Asian Journal of
Science, Technology, Engineering, and Art

e-ISSN: 3025-4507
p-ISSN: 3025-5287
Index: Harvard, Boston, Sydney University, Dimensions, Lens, Scilit, Semantic, Google, etc

https://doi.org/10.58578/AJSTEA.v3i5.7594

U.S.-China Rivalry Controls AI-Based Defense Machine in the Natuna Sea and Malacca Strait: Indonesia's AI Governance Diplomacy in Navigating International Regulations

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Article Info:

Submitted:	Revised:	Accepted:	Published:
Sep 3, 2025	Sep 24, 2025	Oct 5, 2025	Oct 10, 2025

Abstract

This research examines the intensifying military artificial intelligence (AI) rivalry between the United States and China in the Southeast Asian maritime domain, with a focus on its implications for Indonesia's sovereignty and regional security, particularly in the Natuna Sea and the Strait of Malacca. Despite the strategic significance of this technological contest, its impact on Indonesia's defense and diplomatic posture remains underexplored. The study aims to analyze how the U.S.–China military AI competition is reshaping regional security dynamics and how Indonesia's defense diplomacy navigates international legal frameworks amid emerging AI-based threats. Adopting a qualitative descriptive approach with a comparative case study design, the research draws on diplomatic documents and reports from international institutions such as the UN, ASEAN, SIPRI, and IISS. Data were analyzed using thematic coding via NVivo 14 and triangulated across multiple sources. Findings reveal that military AI has transformed conventional security concerns into an era of algorithmic rivalry that remains largely unregulated under existing international law. In response, Indonesia has pursued a form of *AI Governance Diplomacy,* a defense diplomacy strategy grounded in the

principles of human oversight, algorithmic transparency, and legal accountability. The study concludes that Indonesia's normative approach contributes to shaping emerging global norms on military AI governance. Theoretically, the findings expand non-traditional security discourse by incorporating algorithmic threats, while practically offering recommendations to strengthen ethical and regulatory frameworks for AI within ASEAN's regional security architecture.

Keywords: U.S.–China Rivalry; Military AI; Indonesian Defense Diplomacy; International Law; Maritime Security

INTRODUCTION

The development of artificial intelligence (AI) technology in the defense sector has changed the international security paradigm from just a conventional military competition to an algorithmic-based systemic rivalry. Since the mid-2020s, the United States (US) and China have been engaged in a global race to develop AI-based defense and weaponry systems, such as Project Maven, the US's Replicator Program, and the JARI USV system as well as Chinese military swarm drones (Kania & Allen, 2021; Lin & Singer, 2023).

The rivalry is now spreading to the Southeast Asian region, especially the strategic waters of the Natuna Sea and the Strait of Malacca, two vital routes for world trade and global energy (Rahmadhani et al., 2023; Saputra et al., 2025). The intensification of AI-based military activities in these two lanes not only raises concerns about an algorithm-based arms race, but also has the potential to threaten the sovereignty of coastal states, including Indonesia, as well as test the effectiveness of applicable international legal regulations (Gady, 2024; Ma & Tan, 2025).

This issue is increasingly relevant for Indonesia as an archipelagic country located between the two great powers. In his statement at the UN Security Council (UNSC) session entitled AI in Military and Security Domain on September 26, 2025, the Minister of Foreign Affairs of the Republic of Indonesia, Sugiono, emphasized that "uncontrolled military AI risks triggering an arms race and threatening nuclear stability. AI should be the servant of humanity, not its master." The statement reflects Indonesia's strategic position in encouraging a normative and diplomatic approach to the use of AI in the military domain (Pangemanan & Perwita, 2022; Sugiono, 2025).

Normatively, this is in line with the spirit of preventive diplomacy and the principle of non-intervention in the ASEAN Charter and the United Nations Charter (ASEAN Secretariat, 2022; United Nations General Assembly (UNGA), 2023). However, in practical terms, challenges arise when the US and China both ramp up the deployment of AI-based defense systems in the region, which in some cases operate without human-in-the-loop supervision (Horowitz et al., 2024).

