

## Naval Strategies for Safeguarding National Vital Energy Objects at Integrated Terminal Tanjunguban within Indonesia's Maritime Security Architecture

Alberth Levi Sihotang<sup>1\*</sup>, Achmad Sochfan<sup>2</sup>, M. B. Pandjaitan<sup>3</sup>, Jaka Lelana<sup>4</sup>,  
Indra Wijayanto<sup>5</sup>

<sup>1,2,3,4</sup>Sekolah Staf dan Komando Angkatan Laut Indonesia (Seskoal)

<sup>5</sup>Kantor Administrasi Personel, Komando Armada I (Disminpers Koarmada I),  
Angkatan Laut Republik Indonesia

**Corresponding Author:** Alberth Levi Sihotang [albertlevysihotang14@gmail.com](mailto:albertlevysihotang14@gmail.com)

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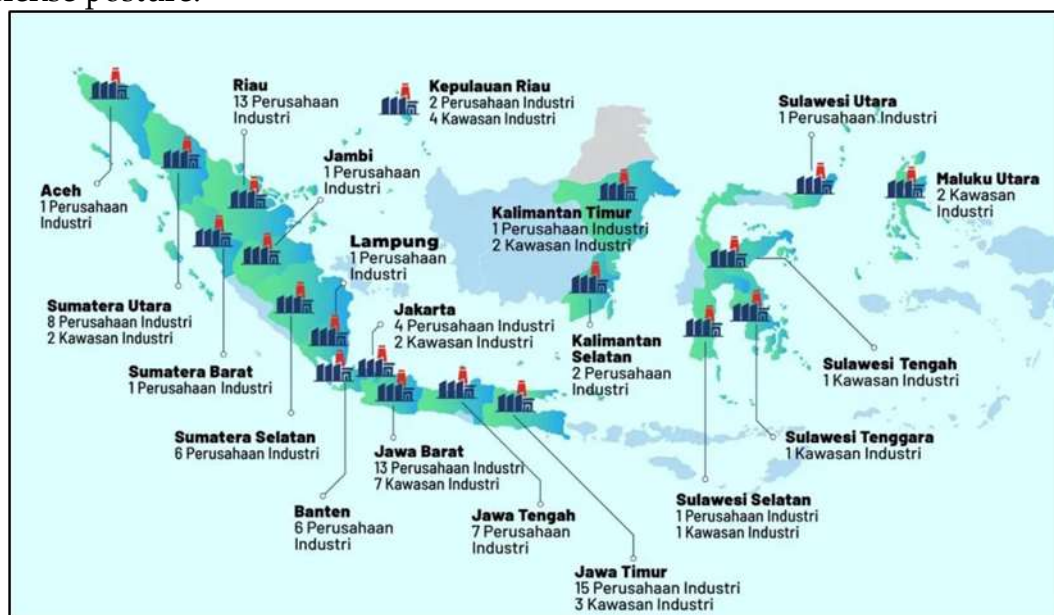
### ABSTRACT

Naval security operations at Integrated Terminal Tanjunguban reflect focused cooperation between the Indonesian Navy and relevant agencies in safeguarding National Vital Energy Objects as critical nodes in fuel and LPG distribution. This study specifically examines how naval strategies for sea control, protection of maritime critical infrastructure, and rapid response are applied to secure the terminal and its surrounding waters. Using a qualitative descriptive approach through document analysis, in-depth interviews, and targeted field observations, the research analyzes the planning, execution, and evaluation of security measures and exercises at Integrated Terminal Tanjunguban. The findings aim to identify concrete operational patterns, key supporting and inhibiting factors, and the direct contribution of these naval strategies to enhancing local maritime security and regional stability around the terminal.

