

AIR POWER AND REGIONAL SECURITY: ASSESSING INDONESIA'S AIR DEFENSE STRATEGY IN THE CONTEXT OF ASEAN REGIONAL

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Abstrak

Studi ini mengkaji kebijakan pertahanan udara Indonesia dalam konteks keamanan regional ASEAN. Studi ini menggunakan konsep Keunggulan Udara bersama dengan Teori Kompleks Keamanan Regional (RSCT) untuk menganalisis akuisisi penting seperti jet tempur Rafale, F-15EX, partisipasi dalam program KF-21 Boramae, penyebaran sistem NASAMS, dan latihan multilateral seperti Garuda Shield. Temuan menunjukkan bahwa upaya modernisasi Indonesia merupakan respons terhadap tantangan terhadap kedaulatannya, pelanggaran wilayah udara yang sering terjadi, dan ancaman yang muncul termasuk proliferasi drone dan rudal. Secara regional, peningkatan kekuatan udara Indonesia ini mengubah keseimbangan keamanan dalam kaitannya dengan negara-negara tetangga ASEAN yang memiliki persenjataan lengkap seperti Singapura dan Malaysia, sekaligus memperkuat mekanisme keamanan ASEAN yang kooperatif namun tidak mengikat. Kontribusi utama studi ini adalah demonstrasinya bahwa upaya modernisasi Indonesia memperkuat pencegahan nasional dan mendorong stabilitas regional, sekaligus menyoroti keterbatasan kerangka kerja kelembagaan ASEAN. Penelitian selanjutnya harus mencakup penilaian operasional dan latihan berbasis skenario untuk lebih mengantisipasi peran Indonesia yang berkembang dalam keamanan ASEAN.

Abstract

This study examines Indonesia's air defense policy within the context of ASEAN regional security. It employs the concept of Air Superiority alongside the Regional Security Complex Theory (RSCT) to analyze significant acquisitions such as the Rafale fighter jet, the F-15EX, participation in the KF-21 Boramae program, the deployment of the NASAMS system, and multilateral exercises like Garuda Shield. The findings indicate that Indonesia's modernization efforts are a response to challenges to its sovereignty, frequent violations of its airspace, and emerging threats including drone and missile proliferation. Regionally, these enhancements to Indonesia's air power are altering the security balance in relation to well-equipped ASEAN neighbors such as Singapore and Malaysia, while also reinforcing ASEAN's cooperative but non-binding security mechanisms. The primary contribution of this study is its demonstration that Indonesia's modernization efforts strengthen national deterrence and promote regional stability, while also highlighting the limitations of ASEAN's institutional framework. Future research should include operational assessments and scenario-based exercises to better anticipate Indonesia's evolving role in ASEAN security.



INTRODUCTION

Regional security in Southeast Asia is influenced by a complex interplay of both traditional and non-traditional threats, all set against the unique institutional backdrop of ASEAN. ASEAN-led regional security mechanisms, such as the ASEAN Regional Forum (ARF), the East Asia Summit (EAS), and the ASEAN Defense Ministers' Meeting (ADMM), are characterized by consensus-building, informal interactions, and non-binding agreements. This reliance on what has historically been referred to as the "ASEAN Way" reflects the mutual interest of member states to address intra-regional disputes peacefully and to prevent the spillover of conflict (Caballero-Anthony, 2022). Despite these unique institutional setups, Southeast Asia remains vulnerable to contemporary security challenges.

Over the past two decades, the Indo-Pacific strategic environment has become increasingly contested. Severe maritime activities in the South China Sea, ongoing threats from transnational terrorism, natural disasters, cyber threats, and the intensifying rivalry between the United States and China all place new demands on ASEAN's security architecture. These challenges strain the

limits of ASEAN's consensus-based institutions, which, while effective for dialogue, are less suited for generating a robust collective response. In such situations, each ASEAN country must navigate the dual challenge of maintaining its independence while also sustaining the cooperative and rule-based norms that underlie regional agreements.

As one of the founders of ASEAN and the world's largest archipelago, Indonesia occupies a unique position in both Southeast Asia and the global context. Geographically, Indonesia controls vital sea routes and airways, such as the Strait of Malacca, making it a crucial hub for regional safety and international trade. In recent years, Indonesia has also sought to establish itself as a global maritime center. To maintain sovereignty, the country needs to invest in both naval and air power (Ghufron, Herdiansyah, & Nuraeni, 2018). While Indonesia's maritime strategy has received considerable scholarly and policy attention, its air defense posture has only recently gained prominence in national security discussions.

