres. CGHE. Uniformed Service University
12) Joko Riyanto. 2017. Kewaspadaan Nasional, Bela Negara, dan Integrasi Nasional. Wira Edisi Juli-Agustus 2017 Volume 67/Nomor 51
13) Junaidi, M. E., Prakoso, L. Y., Eka, M., & Yudho, L. (2021). Pancasila as the Basis for Indonesia's Universal Defense. *Journal of Social and Political Sciences*, *4*(2), 148–154. https://doi.org/10.31014/aior.1991.04.02.283
14) Jurnal Maritim, 2018. https://jurnalmaritim.com/2018/
15) Kasih Prihantoro Zakariya, Lukman Yudho Prakoso, Ratna Damayanti, A. D. (2019). Public Policy Analysis of Defense Areas and Defense Area Plan In Grati Pasuruan. *The 3th Indonesia International Defense Sciense Seminar*, *2*(Universitas Pertahanan), 483–490.
16) Kasih Prihantoro, L. Y. P. (2021). *BELA NEGARA, PERPEKTIF TEKNOLOGI PERTAHANAN*. ID Patent EC00,202,155,036.
17) Keputusan Dansesko TNI Nomor 363 Tahun 2020 tentang Naskah Departemen Kampanye Militer
18) Kusuma, A. W., Prakoso, L. Y., Sianturi, D., Pertahanan, S., Fakultas, L., Pertahanan, S., & Pertahanan, U. (2021). Relevansi Strategi Pertahanan Laut Berdasarkan Doktrin Jalesveva Jayamahe Terhadap Globalisasi Dan Perkembangan Lingkungan Strategis. *Strategi Pertahanan Laut*, *6*(1), 77–100.
19) La Ode, M. H., Prakoso, L. Y., & Risman, H. (2021). PERANG SEMESTA MELALUI OPTIMALISASI PENERAPAN NILAI PANCASILA PERSATUAN INDONESIA DALAM MENDUKUNG PERTAHANAN NEGARA. *Strategi Perang Semesta*, *7*(1).
20) Muhammad Risahdi Mansyur , Andi Henny, Lukman Yudho Prakoso and Ratna Damayanti, M. J. 2. (2019). The Implementation Of Policies To Protect National Vital Objects In The Indonesian Navy's Second Fleet Base Surabaya–IIDSS2019. *The 3th Indonesia International Defense Sciense Seminar*, *2*(Obyek Vital Strategis), 506–512.
21) Naskah Departemen Kampanye Militer, 2020
22) Novianto, Rizal Dwi., Firmansyah, Dimas Agung., Pratama, Nauval Adi. (2020). Penyelesaian Sengketa Di Laut Natuna Utara. Jurnal Hukum Bisnis Bonum Commune Volume 3 Nomor 1 Februari 2020.
23) Perpres No. 97 Tahun 2015 dijelaskan tentang pembangunan wilayah perbatasan dan pulau-pulai kecil terluar/terdepan
24) Staf Operasi Koarmada I. Mabes TNI, Keputusan Panglima TNI Nomor Kep /555/VI/2018 tanggal 6 Juni 2018 tentang Doktrin TNI Tri Dharma Eka Karma
25) Suhirwan, Andryan Ole, Kurniawan, C., & Lukman Yudho Prakoso. (2020). Indonesian Navy Against Covid-19. *Public Policy Anda Administration Research*, *10*(covid 19), 18–23. https://doi.org/10.7176/PPAR/10-5-02
26) Susetyo Heru. 2008. Menuju Paradigma Keamanan Komprehensif Berperspektif Keamanan Manusia dalam Kebijakan Keamanan Nasional Indonesia. Lex Jurnalica Vol. 6 No.1
27) Syaodih Nana. 2011. Metode Penelitian Pendidikan. Bandung: PT Remaja Rosdakarya
28) UNCLOS 1982, Pasal 76 ayat 4 hingga 6
29) UU nomor 3 tahun 2002 pasal 1 Tentang Pertahanan Negara