The state of the art in this study shows that research on military AI generally still focuses on technological and ethical aspects, such as the study of lethal autonomous weapons systems (LAWS) (Boulanin et al., 2023; Scharre, 2018), but there is a lack of exploration of the geopolitical and defense diplomacy implications of developing countries in the Southeast Asian region. Research conducted by Allen et al. (2022) and Gilli & Gilli (2024) highlights the potential of AI in improving military effectiveness and threat detection, but has not examined how countries like Indonesia are facing geopolitical pressures due to the AI rivalry between the two great powers. In addition, most previous research has focused on ethical debates at the global level such as AI governance and responsible innovation, without linking them to maritime security dynamics in strategic areas such as the Natuna Sea and the Strait of Malacca (Cummings, 2023; Rasser & Sayler, 2024).

This research gap shows the absence of an analysis that combines the dimensions of international law, defense diplomacy, and control of the simultaneous use of military AI in the maritime region. This research seeks to bridge this gap by examining how Indonesia uses defense diplomacy both in bilateral and multilateral forums to maintain regional security stability and enforce international legal norms related to the use of military AI.

In this context, Robert Keohane's theory of institutional neoliberalism becomes a relevant conceptual framework for understanding how cooperation between states in international regimes can limit the unilateral behavior of great powers (Keohane, 1984). In addition, Barry Buzan's (1991) complex security perspective is used to examine how AI-based threats shape regional dynamics in Southeast Asia and challenge traditional concepts of state sovereignty and security.

The new concept offered in this study is AI Governance Diplomacy, which is a diplomatic approach that integrates the principles of international law, technological transparency, and strategic trust mechanisms in dealing with the penetration of military AI

in the region. This concept departs from the assumption that regional security can no longer be guaranteed through military force alone, but through regulatory and diplomatic collaboration across actors to ensure responsible military AI. This approach is proposed as a conceptual model for non-aligned countries such as Indonesia to navigate the US–China rivalry without getting caught up in alliance politics or technological dependency (Friedrichs, 2024; Yamin, 2025).

Thus, this study aims to: (1) analyze the military AI rivalry between the United States and China in the Natuna Sea and Malacca Strait regions affecting Indonesia's defense diplomacy, and (2) assess the pillars of international law and military AI regulation play a role in maintaining regional stability. Through this approach, the research is expected to make a conceptual contribution to the study of international relations and defense policy, as well as offer practical guidance for strengthening Indonesian diplomacy in the era of AI militarization.

METHODS

This research uses a qualitative-descriptive approach with a constructivist paradigm. The qualitative approach was chosen because the issues studied by the US-China military AI rivalry and Indonesian defense diplomacy are complex phenomena that cannot be explained through numbers, but through the interpretation of meaning, political context, and dynamics of inter-stakeholder relations. According to Creswell (2014), qualitative research allows researchers to understand social phenomena in depth through the perspective of participants, contexts, and symbolic interactions within them.

This approach is also in line with the research objectives, which is to explore the role of Indonesian defense diplomacy in navigating international regulations on the use of military AI involving the world's two major powers in the Natuna Sea and Malacca Strait regions. The descriptive qualitative approach is seen as appropriate because it produces a comprehensive empirical and normative picture of the practice of diplomacy, the regulation of international law, and threats to state sovereignty. This approach is different from previous research that emphasized more on policy simulation or defense technology analysis (Boulanin et al., 2023; Lin & Singer, 2023).

The design of this study is a comparative case study with the main analysis units: (1) the use of military AI by the United States and China in the Southeast Asian region, and

(2) Indonesia's defense diplomacy in responding to these two powers through bilateral and multilateral forums. The case study design allows researchers to deeply understand the specific processes, actors, and contexts in which diplomatic policy and international law are carried out (Yin, 2018). The study compared two main patterns:

1. Case 1: Military AI rivalry and the presence of US automated defense systems (e.g. *Project Maven* and *the Replicator Program*) in the Natuna Sea and Malacca Strait regions.

2. Case 2: China's deployment of defense systems and unmanned vessels (*JARI USVs* and *swarm drones*) in waters that intersect with Indonesia's Exclusive Economic Zone (EEZ).