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## INTRODUCTION

Integrated Terminal Tanjunguban is one of Indonesia's National Vital Energy Objects, functioning as a strategic hub for fuel and LPG distribution to several regions in Sumatra and Kalimantan within the national maritime logistics network. It is embedded in a wider constellation of National Vital Objects and industrial zones scattered across the archipelago, as illustrated in Figure 1, which shows key energy-intensive companies and industrial estates in provinces such as Aceh, North Sumatra, Riau, East Kalimantan, East Java, and others. The geographical dispersion of these sites means that disruption at a single critical node can trigger cascading effects along supply chains, affecting national energy availability, industrial production, and overall economic resilience. In this sense, Integrated Terminal Tanjunguban represents not only a vital logistical asset, but also a strategic component of Indonesia's broader maritime security and national defense posture.



**Figure 1. Companies and Industrial Zones in Indonesia Designated as National Vital Objects.**

Source: [https://www.instagram.com/p/DIzxA9zo5S/?utm\\_source=ig\\_web\\_button\\_share\\_sheet](https://www.instagram.com/p/DIzxA9zo5S/?utm_source=ig_web_button_share_sheet)

Indonesia's status as the world's largest archipelagic state, located between the Indian and Pacific Oceans and intersected by major sea lines of communication, further amplifies the strategic significance of such energy terminals. The waters around Tanjunguban lie in proximity to busy routes linked to the Malacca Strait and other choke points that handle a substantial share of global trade and energy shipments. This environment is characterized by dense commercial traffic, overlapping jurisdictions, and a spectrum of risks ranging from traditional maritime crimes, smuggling, and illegal fishing to terrorism, sabotage, and hybrid threats directed at maritime critical infrastructure. The combination of high traffic density, strategic location, and the presence of energy facilities with large storage capacity creates a complex security setting that demands continuous vigilance and robust protective measures.

Within Indonesia's maritime security architecture, the Indonesian Navy, particularly Fleet Command I (Koarmada I) plays a central role in safeguarding National Vital Energy Objects such as Integrated Terminal Tanjunguban. Naval operations in this area encompass sea control, surveillance, escort of high-value units, and direct protection of terminal approaches and anchorages. These activities are increasingly organized within frameworks of maritime domain awareness and critical maritime infrastructure protection, which emphasize early warning, layered defense, and integration between sea and shore-based security elements. Regular exercises and drills are conducted to test contingency plans, refine rules of engagement, validate standard operating procedures, and ensure that naval units can respond swiftly to incidents such as unauthorized intrusions, sabotage attempts, or maritime accidents that threaten terminal operations.

However, securing Integrated Terminal Tanjunguban cannot rely solely on naval power. Effective protection requires close synergy among the Indonesian Navy, other maritime law-enforcement agencies, port authorities, and the energy company that operates the terminal. This multi-agency cooperation involves joint risk assessments, shared situational awareness, interoperability of communication systems, and harmonized crisis-management protocols. On the ground and at sea, it translates into coordinated patrol patterns, joint command-post exercises, integrated access-control measures, and collaborative response teams capable of handling both security incidents and safety-related emergencies. Such arrangements are crucial to bridge institutional mandates, minimize gaps in jurisdiction, and create a coherent security shield around the terminal and its surrounding waters.

Against this background, the present study focuses on naval strategies for safeguarding National Vital Energy Objects at Integrated Terminal Tanjunguban as an integral part of Indonesia's maritime security architecture. It seeks to analyze how strategic concepts such as sea control, deterrence, and protection of maritime critical infrastructure are operationalized through concrete patterns of operations and exercises in the terminal's area of responsibility. The study also explores the supporting and inhibiting factors that influence the effectiveness of these strategies, including doctrinal guidance, force posture, inter-agency coordination mechanisms, and logistical or technological constraints. By employing a qualitative descriptive approach based on document analysis, interviews, and field observation, the research aims to provide a nuanced understanding of the Indonesian Navy's contribution to the protection of strategic energy infrastructure and to the maintenance of maritime security and regional stability in the waters surrounding Integrated Terminal Tanjunguban.