This growing focus on air defense is justified. Indonesia's recent acquisition of Rafale combat aircraft from France and other

modernization plans reflect a recognition of air power as a fundamental component of national defense (Mardhika, De Fretes, & Simanjuntak, 2023). Reports from the Indonesian military indicate numerous violations of Indonesian airspace by foreign aircraft, with 216 violations detected in a single air defense sector between 2015 and 2018 (Ghufron et al., 2018). Such violations reveal gaps in surveillance, early warning systems, and the ability to respond rapidly. Furthermore, modern air threats now extend beyond conventional fighter aircraft to include unmanned aerial vehicles (drones), ballistic missile proliferation, and even cyber intrusions into command-and-control systems (Amrin, Suwito, & Suryo, 2025). This underscores the need for an integrated and technology-intensive air defense strategy.

While Indonesia's defense modernization and maritime strategy have garnered significant attention, the air dimension remains largely overlooked. Much of the research focuses on Indonesia's naval development and maritime diplomacy in the Indo-Pacific, aligning with ASEAN countries' traditional emphasis on sea-based security cooperation. However, the role of air power, as a crucial component of Indonesia's security and deterrent capabilities, has not

been thoroughly explored in academic discourse. Some publications have addressed the government's efforts to enhance air control alongside modernization programs (Basundoro & Yakti, 2025; Slayton, 2018), but no studies have systematically connected Indonesia's air defense strategy with the overarching ASEAN security architecture. This connection is vital, as understanding Indonesia's air defense strategy is essential not only for comprehending the country's defense priorities but also for deciphering the evolving regional security complex in Southeast Asia, especially in light of Indo-Pacific challenges.

We argue that Indonesia's evolving air defense strategy is shaped by two key factors: the need to protect national sovereignty and the requirement to align with ASEAN's cooperative security norms. By examining Indonesia's air defense posture through this dual framework, this study contributes original insights to both national defense scholarship and regional security studies. This approach sheds light on how one of ASEAN's most influential members navigates the competing demands of military modernization and regional consensus.

This study addresses the following questions: How does Indonesia's air defense strategy respond to current regional security

challenges, and what implications does it have for the ASEAN security architecture? The objectives are threefold: first, to identify and understand the main elements of Indonesia's air defense plan; second, to evaluate the logic and effectiveness of that plan in responding to emerging threats; and finally, to investigate how Indonesia's air defense aligns with, or differs from, the security objectives of the ASEAN region. The findings will be crucial in informing both academic discussions about adjustments to ASEAN security measures and policy dialogues concerning Indonesia's defense posture in the Indo-Pacific era.

ANALYSIS FRAMEWORK

Air Superiority

This study examines Indonesia's defense through the lens of air power theory, particularly focusing on air superiority. Classical theorists such as Trenchard, Mitchell, and Douhet argued that controlling the air is crucial in modern warfare, as it allows for better organization and contestation of other battlefields (Kalhor, 2025). A recent body of work reaffirms the significance of air superiority while also addressing its evolving nature in light of new challenges. Saunders & Souva (2020)

conducted the first comprehensive quantitative analysis of the relationship between air superiority and battlefield victory, examining decisive battles from 1932 to 2003. They found that in nearly 79 percent of cases, the side that emerged victorious in a decisive battle also achieved air superiority. Notably, their research indicates that air superiority is a more reliable predictor of victory than factors like regime type, the degree of modernization, or overall military power. The rationale is straightforward: controlling the skies enhances maneuverability and firepower, enabling combined arms operations while hindering the enemy's capacity to project air or ground power effectively. They categorize air superiority not just as a facilitating condition but as a primary cause of victory in modern warfare.

Hecker (2024) contends that the traditional view of air superiority, primarily focused on manned aircraft, may no longer be valid in an era characterized by drones, loitering munitions, and contested airspace. He draws lessons from Ukraine, asserting that the widespread use of small unmanned aerial systems (sUAS) and inexpensive precision threats has challenged many established assumptions of dominance.

Consequently, maintaining air superiority may necessitate a balanced force structure that includes both high-end and low-end platforms, which are agile, cost-effective, and dispersed. Fundamentally, the principle of deterrence by denial, convincing adversaries that initiating conflict is not worthwhile, depends on the ability to inflict unacceptable losses, which requires a more flexible and resilient approach to the air domain.

Kreuzer (2024) further expands on this concept, advocating for a fundamental rethinking of air power beyond traditional paradigms. He introduces the idea of the “air littoral,” a contested zone where drones, missiles, and ground-based fire blur the distinctions between air, land, and sea. In this perspective, the pursuit of absolute air control may not always be feasible or desirable. Instead, the objective should be to view air power as part of a broader multidomain contest, where the goal is not merely dominance but the ability to integrate and respond effectively across intersecting operational areas. This perspective challenges long-standing Douhetian assumptions and raises questions about the wisdom of investing in high-end fighter aircraft to achieve the strategic goals that states seek in the twenty-first century.