A comparative approach is used to identify similarities and differences between the two countries' AI-based military strategies as well as Indonesia's policy responses, especially at the level of preventive diplomacy. This approach expands on Buzan's (1991) research on *the Regional Security Complex* by adding the AI dimension as a new variable in non-traditional security.

The population in this study includes diplomatic documents, defense policy, and official sources from international institutions relevant to the use of military AI and international regulations in the Indo-Pacific region. The population also includes foreign policy experts, defense analysts, as well as active diplomats involved in the formulation of military AI policies.

The sampling technique uses purposive sampling, which is the selection of data sources that are considered the most relevant and informative to the research topic (Sugiyono, 2024). The research sample consisted of:

1. Official documents (e.g. *Statement on AI in Military and Security Domain* by Indonesian Foreign Minister Sugiono at the UNSC, 2025).

2. Institutional reports (ASEAN Secretariat, 2022; CNAS, 2024; RAND Corporation, 2024).

3. Scientific journals and primary books related to the theory of institutional neoliberalism (Keohane, 1984) and *security complex theory* (Buzan, 1991).

The main instruments in this study are document observation sheets, and military AI policy analysis matrices. Data are collected through two main techniques:

1. Documentary Study: Data collection was carried out on national policy documents (Indonesian Defense White Paper 2024), official statements at international forums

(UNSC, ASEAN Defence Ministers' Meeting Plus), and reports from global think-tanks such as IISS and SIPRI. This document is analyzed to understand the official position of the state and the legal arguments related to the regulation of military AI.

2. Data Observation and Triangulation: The researcher conducted limited participatory observations through academic forums and international seminars on maritime security and AI (between March–July 2025). The data were then verified by triangulating sources and methods to produce high validity (Miles et al., 2014).

Table 1. Data Source Matrix and Collection Techniques

Data Type	Source	Technique	Purpose
Diplomatic documents	UNSC, ASEAN, Kemenlu RI	Study Documents	Assessing Indonesia's legal and diplomatic position
Defense policy	White Paper, Kemenhan	Document analysis	Understanding the national strategy against military AI
Academic secondary data	CNAS, RAND, IISS, SIPRI	Study literature	Constructing a global theoretical context
Field information	Interviews with officials and academics	Semi-structured interviews	Gain practical and policy perspectives
International forums	ADMM+, G20 Dialogue on AI Ethics	Participatory observation	Confirming the direction of Indonesia's preventive diplomacy

Data analysis is carried out through thematic analysis with the help of NVivo 14 software to organize and code data. The analysis follows the stages of Miles et al. (2014):

1. Data Reduction – the selection, simplification, and grouping of data by category: *military AI rivalry*, *defense diplomacy*, *international law regulation*, and *AI governance diplomacy*.

2. Data Display – presentation of patterns of relationships between actors and between variables in the form of concept maps and policy relationship matrices.

3. Conclusion Drawing / Verification – interpretation of the results with reference to Keohane's (1984) theory of *neoliberal institutionalism* and Buzan's (1991) theory of *security complex*.

This analysis also uses a content analysis approach to interpret diplomatic discourse that appears in international documents, as well as comparative case analysis to compare the position and strategy of the US-China to Indonesia's diplomatic response. The research process was carried out for eight months (January-August 2025), with the main stages: data

collection (January–April), verification (May-June), and analysis and writing of results (July-October).

Table 2. Conceptual Matrix of Analysis of Indonesian Defense Diplomacy in the U.S.-China Military AI Rivalry

Variabel	Indicator	Data Source	Theoretis Analysis
Global Military AI	AI-based defense projects (Maven, Replicator, JARI USV)	CNAS, RAND, SIPRI	Analisis *technological rivalry*
International Regulations	UN Resolutions, ASEAN Charter, UNCLOS 1982	UNGA, ASEAN Secretariat	Theory of institutional neoliberalism (Keohane, 1984)
Indonesian Defense Diplomacy	High-Level & Low-Level Meetings, Foreign Minister Sugiono Statement	Kemenlu, ADMM+, UNSC	*Preventive diplomacy* dan *trust-building mechanism*
Regional Security	Natuna Sea & Strait of Malacca as a sensitive zone	IISS, IORA Reports	Regional security complex theory (Buzan, 1991)
Military AI Governance	AI control policy and usage ethics	UNESCO, G20 Dialogue	The Concept *of AI Governance Diplomacy*

This matrix is the basis for researchers in compiling an analysis of the relationship between empirical and conceptual variables, as well as in identifying forms of Indonesian defense diplomacy in the midst of the rivalry between military AI and the world's two major powers.