## **LITERATURE REVIEW**

Maritime defense strategies play a vital role in protecting critical national assets, particularly the energy infrastructure that forms the backbone of national resilience. The Integrated Terminal Tanjung Uban, as one of the strategic energy distribution hubs with large-scale capacity and serving as an energy hub for the Sumatra region and its surroundings, plays a crucial role in ensuring the continuity of the national fuel supply.

Within the context of Indonesia's maritime security architecture, the role of the Indonesian Navy and other maritime security agencies is crucial in securing energy distribution routes from threats such as sabotage, terrorism, and transnational crime, in line with their primary function of safeguarding the sovereignty and security of Indonesia's maritime territory. Furthermore, the strategic geographical location of Tanjung Uban near the Malacca Strait underscores the urgency of implementing an integrated naval strategy, grounded in modern maritime surveillance and multi-stakeholder coordination, to ensure the operational sustainability of vital energy infrastructure within the framework of national maritime security.

## **METHODOLOGY**

This study employs a qualitative descriptive approach to examine naval strategies for safeguarding National Vital Energy Objects at Integrated Terminal Tanjunguban within Indonesia's maritime security architecture. The research process begins with a document-based site review of the terminal and its surrounding waters, followed by field observation and semi structured interviews with key informants from the Indonesian Navy, other relevant maritime agencies, and the energy operator responsible for the terminal. Problem mapping is then carried out to identify vulnerabilities, existing security measures, and patterns of naval operations related to the protection of the terminal. Based on this mapping, the researcher designs an analytical framework to assess how security operations and exercises are planned, implemented, and evaluated.

Data collection combines several techniques: analysis of official doctrines, operational orders, and after action reports; on site observation of security arrangements and, where possible, naval exercises around the terminal; and in depth interviews with officers and personnel directly involved in planning and executing protection measures. These activities are conducted over a defined research period that covers preparation, data gathering, and verification stages. In parallel, focused discussions with selected practitioners and experts are used to clarify interpretations of operational concepts, coordination mechanisms, and perceived strengths and weaknesses in current security practices.

The empirical work is complemented by a literature based theoretical study to provide a solid conceptual foundation for analyzing naval strategies and the protection of maritime critical infrastructure. The literature reviewed includes scientific journals, policy papers, and previous studies on maritime security, sea control, critical energy infrastructure protection, and inter agency cooperation in naval operations. Particular attention is given to works that discuss the role of navies in safeguarding offshore and coastal energy facilities, frameworks of

maritime domain awareness, and models of multi agency coordination in complex maritime environments.

Data analysis follows an iterative, interpretive process. Field notes, interview transcripts, and documents are organized thematically according to key categories such as strategic concepts, operational patterns, supporting factors, inhibiting factors, and observed outcomes for maritime security around Integrated Terminal Tanjunguban. Through continuous comparison between empirical findings and the theoretical framework, the study seeks to build an integrated picture of how naval strategies are formulated and implemented in practice. By combining practical operational insights with a strong theoretical base, this methodological approach is expected to produce context sensitive findings that can inform the development of more effective naval protection strategies for National Vital Energy Objects in Indonesia.

## **RESEARCH RESULT AND DISCUSSION**

The protection of National Vital Energy Objects as part of Indonesia's maritime security architecture cannot be separated from the active role of naval forces and robust multi-agency coordination. Integrated Terminal Tanjunguban provides a concrete example of how operational synergy between the Indonesian Navy, other state maritime agencies, and the energy operator shapes a layered security posture around a strategic energy facility. Through a series of security operations, exercises, and coordination forums, these efforts are directed not only at safeguarding physical infrastructure but also at enhancing maritime domain awareness and rapid response capacity in surrounding waters. The main results of the study are presented in three interrelated thematic subsections as follows.