Regional Security Complex Theory

Regional Security Complex Theory (RSCT) was first proposed by Barry Buzan and Ole Wæver. They argued that security is dynamic, with its peak occurring at the regional level. Regional states are interconnected due to their proximity and interdependence (Farzayee, 2023). Koessetianto et al. (2024) explained that security dynamics in Southeast Asia can be described as a complex in which ASEAN serves as the center for managing tensions among great powers while addressing transboundary threats such as maritime security and terrorism. Within this complex, RSCT can address two key questions: (1) Why is the security of a state in Southeast Asia inseparable from its neighbors? (2) Why can Indonesia's defense not be separated from the stability of ASEAN?

Farzayee (2023) provides a broader conceptual review, emphasizing that RSCT moves beyond a state-centric approach by including non-traditional threats, securitization processes, and the role of non-state actors. Therefore, RSCT is not limited to classical military threats but also encompasses issues like environmental concerns, terrorism, migration, and cyber risks. The key concepts include security

interdependence (the mutual reliance of states), securitization (framing issues as existential threats requiring extraordinary measures), and geographical clustering (the idea that threats are more easily transmitted across short distances). This makes RSCT a flexible and multidimensional framework for studying ASEAN.

Amable (2022) expanded RSCT by addressing the emergence of security regions and the role of great powers in shaping nascent complexes. He found that RSCT often assumes that regions are already established. In reality, however, regional complexes are often in the process of formation, influenced by changing patterns of amity and enmity, as well as interventions from external actors. He proposed a framework for studying nascent Regional Security Complexes (n-RSC) and identified several indicators, such as geographic proximity, interaction density, and the involvement of adjacent great powers. In the context of Southeast Asia, this perspective helps us understand how the rivalry between the United States and China both drives ASEAN consolidation as a security complex and creates divisions within it.

In summary, the analytical framework based on RSCT connects Indonesia's air

defense policy with three aspects: (1) ASEAN's balancing behavior in the Sino-American competition, (2) securitization and interdependence that shape state behavior in relation to regional security, and (3) ASEAN's evolution between maturity and immaturity as a Regional Security Complex, influenced by both internal consistency and external pressures. This framework supports two possibilities: (1) Indonesia's air power is simply aimed at safeguarding national interests, and (2) Indonesia's air power serves as the foundation of ASEAN's collective security in the Indo-Pacific region.

ASEAN Way

Throughout its existence, ASEAN's security model has been defined by what is known as the "ASEAN Way," a unique approach to diplomacy characterized by consensus, informality, and non-interference (Husna, 2025). According to Agastia (2021), these principles have served as the foundation for maintaining peace and fostering trust among member states, thereby facilitating ASEAN's gradual evolution into a security community. However, these same regulations can also lead to a limited response to serious security issues. This paradox, where stability arises from a practice of

restraint, yet vulnerability increases due to a lack of strong institutionalization, remains at the heart of ongoing discussions about ASEAN's role in security.

The ASEAN Regional Forum (ARF), established in 1994, exemplifies the cooperative security model of ASEAN. As noted by Kovtun & Vartovnyk (2024), the ARF was formed in the aftermath of the Cold War, a time of new opportunities when ASEAN's diplomatic credibility allowed it to unite diverse actors such as the United States, China, Russia, and Japan. The primary value of the ARF lies in its confidence-building measures, which include high-level consultations, transparency initiatives, and annual security outlooks. These efforts reduce misunderstandings and foster a culture of dialogue. Furthermore, these mechanisms extend ASEAN's cooperative norms into the broader Asia-Pacific region, highlighting ASEAN's role as a "diplomatic convenor" rather than a military force.

The trajectory of the ASEAN Regional Forum (ARF) underscores the challenges of security management within the region. Despite the implementation of confidence-building measures, efforts have proven largely ineffective, as noted by Kovtun & Vartovnyk (2024). Preventive diplomacy exists primarily as a theoretical concept,

while practical conflict resolution remains unutilized. The principle of consensus, designed to accommodate various stakeholders, significantly hampers the ability to address critical issues such as those in the South China Sea, the North Korean nuclear crisis, and the situation in Taiwan.

In response, the ARF has shifted its focus to less contentious topics in the realm of non-traditional security, including counterterrorism, disaster relief, and cybersecurity. These changes highlight both ASEAN's limitations and the priorities of major powers in the region.

Scholars differ in their assessments of ASEAN's leadership in this context. Some see ASEAN as a deliberate "driver" of regional cooperative security, while others argue that it has emerged as an "accidental leader," positioned by the fact that alternative chairpersons were not acceptable to influential powers. Regardless, ASEAN's leadership reflects a style of soft regionalism; it provides a platform for dialogue but shies away from binding commitments or coercive measures (Spastyono, Malik, & Wahyudi, 2024). Consequently, the ARF remains mired in the initial stages of cooperative security, where transparency and dialogue are ends in themselves, rather than pathways to collective action.