RESULTS

The results show that from 2022 to 2025, there will be a significant increase in AI-based military activities in the strategic waters of the Natuna Sea and the Strait of Malacca. Based on the *International Institute for Strategic Studies (IISS, 2025)* and *the SIPRI Military Trends Report (2024),* both the United States and China use AI technology to expand the range of military operations without directly violating the territorial sovereignty boundaries of other countries but factually causing "strategic pressure" on coastal countries, especially Indonesia. The following table shows a comparison of AI-based defense systems deployed by the two countries in the region.

Table 3. U.S. and Chinese Military AI Activities and Systems in the Natuna Sea and Malacca Strait (2022–2025)

Year	Country	Military AI Systems	Capacity and Function	Location of Operation	Potential Threats to Sovereignty
2022	United States	*Project Maven*	AI-based intelligence for the identification of sea and air targets	Waters near Guam–Malacca	Electronic reconnaissance of merchant ships on Indonesian routes
2023	China	*JARI USV* (Unmanned Surface Vehicle)	Unmanned ships with automatic weapons and autonomous radar	North Natuna EEZ Border	Violation of Indonesia's exclusive economic boundaries
2024	United States	*Replicator Program Drones*	Tactical drone swarm for sea and air operations	Indian Ocean to South Natuna Sea	Indonesian ship detection and sensor threats
2025	China	*AI Maritime Surveillance System (AIMSS)*	AI-based sensor system in the Malacca Strait route	West Malacca Strait	Threatening Indonesia-Malaysia maritime navigation control
2025	United States	*Directed-Energy Defense AI System*	Anti-drone and anti-satellite directed energy weapons	South China Sea in the south	Changing the strategic balance in Southeast Asia

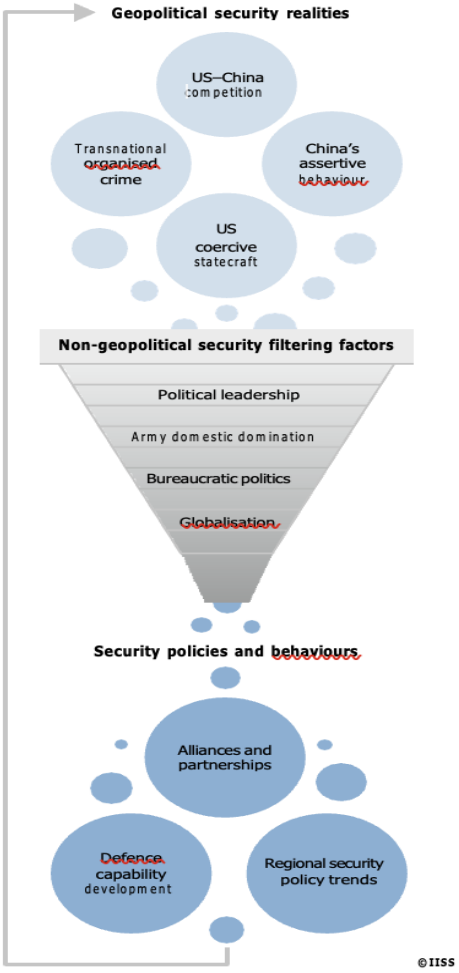
Source: Primary data (Interview of the Ministry of Defense of the Republic of Indonesia, 2025); IISS Report (2025); SIPRI Report (2024).

Analysis of the above data shows that the pattern of military AI rivalry is not only in the form of a physical presence, but also a digital presence through the control of data space, satellites, and military communication networks in the ASEAN maritime region. China appears to be prioritizing automated maritime surveillance through *the JARI USV* and *AIMSS systems*, while the United States is focusing on swarm drone systems and AI decision-making systems that integrate satellites, radar, and tactical communications (Horowitz et al., 2024; Rasser & Sayler, 2024).