### ***The Role of Naval Security as a Driver of Critical Energy Infrastructure Protection***

Indonesia's maritime security policy increasingly recognizes that naval strategies for the protection of National Vital Energy Objects are not only a technical requirement, but also a strategic driver of transformation in the way coastal and offshore areas are managed. This is reflected in various initiatives that place the Indonesian Navy at the center of efforts to safeguard critical infrastructure while supporting broader national security and economic objectives. At Integrated Terminal Tanjunguban, this strategic spirit is clearly visible in the way the surrounding maritime area is treated as a priority security zone that combines operational readiness, inter-agency cooperation, and protection of vital sea lines of communication.

The same spirit is evident in the layered protection measures applied to the terminal and its approaches, which aim to build a clear security identity for the area as a protected energy hub. Patrol patterns, surveillance procedures, and exercise scenarios are designed to maintain a visible and credible naval presence, thereby deterring potential threats and signaling the importance of the terminal for national resilience. Although challenges remain in terms of resource limitations, technological gaps, and environmental factors such as dense traffic and complex geography the naval and civilian stakeholders at Tanjunguban

share a strong expectation that enhanced security arrangements will generate wider benefits for local stability and economic continuity.

Naval operations around the terminal, much like large infrastructure projects, produce dual impacts. On the one hand, they generate positive effects such as improved situational awareness, safer navigation for merchant shipping, and greater confidence for energy operators. On the other hand, they can expose institutional and coordination weaknesses, for example in information sharing or incident response routines. Rather than viewing these as obstacles, the security community increasingly treats them as stimuli for doctrinal refinement, operational innovation, and closer cooperation between sea-based and shore-based actors. In this way, the protection of Integrated Terminal Tanjunguban becomes a laboratory for developing more adaptive and integrated maritime security practices.

The ethos of collective responsibility rooted in ideas of joint maritime defense and shared safeguarding of critical infrastructure serves as crucial strategic capital in building a resilient security environment around National Vital Energy Objects. With this ethos, the Indonesian Navy and its partners do not treat coastal communities and commercial operators merely as passive beneficiaries of security, but as active participants in maintaining vigilance and reporting anomalies. Values such as trust, openness to coordination, and willingness to innovate become key foundations for positioning Integrated Terminal Tanjunguban as a secure, inclusive, and strategically protected node within Indonesia's wider maritime security architecture.

### ***From Energy Hub to Strategically Protected Naval Security Zone***

Transforming an energy terminal into a strategically protected security zone is a process that requires shared awareness, clear doctrine, and strong institutional support. The initial step at Integrated Terminal Tanjunguban is the establishment of coordinated security arrangements in which the Indonesian Navy acts as the lead maritime security actor, supported by other state agencies and the terminal operator. In this framework, naval security is not limited to guarding a static facility, but extends to ensuring safe approaches, anchorages, and surrounding sea lanes that connect the terminal to wider national and regional energy networks.

Operational coordination is further developed through structured forums and planning meetings that bring together naval commanders, maritime law-enforcement officials, port authorities, and company security managers. Through these interactions, a shared understanding is built regarding threat scenarios, protection priorities, and response procedures for incidents that may affect the terminal. One concrete outcome is the preparation of formal plans, standing operating procedures, and inter-agency agreements that define roles, responsibilities, and communication lines in the event of security disturbances or maritime emergencies.

Within this process, there is strong institutional commitment to treating Integrated Terminal Tanjunguban as a high-priority security area. Naval patrols, surveillance activities, and exercise programs are designed to reinforce the perception that the terminal is a protected node within Indonesia's maritime security architecture. For the Indonesian Navy, these activities provide opportunities to refine tactics, techniques, and procedures for protecting critical energy infrastructure, while for civilian stakeholders they offer reassurance that their operations are backed by credible security guarantees.

However, the development of a mature protection regime around the terminal cannot be achieved instantly. Progress requires gradual stages, beginning with improving personnel readiness and joint training, followed by enhancing surveillance systems, communication networks, and contingency planning. Challenges such as limited resources, uneven experience among agencies, and the need for better technology and funding must be addressed through long-term planning that is both realistic and adaptive. Over time, this step by step consolidation is expected to transform Integrated Terminal Tanjunguban from a vulnerable energy facility into a model of integrated naval-led protection of National Vital Energy Objects in Indonesia.