The literature on this topic highlights the conflicts associated with Indonesia's defense policy. Practically speaking, Indonesia is enhancing its air force capabilities to control its airspace and deter any threats, which aligns with the principles of realism in international relations. However, the regional security framework in which Indonesia operates is based on cooperation rather than strict defense measures. Although ASEAN promotes dialogue, it avoids establishing robust collective defense mechanisms. This situation implies that while Indonesia is strengthening its air defense, it cannot rely on ASEAN for operational assistance in the event of an aerial attack. This unique combination of national hard power within a regional soft security context makes Indonesia's air defense strategy an intriguing subject for study in relation to ASEAN's overall security architecture.

When considered together, the theoretical frameworks provide a well-integrated foundation for understanding Indonesia's air defense strategy within the regional security context of ASEAN. The Air Superiority framework clarifies the integration of operational and doctrinal concepts that underpin Indonesia's need for

modern fighter aircraft and technologically advanced air defense systems. Initiatives like Garuda Shield emphasize the importance of air dominance for both deterrence and national resilience.

Meanwhile, the Regional Security Complex Theory (RSCT) situates these sovereign actions within the interconnected security environment of Southeast Asia, where the distribution of power, external influences, and regional relationships greatly influence the defense strategies of individual states. The ASEAN Way, characterized by consensus and non-interference, limits how Indonesia can showcase its extensive capabilities without jeopardizing trust in the region.

Thus, this combined framework enables a comprehensive assessment of whether the modernization of Indonesia's air defense enhances national deterrence while maintaining cooperative norms within ASEAN, or if it leads to the emergence of new imbalances that could undermine regional cohesion. This analysis connects material power modernization with institutional and normative dynamics, successfully merging hard security strategies with the soft architecture of Southeast Asian regionalism.

RESEARCH METHOD

The researchers chose a qualitative research design to examine Indonesia's air defense strategy within the ASEAN regional security framework by analyzing various documents. They selected a qualitative approach to capture the details of strategic and institutional dynamics, as these aspects cannot be fully represented by quantitative models. This study explores the underlying and sometimes covert elements of Indonesia's defense policy, including how changes in the military, the adoption of new technologies, and cooperation with other countries are articulated in official statements and reflected in the broader geographic context.

The research data primarily comes from secondary sources, including Indonesia's Defense White Papers, official statements from the Ministry of Defense, defense cooperation agreements, and ASEAN-related policy documents. Additionally, the authors drew on academic research articles, expert opinions published by think tanks, and institutional publications from international research organizations focused on Indo-Pacific and Southeast Asian security. Furthermore, relevant media reports were consulted to obtain the latest

information on Indonesia's defense procurement, especially concerning fighter aircraft, air defense systems, and multilateral exercises such as Garuda Shield.

For content analysis, the main objective was to identify recurring themes, conceptual linkages, and policy trends. The collected texts were coded into four analytical dimensions: sovereignty and airspace control, capability development and procurement, institutional coordination, and ASEAN-level engagement. This coding facilitated a connection between Indonesia's national defense trajectory and ASEAN's cooperative security norms, allowing for an understanding of how air defense modernization impacts regional security interdependence. All inferences were based on textual evidence and aligned with the theoretical frameworks of Air Superiority Theory and Regional Security Complex Theory (RSCT). The employed method is rigorous in its analytics and minimizes researcher bias, ensuring that the conclusions reached are empirically grounded. Moreover, these conclusions contribute to academic discussions and foster dialogue between scholars and policymakers on Southeast Asian security issues.

RESULTS AND DISCUSSIONS

Indonesia has significantly increased its defense spending in recent years to support a comprehensive modernization initiative. Official data and analyses indicate that Indonesia's military budget is now in the tens of billions of dollars per year. For example, SIPRI reports that in 2024, Indonesia's military expenditure was approximately US\$11 billion, which is around 0.8% of its GDP (Tian, Lopes da Silva, Liang, & Scarazzato, 2024). Under the current administration, defense allocations have risen to fund both personnel costs and major equipment acquisitions. Some commentators have noted multi-year plans proposing up to US\$40–50 billion in new procurements (Storey, 2021).

Strategically, Indonesia's official defense policy centers around the concept of "total defense," known as *Sistem Pertahanan Rakyat Semesta*, or a People's Total Defense System. This aims to preserve national sovereignty, territorial integrity, and national safety (Danga, Prakoso, Hutajulu, & Fahlevie, 2023). The unique island nature of the country necessitates a defense system that includes all elements of society, making everyone an equal partner in the nation's defense.