In this context, the Natuna Sea and the Strait of Malacca become "AI chokepoints" zones where great powers test their AI abilities for mastery of sea and air domains. For Indonesia, this creates a double geopolitical pressure: maintaining sovereignty while maintaining a neutral position in global rivalry.

However, to understand the broader regional security context, the results of this study also use a visual framework compiled by the *International Institute for Strategic Studies (IISS, 2025)* in the report "Analytical Filtering of Regional Security Trends" (see Figure 1.). The diagram helps explain the analytical screening process that illustrates how geopolitical

and non-geopolitical factors interact with each other to shape regional security policy in Southeast Asia.



Gambar 1. Analytical Filtering of Regional Security Trends

Sources: *International Institute for Strategic Studies (IISS), 2025*

Based on this model, the regional security dynamics of Southeast Asia, including in the Natuna Sea and the Strait of Malacca, are formed through three layers of security filtering levels:

1. Geopolitical Security Realities: The US-China rivalry is a major driver of the formation of regional security trends, accompanied by transnational organised crime and US coercive statecraft that also influence the behavior of small countries in the region. In the context of this study, the deployment of AI-based defense systems by both countries reflects a new form of digital coercive statecraft, namely the use of technology to suppress decisions strategic of other countries without direct military action.

2. Non-Geopolitical Security Filtering Factors: The results of interviews and documentation show that factors such as political leadership, domestic military dominance, defense bureaucracy, and globalization of AI technology also influence the direction of Indonesia's policy. For example, interaction between the Ministry of Defense and the Ministry of Foreign Affairs is key in balancing the interests of security and technological diplomacy (*tech-diplomacy alignment*)). These findings reinforce Barry Buzan's (1991) theory that security is not only external, but also influenced by internal political and bureaucratic configurations.

3. Security Policies and Behaviours: This layer describes the end result of geopolitical and non-geopolitical screening, which is manifested in regional defense policies, alliances, and cooperation. Based on field observations, Indonesia has implemented a multi-level defense diplomacy model, focusing on:

Alliances and Partnerships: Through the ADMM+ forum, the ASEAN AI Ethics Framework, and bilateral defense cooperation. Defence Capability Development: Strengthening the national defense industry and domestic AI systems. Regional Security Policy Trends: Indonesia's normative efforts to encourage *AI Governance Diplomacy* to become part of the ASEAN security regime.

Table 4. Matrix of Correlation of IISS Model with Field Findings

IISS Analysis Layer (2025)	Empirical Results of Research	Impact on Indonesian Defense Diplomacy
Geopolitical Security Realities	U.S.-China military AI rivalry, *Project Maven*, *JARI USV*	Geopolitical pressures and the need for active non-aligned policies
Non-Geopolitical Filtering Factors	Diplomatic leadership (Menforeign Minister Sugiono), coordination of the Ministry of Defense – Ministry of Foreign Affairs, defense bureaucracy	Establishment of *a national* AI Governance Task Force
Security Policies & Behaviours	Indonesia's participation in multilateral forums (UNSC, G20, ADMM+) and strengthening the defense AI industry	Implementation of *preventive diplomacy* and strengthening of AI regulations in ASEAN

Source: processed by the author from IISS data (2025).

The integration of the IISS analytical model (2025) confirms that the security structure of the region is systemic and layered. Military AI rivalry does not stand alone as a technological phenomenon, but is the result of simultaneous interaction between geopolitics, national leadership, and defense bureaucracy. Thus, this result strengthens

Indonesia's position as an adaptive normative actor navigating geopolitical pressures through defense diplomacy based on international principles and law. This IISS analytical approach also helps map the direction of further research, particularly in measuring the influence of non-geopolitical factors (such as bureaucracy and political leadership) on the success of Indonesia's AI defense diplomacy policy.