### ***Revitalizing Maritime Security Through Operational Practice and Strategic Innovation***

Maritime security activities around Integrated Terminal Tanjunguban have long involved a range of operational functions that together form a "security ecosystem" for protecting National Vital Energy Objects. Naval patrols, surveillance missions, and security checks on approaching shipping lanes operate alongside the terminal's own safety procedures and port-facility security measures. This constellation of activities constitutes a core operational capital for building a robust protection regime around the energy hub.

Strategic innovation becomes increasingly visible through the way different actors contribute to this protection chain. Naval units, maritime law-enforcement agencies, port authorities, and the terminal's security organization each play critical roles from early detection and identification of suspicious movements at sea to crisis response and recovery on shore. Their combined involvement not only reduces vulnerability to security incidents, but also strengthens institutional roles and shared responsibility in the protection of critical energy infrastructure.

Ongoing security operations and exercises provide a platform for these actors to grow and adapt. Through joint drills, table-top exercises, and operational rehearsals, participants can test procedures, practice communication protocols, and evaluate the effectiveness of existing plans. To enhance performance, capacity-building in areas such as information sharing, use of maritime surveillance technology, and development of standard operating procedures is essential. The integration of operational experience and doctrinal development becomes a major strength of the naval led protection concept.

With this approach, revitalizing maritime security around Integrated Terminal Tanjunguban is not only about creating more patrols or installing new equipment, but also about fostering awareness of innovation, collaboration, and long-term sustainability among all stakeholders. Operational practices become a reflection of shared strategic understanding as well as an effective instrument for demonstrating state presence and deterrence, thereby strengthening the security of National Vital Energy Objects by, from, and for the national maritime community.

## **CONCLUSIONS AND RECOMMENDATIONS**

This study demonstrates that naval strategies play a crucial role in safeguarding vital national infrastructure in the energy sector, particularly at the Tanjung Uban Integrated Terminal, which serves as one of Indonesia's strategic energy distribution hubs. Within the framework of Indonesia's maritime security architecture, synergy between the Indonesian Navy (TNI Angkatan Laut), the Maritime Security Agency (Bakamla), and other relevant agencies is key to addressing various threats both conventional and non-conventional such as sabotage, terrorism, and transnational crime. The effectiveness of security measures is heavily influenced by maritime surveillance capabilities, operational readiness, and the integration of technology-based security systems.

Based on the research findings, it is recommended that the government strengthen interagency coordination within the national maritime security system by enhancing interoperability and real-time information sharing. The Indonesian Navy needs to increase its presence and patrols in strategic areas around the Tanjung Uban Integrated Terminal, supported by modern surveillance technologies such as maritime radar and satellite-based monitoring systems. Additionally, it is important to develop an integrated security system involving private terminal operators to create layered protection for national critical infrastructure. Further research is expected to empirically assess the effectiveness of naval strategy implementation in the field and to develop adaptive security models that account for the dynamics of maritime threats.

## **ADVANCED RESEARCH**

Further research is recommended to examine in greater depth the effectiveness of naval strategy implementation in securing vital energy infrastructure through an operational case study approach at the Tanjung Uban Integrated Terminal. Additionally, further research could explore the use of modern maritime technologies, such as satellite-based surveillance systems, unmanned systems (maritime and aerial drones), and artificial intelligence to enhance early detection and response to threats. An analysis of multi-stakeholder collaboration models between the Indonesian Navy, Bakamla, Polair, and the private sector is also crucial to strengthen integration within Indonesia's maritime security architecture. Furthermore, comparative research on energy critical infrastructure security practices in other countries could be conducted to identify relevant and adaptable best practices for the Indonesian context.

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