Indonesia has established a naval force baseline called *Kekuatan Pokok Minimum* (Minimum Essential Force, MEF), which serves as a core strength for its military. Current policy strategies focus on developing practical deterrence capabilities, emphasizing powerful air forces and anti-missile systems rather than large standing armies (Pamungkas, Siregar, & Prapsetyo, 2024). Recent defense and security policy papers highlight the objective of manufacturing highly sophisticated defense equipment and technological weapons through foreign partnerships, aiming for a strategy that balances self-reliance with international collaboration.

Fighter Aircraft Acquisitions and Air Force Expansion

Indonesia's ongoing defense modernization primarily targets the enhancement of its air combat capabilities, which are considered crucial for deterrence and the projection of national power. In recent years, Jakarta has significantly diversified its sources of procurement, engaging multiple suppliers from Europe, the USA, and Asia to mitigate the risk of over-relying on a single partner. These acquisitions not only reflect the technical

improvements needed for the Indonesian Air Force (TNI-AU) but also align with the country's strategic goal of adapting its air defense posture to address evolving security

challenges in the Indo-Pacific region. The following table summarizes Indonesia's major air defense and fighter aircraft purchases from 2020 to 2025.

Table 1. Indonesia's Major Air Defense and Fighter Aircraft Acquisitions (2022–2025)

Aircraft	Supplier/Country	Year	Quantity	Generation/Type
Dassault Rafale	France	2022	42 units	4.5-generation multi-role fighter
KAAN	Turkey	2025	48 units	5th-generation air superiority fighter
F-15EX Eagle II	United States	Negotiation (2023-2025)	24 units	4.5-generation multi-role fighter
KF-21 Boramae	South Korea	Ongoing (since 2016)	Joint project	4.5-generation multi-role fighter

Source: Compiled by the author from Prawira et al., 2025; Reuters, 2025a, 2025b; Storey, 2021; Wicaksana et al., 2024.

In recent years, based on the table above (Table 1), Indonesia has diversified its sources of military aircraft by signing significant contracts with several suppliers. Notably, in 2022, Jakarta finalized a deal to acquire 42 Dassault Rafale multi-role fighters from France (Wicaksana et al., 2024). These Rafale jets are set to replace the aging F-5 fighters and will form the backbone of the Indonesian Air Force (TNI-AU) in the coming decade.

Additionally, in July 2025, Indonesia entered into a contract with Turkey for the purchase of 48 KAAAN next-generation fighters (Reuters, 2025a). The KAAAN, also known as the TF-X, is Turkey's domestically designed fifth-generation light fighter.

Delivering these aircraft will be crucial for modernizing Indonesia's fighter fleet. According to Reuters, this agreement is part of a broader initiative to "modernize its aging military hardware," following the Rafale order and showcasing Jakarta's ambition to advance its military capabilities significantly (Reuters, 2025a).

Indonesia is also exploring the possibility of purchasing jets from the United States. While no formal contract has been signed yet, official statements indicate that Indonesia is negotiating to acquire Boeing F-15EX fighters. The F-15EX is the latest generation of U.S. air superiority fighters, known for its extended range and large payload capacity. Indonesia has expressed

interest in acquiring approximately 24 such aircraft (Prawira et al., 2025). These negotiations are seen as both a strategic position and part of a broader exploration of options. Additionally, reports in 2025 suggested that Jakarta is considering the Chinese Chengdu J-10C fighter as another potential option (Reuters, 2025a).

A common theme in Indonesia's procurement strategy is the aim for a diverse air force, combining Western and non-Western jets. The country plans to retain older Russian aircraft, such as the Su-27/30 and F-16, to ensure a varied fleet.

In summary, Indonesia's current purchasing strategy focuses on developing large-scale air combat capabilities. From a doctrinal perspective, the air force is working towards achieving its Minimum Essential Force (MEF) goals by integrating a sufficient number of modern fighters to meet its deterrence requirements. With the addition of the Rafales, the upcoming KAAN, and the potential acquisition of the F-15EX, the TNI-AU will have access to a range of 4.5- and 5th-generation fighters. Collectively, Indonesia is making significant strides to establish a larger and more modern air wing compared to the previous decade. A defense analyst has noted that this swift and dynamic

consideration of alternatives, ranging from Rafales to KAAN to the possible F-15EX, helps prevent over-reliance on a single country; however, it complicates long-term planning and integration (Storey, 2021).

Strategic Partnerships and Aerospace Collaboration

Indonesia has leveraged the international space technology network to enhance cooperation abroad, aiming to achieve its modernization and technology transfer objectives. A notable example of this collaboration is the Korean-Indonesian fighter project known as the KF-21 Boramae. Initiated in the mid-2010s, this program not only requires Indonesia to invest financially but also to acquire knowledge and skills for the joint development of a next-generation fighter jet alongside South Korea (Permana, 2025).