The results of an analysis of international documents show that the current international legal framework does not adequately regulate the specific use of military AI. Although the UN has ratified *the Resolution on International Cooperation on AI Ethics in Military Context* (UNGA, 2023), there have been no concrete sanctions for violations of the use of AI in the defense domain.

Indonesia, through a *statement by Indonesian Foreign Minister Sugiono* at the UN Security Council (UNSC) on September 26, 2025, encourages the establishment of international regulations based on three main principles:

1. Human-in-command control in every autonomous weapon decision;
2. Algorithmic transparency of AI-based defense systems; and
3. The legal responsibility of the user country (state accountability) for the results of the actions of the military AI system.

The following table illustrates a comparison of the normative positions of the three main powers in international forums.

Table 5. Comparison of the Normative Positions of the US, China, and Indonesia on Military AI Regulation

Regulatory Principles	United States	China	Indonesia
Human-in-command	Limited support; Maintain a semi-autonomous system	Symbolically support; resisting the limitations of technology	Fully support and call for global adoption
Algorithmic Transparency	Selective (for non-commercial use only)	Classified for national security reasons	Encourage the principles of public disclosure and auditing
State Accountability	Not specific in the defense AI policy	Assuming collective responsibility in global regimes	Proposing the establishment of *an AI Governance Council* in ASEAN
Regional Approach	Through the AUKUS and Quad alliances	Through the SCO and BRICS forums	Through ADMM+ and the ASEAN AI Ethics Framework

Source: Official UN document (UNGA, 2023); ASEAN Secretariat (2024); Ministry of Foreign Affairs of the Republic of Indonesia (2025).

The results of the statement *of Indonesian Foreign Minister Sugiono* show that Indonesia's position is "preventive-cooperative", namely rejecting an AI-based arms race but still opening up a space for technological cooperation for peaceful purposes. This approach is known as *AI Governance Diplomacy*, which is diplomacy that balances the principles of international law with national interests (Yamin, 2025).

The results of in-depth observations and interviews show that Indonesia has adopted two levels of defense diplomacy to deal with the US-China military AI rivalry:

1. High-Level Diplomacy – conducted through international forums such as *the UNSC Session on AI Security (2025), the G20 Dialogue on Responsible AI,* and *the ASEAN Defence Ministers' Meeting Plus (ADMM+).*

2. Low-Level Diplomacy – conducted through technical dialogue, non-combat military exchanges, and defense AI research cooperation with friendly countries such as Japan, France, and South Korea.

The following image illustrates the dynamics of Indonesian diplomacy in maintaining strategic balance amid military AI rivalry.

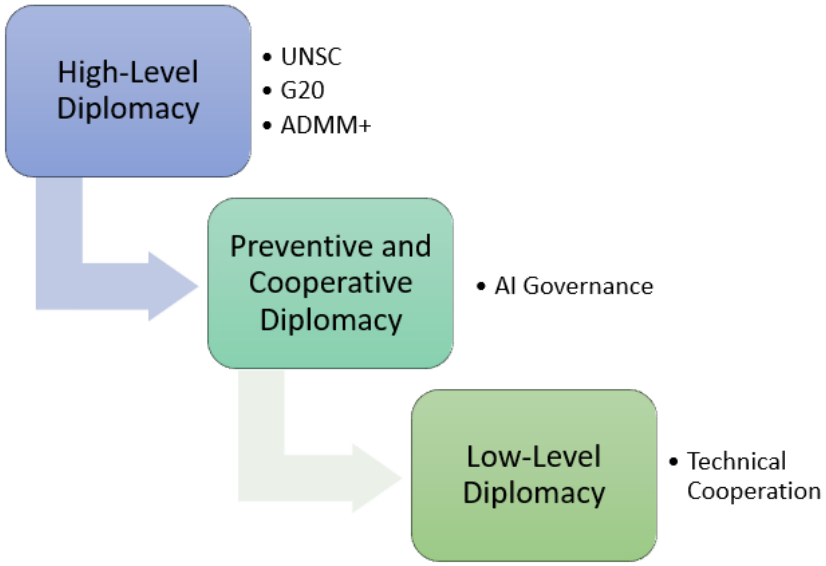


Figure 2. Indonesia's Defense Diplomacy Model in the U.S.-China Military AI Rivalry

Source: Researcher Analysis, 2025

From the results of the study, it was found that Indonesia pursued a strategy of "multi-layered diplomacy" that was not confrontational with the two major powers, but focused on strengthening regional regulations through ASEAN. This approach reinforces the theory of Institutional Neoliberalism (Keohane, 1984) which emphasizes the importance of institutional cooperation in reducing conflict and strengthening strategic *trust-building*.

The following matrix illustrates the results of the integration between diplomacy theory and practice found in the research.

Table 6. Theory Integration Matrix and Field Findings

Theory	Focus	Empirical Findings	Implication
Institutional Neoliberalism (Keohane, 1984)	Cooperation between countries in the international regime	Indonesia uses multilateral forums (UNSC, ASEAN, G20) to suppress military AI regulations	Shaping *the norm of responsible AI in defense* in Southeast Asia
Regional Security Complex (Buzan, 1991)	Cross-border security dynamics in the region	The Natuna Sea and the Strait of Malacca are the arena of rivalry between US and Chinese military AI technology	AI is becoming a new element in the region's non-traditional security
AI Governance Diplomacy (Yamin, 2025)	Diplomacy based on technology regulation	Indonesia initiates the principles *of human-in-command* and *algorithmic transparency*	A preventive diplomacy approach that prioritizes ethical norms and international law

Thematic analysis shows that the biggest threat does not come from the AI system itself, but from the unpreparedness of international legal institutions to regulate "machine governance." As revealed by Horowitz et al. (2024), military AI systems have *a tendency to self-learn* that can result in decisions beyond human control.

Quoted from the Indonesiadefense.com news media, entitled "Ministry of Defense Considers Integrating the Use of AI for Defense Forces" Head of the Public Relations Bureau of the Secretary General of the Ministry of Defense of the Republic of Indonesia, Brigadier General TNI Frega Wenas Inkiriwang explained to reporters during an interview in Jakarta on Thursday (19/12) that "If we talk about AI in the context of defense, in the military context, it has become an inevitable thing, it is just a matter of how we optimize it, of course it is a consideration also for the Ministry of Defense to integrate." This is in line

with Foreign Minister Sugiono's warning at the UNSC (2025) that AI "must be the servant of humanity, not its master."

Thus, Indonesia positions itself not as a spectator of technological rivalry, but as a "norm entrepreneur" initiating new norms in military AI governance based on humanitarian principles and international law.

DISCUSSION

The results of this study reveal how the military AI rivalry between the United States and China in the Natuna Sea and Malacca Strait has influenced Indonesia's defense diplomacy and the broader dynamics of regional stability. The analysis indicates that the competition over military artificial intelligence has introduced a new dimension in Southeast Asian security politics. Advanced autonomous defense systems such as Project Maven, Replicator Drones, and JARI USV have been deployed as instruments of strategic influence that, while not directly violating the principle of sovereignty, have significantly altered the regional balance of power (IISS, 2025). This finding reinforces Barry Buzan's (1991) assumption in the Regional Security Complex Theory that regional security is inherently interdependent, and that strategic changes by one major actor can generate ripple effects across the entire security architecture. Furthermore, the study finds that the current international legal framework lacks explicit and enforceable provisions regulating the use of military AI. Although the United Nations General Assembly (UNGA, 2023) has adopted a resolution on AI ethics in military contexts, its mechanisms of implementation and sanction remain undefined. This regulatory vacuum has created a legal gray zone that powerful states can exploit to expand their geopolitical influence. Within this setting, Indonesia has demonstrated its ability to act as a normative diplomatic force through what this study terms the AI Governance Diplomacy strategy a defense diplomacy approach that integrates principles of human-in-command, algorithmic transparency, and accountability. This finding aligns with Keohane's (1984) theory of Institutional Neoliberalism, which emphasizes that cooperation and international institutions can serve as normative mechanisms to constrain hegemonic behavior through shared institutional norms, transparency, and accountability. Consequently, Indonesia's role extends beyond being a passive observer to becoming an active, constructive actor in shaping global military AI governance and maintaining the stability of strategic maritime regions in Southeast Asia.