When Indonesia faced delays in funding, both parties convened in the middle of 2025 to renegotiate the financial terms. South Korea's Defense Acquisition Program Administration (DAPA) announced in June 2025 that Indonesia's financial contribution to the KF-21 project would be reduced, adjusting the total commitment to approximately 600 billion won (around

US\$439 million) (Reuters, 2025b). This renegotiation was designed to ease Indonesia's financial burden while ensuring its continued involvement in the program.

As a result of this agreement, Indonesia remains a key partner in the KF-21 development and expresses intentions to purchase a batch of KF-21 jets, initially anticipated to be around 48 or 50 units (Reuters, 2025b).

Garuda Shield

Over the past few years, one of Indonesia's most enduring and closest collaborations in the aerospace and defense sector has been with the United States. This partnership is primarily represented by the annual "Garuda Shield" exercise (Sahputra, Dermawan, & Dewi, 2024). Initially a bilateral training program, "Garuda Shield" has evolved into a multilateral event involving several U.S. allies. This evolution clearly demonstrates the strategic commitment of the U.S. to Indonesia. Additionally, the exercise provides opportunities for the Indonesian National Air Force (TNI-AU) and other Indonesian services to interact with integrated air and missile defense operations. It facilitates the exchange of expert personnel and allows for

joint maneuvers that closely simulate modern combat environments (Ariani, 2024).

Moreover, this partnership has been crucial in supporting the smooth flow of technologically advanced platforms, including the upgrades of the F-16 under the Peace Bima Sena II program and ongoing discussions regarding the procurement of the latest F-15EX fighters (Sahputra et al., 2024). Cooperation with the United States has included support packages and grants through programs such as Foreign Military Sales (FMS), Excess Defense Articles (EDA), and FMF/US Grant 333. These initiatives have significantly contributed to the upgrading of airfield facilities and the enhancement of maritime domain awareness in Indonesia (Sahputra et al., 2024).

In summary, by integrating Indonesia into multilateral structures and increasing technical interoperability, the "Garuda Shield" exercise and other cooperative mechanisms not only help build the professional capacity of TNI-AU but also confirm Indonesia's role as a key player in the evolving security landscape of Southeast Asia.

Air Defense Systems

Along with airlift capabilities and fighter aircraft, modernizing air defense has

become a priority, particularly for ground-based systems. After decades without medium-range surface-to-air missiles (SAMs), Indonesia has reactivated dedicated air defense missile units. In 2021, the Ministry of Defense (MoD) announced plans for the Air Force to procure Norway/US NASAMS (National Advanced Surface-to-Air Missile System) air defense batteries to replace the outdated Soviet-era S-75 (SA-2) systems (Kemhan, 2021). According to MoD press releases, the Indonesian Air Force (TNI-AU) decided to form a new missile squadron to address medium-range threats, using NASAMS to enhance Indonesia's integrated air defense system (Kemhan, 2021).

The government reports that a contract for NASAMS has been signed and that the first systems have been delivered to a base in Tangerang, enabling coverage of critical areas. NASAMS utilizes AIM-120 AMRAAM missiles to engage a variety of airborne threats, including aircraft, helicopters, cruise missiles, and drones. The MoD emphasizes that NASAMS is designed to "eliminate airborne targets such as cruise missiles, aircraft, UAVs, and helicopters," with a particular focus on protecting high-

value assets, including the capital region, from air attacks (Kemhan, 2021).

Indonesia's efforts to bolster its air defense have been closely linked to cooperation with the United States, especially through mechanisms like Foreign Military Sales (FMS), Excess Defense Articles (EDA), and Foreign Military Financing (FMF) programs (Saputra, Darmawan, & Dermawan, 2022). Between 2020 and 2023, these initiatives have allowed Indonesia to acquire spare parts, missile systems, radars, and unmanned aerial vehicles that directly support its Minimum Essential Force goals. For example, in 2020, Indonesia received ScanEagle UAVs and Bell 412 helicopter equipment, along with funding assistance valued at approximately USD 14 million under FMF (Saputra et al., 2022).

Joint training and educational programs, such as the International Military Education and Training (IMET) and Garuda Shield, have further integrated Indonesia's air defense capabilities with U.S. standards. Cooperative exercises have tested interoperability across air, sea, and land domains. This collaboration not only enhances the material aspects of Indonesia's air defense posture but also deepens strategic

ties with Washington. Joint exercises like Garuda Shield serve as platforms for tactical integration, institutional strengthening, and knowledge transfer (Saputra et al., 2022).

Importantly, this relationship does not constitute a formal alliance. Indonesia continues to assert its "bebas aktif" (independent and active) doctrine and prioritize ASEAN centrality. However, this partnership has significantly improved Indonesia's ability to develop a layered air defense system while balancing engagement with major powers in the region (Amaral & Hapsari, 2023).

Comparison with Other ASEAN Air Forces

The air forces in Southeast Asia are at varying stages of modernization. Neighboring countries to Indonesia that have air forces capable of competing with it have also been upgrading their aircraft, reflecting a regional trend toward more capable fleets. The Republic of Singapore Air Force (RSAF) is recognized as the most advanced in the region. Singapore has committed to acquiring 20 Lockheed Martin F-35 fifth-generation fighters, which include a mix of F-35A and F-35B variants (MINDEF, 2025). In a statement made in September 2025, Singapore's Defence Minister announced

that the first of these F-35s is expected to be delivered by the end of 2026. With a varied fighter aircraft fleet that will include not only F-35As and F-35Bs but also its current F-15SGs, Singapore will soon possess fifth-generation air power, putting it ahead of Indonesia and other countries.

Malaysia is also in the process of rebuilding its air combat capabilities. In 2023, Kuala Lumpur signed a contract for 18 KAI FA-50 light combat aircraft from South Korea (Block 20 configuration, approximately \$920 million) (Waldron, 2023). These FA-50 jets will serve as lead-in trainers and light fighters for the Royal Malaysian Air Force (RMAF), replacing older Hawk aircraft. Malaysia continues to operate Su-30MKM Flankers, which were procured a decade ago, and is evaluating options for heavier fighters, including possible upgrades to the Su-30 or even the Su-35 (Waldron, 2023). In the context of littoral ASEAN countries, Malaysia's acquisition of both Western and Korean platforms demonstrates a balancing strategy, similar to Indonesia's but on a smaller budget.

The Philippines has the smallest air combat force among the three nations but is also refreshing its capabilities. Manila currently operates 12 KAI FA-50PH jets (acquired between 2017 and 2019) and, in

mid-2025, contracted for 12 additional FA-50s (approximately \$700 million) (Chavez, 2025). These new aircraft will be upgraded versions featuring aerial refueling capabilities and AESA radar, expected to arrive around 2030. The Philippine Air Force (PAF) still operates many light aircraft, such as turboprop A-29 Super Tucanos, and is considering replacements for its outdated supersonic jets. Under its modernization program, the Philippines plans to eventually acquire multirole fighters in the 2020s, potentially of Western or Korean/European designs, although a final decision has yet to be made (Chavez, 2025).

Indonesian Defense Doctrine and RSCT Implications

Indonesia's current defense doctrine, as outlined in official strategy documents, emphasizes a self-reliant, defensive posture that leverages the nation's geographic unity. The 2015–2019 National Defense Policy explicitly states that national defense is carried out through a *Pertahanan Rakyat Semesta* (Total People's Defense) system aimed at protecting sovereignty, territorial integrity, and national safety nation (Danga et al., 2023). In practical terms, this involves investing in a credible core military, known

as the Minimum Essential Force (MEF), while also utilizing civilian resources, such as militia programs and civil defense, in support.

Indonesia's White Paper on defense reiterates these principles and calls for the development of domestic defense industry capabilities. The objective is to deter "all forms of threat" by maintaining sufficient military capabilities across all domains (Danga et al., 2023). This defensive orientation, along with the goal of achieving technological self-sufficiency, explains why Indonesia seeks technology transfer from its partners and envisions producing or co-producing military equipment domestically.

When viewed through the lens of Regional Security Complex Theory (RSCT), Indonesia's defense initiatives have significant implications for the security landscape of Southeast Asia. RSCT posits that the security of states is interconnected at the regional level, influenced by various factors such as geographic proximity, relative power, threat perceptions, and alliance networks. Indonesia's rapid upgrading of its Air Force and the enhancement of its air defense capabilities are altering the regional balance of power. This development not only deters hostile actions but also reassures the

Indonesian people that their country maintains control over its airspace.

The mutual balancing dynamics often described in RSCT are evident in Singapore's decision to procure F-35 fighters to maintain its technological advantage. Similarly, Malaysia's acquisition of FA-50 aircraft will strengthen its position in the region. These actions illustrate how neighboring states may feel compelled to upgrade or diversify their military capabilities in response, particularly if Indonesia enhances its own fighter and surface-to-air missile (SAM) capabilities. Thus, Indonesia's military advancements could shift the regional equilibrium, prompting other states to bolster their defenses to ensure effective deterrence.

External and Internal Dynamics of Indonesia's Defense Strategy

Indonesia's multi-vector procurement strategy reflects the external influences outlined in the Regional Security Complex Theory (RSCT). Instead of aligning with a single patron, Jakarta is "shopping around" on a global scale (Storey, 2021). It engages with both Western and non-Western powers, purchasing military equipment from countries like France and Turkey, negotiating with the United States, and cooperating with Korea. This diversification helps Indonesia

avoid over-reliance on any one power, a lesson learned from past U.S. embargoes (Storey, 2021). In RSCT terms, Indonesia is managing its external threat environment by not tying itself to any single great power, which diminishes the risk of domination by others.

At the same time, Indonesia's outreach to the U.S. (for the F-15EX), Europe (for the Rafale), and East Asia (for the KF-21) positions it as a key player in multiple power configurations. Internally, Indonesia's focus on securing the archipelago, driven by national defense doctrine, addresses the identity and interest variables within RSCT. As the largest country in ASEAN, both geographically and demographically, Indonesia is committed to promoting regional peace through stability. The enhancement of the Indonesian National Armed Forces (TNI) capabilities under the banner of homeland defense aligns with the nation's political leadership narrative.

Thus, strengthening *the Sistem Pertahanan Rakyat Semesta* (Universal People's Defense System) with tangible assets such as jets and missiles not only garners local support and helps repel non-traditional threats, like territorial violations from increased foreign fishing and Coast Guard activities in its waters, but also

supports the RSCT framework. A satisfied and self-assured Indonesia can act as a stabilizing force in the sub-region, facilitating a credible collective defense posture.

In essence, Indonesia is actively reshaping the Southeast Asian security complex by strategically allocating funds for advanced military aircraft purchases and participating in cooperative programs. Its modernized air power and defense doctrine not only enhance deterrence but also signal that Indonesia can no longer be overlooked by its neighbors. This shift aligns with RSCT predictions: Indonesia's military capabilities will compel other ASEAN states to respond either through balancing or bandwagoning. For instance, Singapore's acquisition of the F-35 can be seen as a strategic move to counterbalance before Indonesia gains an unassailable advantage (MINDEF, 2025). Conversely, a stronger India could also reassure smaller neighbors regarding the maintenance of a stable status quo, depending on the dynamics of diplomatic relations.

Ultimately, Indonesia's diversified acquisition strategy and its strategic posture illustrate the country's quest for the highest level of security possible in a complex regional landscape, in accordance with RSCT

variables of geography, power distribution, and alliance choices. These factors will continue to shape the security architecture of ASEAN.

CONCLUSION

The evolution of Indonesia's air power indicates that the stability of ASEAN will increasingly rely on the ability of middle powers to combine technological modernization with normative restraint. Indonesia's recent upgrades, including the acquisition of modern fighters, the development of layered missile-defense capabilities, and the expansion of multilateral exercises, are not just technical enhancements. Instead, they represent a shift away from a reactive, territorially bound defense strategy to a more proactive role in shaping regional security dynamics. This transition redefines air power not only as a tool for national deterrence but also as a means of managing interstate interdependence, particularly concerning contested flight rights and shared airspace. These issues lie at the intersection of sovereignty, mobility, and collective security within the ASEAN framework.

This progressive shift carries significant implications. Firstly, by widening

its technological gap with both superpowers and other ASEAN countries, Indonesia is making the scenario of achieving "equivalence in the skies" a likely pathway for altering the regional balance of influence. Secondly, the growth of unilateral capacity-building efforts often conflicts with the cooperative security norms upheld by ASEAN. Consequently, the organization's durability will largely depend on the ability of key middle powers, especially Indonesia, to merge capability acquisition with thoughtful restraint, openness, and diplomacy.

However, the conclusions drawn from this analysis have limitations due to methodological constraints. The research heavily relies on secondary sources and official documents, which restrict access to insights into the management of decision-making processes, procurement negotiations, and doctrinal changes that influence technology usage. Additionally, the procurement process for defense systems is inherently variable; thus, local political shifts, financial constraints, and evolving perceptions of threats can quickly alter policy priorities and impact the anticipated security outcomes.

Future research should focus on processes, implementation, interoperability

challenges, and performance during crises. Comparative case studies, such as examining Indonesia's approach to Singapore's F-35 integration or Malaysia's acquisition of the FA-50, would provide a theoretical foundation for analyzing regional security complex theory (RSCT) in relation to technological changes. Scenarios that explore potential conflict areas, like the South China Sea or airspace violations, could offer insights into how Indonesia's revised air posture might interact with these situations. Finally, policy initiatives should focus on identifying practical multilateral strategies that enable ASEAN middle powers to modernize responsibly while preserving the normative foundations of regional order, which include transparency measures, standardized incident-at-sea or air protocols, and enhanced confidence-building exercises.

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