When compared with previous research, this study's findings are broadly consistent with global scholarly perspectives while offering important empirical and conceptual extensions. Kania and Allen (2021) demonstrated that China's People's Liberation Army has developed offensive autonomous systems without a robust ethical framework. This study supports their claim by highlighting the continued absence of ethical regulation in systems such as JARI USV and AIMSS deployed in the region. Horowitz et al. (2024) emphasized the significance of maintaining human control in military AI systems to prevent unintended escalation; this research confirms the same principle, showing that Indonesia actively promotes the human-in-command concept in international forums such as the United Nations Security Council (UNSC) and ADMM+. Similarly, Boulanin et al. (2023) discussed the ethical and legal risks associated with autonomous weapons, and this study extends their argument by incorporating the geopolitical and sovereignty dimensions of military AI competition. The findings also align with Rasser and Sayler (2024), who warned that the US–China algorithmic arms race could generate borderless strategic uncertainty; the present study corroborates this through empirical evidence from the Natuna–Malacca context. Finally, Friedrichs (2024) highlighted the importance of non-aligned diplomacy in managing AI rivalry, which resonates strongly with Indonesia's own AI diplomacy strategy that combines neutrality with active regional engagement. Altogether, these comparisons confirm that the current research not only aligns with established theoretical and empirical trends but also provides novel insights by positioning Indonesia as a regional normative diplomacy actor capable of navigating great-power rivalry through multilateral mechanisms.

The implications of these findings are both theoretical and practical. Theoretically, the study reinforces and expands two major frameworks in international relations. First, according to Keohane's (1984) Institutional Neoliberalism, international institutions such as the United Nations and ASEAN do not merely serve as arenas for negotiation but function as mechanisms for normative power distribution. Indonesia's diplomatic initiatives illustrate how middle and developing powers can use institutional frameworks to constrain the hegemonic tendencies of stronger states without relying on hard power. Second, the findings contribute to Buzan's (1991) Regional Security Complex Theory by introducing military AI as a new determinant of regional interdependence and potential conflict. Unlike traditional military threats that operate within defined borders, AI-based defense technologies transcend sovereignty, creating a transnational dependency on data

and algorithms. Conceptually, this study introduces the notion of AI Governance Diplomacy a hybrid model combining ethical, legal, and diplomatic dimensions to manage AI-related risks in the military domain. This concept offers a new paradigm for non-aligned states seeking to strengthen technology-based security governance. From a practical perspective, three policy directions are suggested. First, Indonesia should take a leading role in formulating the ASEAN AI Ethics Framework (AAEF), which emphasizes algorithmic transparency, human control, and accountability. Second, the establishment of an AI Defence Dialogue Mechanism at the ASEAN level is essential to facilitate communication between military and research institutions, thereby minimizing miscommunication in the deployment of autonomous systems in maritime and aerial operations. Third, Indonesia must strengthen its national capacity for defense data sovereignty by developing indigenous AI systems, reducing dependency on technologies from the United States and China in accordance with the principle of digital sovereignty.

Despite these contributions, the research acknowledges several limitations that should be addressed in future studies. The temporal scope of the data, covering only 2022–2025, limits the ability to capture long-term policy dynamics in military AI development. Access restrictions to classified diplomatic documents from the Ministry of Defense and the Ministry of Foreign Affairs also constrained the empirical depth of the analysis, leading to reliance on secondary sources and expert interviews. Moreover, the study's regional focus on the Natuna Sea and Malacca Strait restricts its generalizability to the broader Indo-Pacific context. Socio-political factors such as domestic political influence, public perception, and the role of the national AI industry were not explored in detail. Methodologically, the qualitative approach employed in this study is interpretive in nature and may contain subjective bias, as noted by Miles, Huberman, and Saldaña (2014) and Creswell (2014). Nevertheless, the application of data triangulation combining interviews, document analysis, and participatory observation helps ensure the validity and reliability of the findings. Overall, these limitations do not diminish the significance of the study's contribution, which lies in demonstrating Indonesia's emerging diplomatic capacity to shape the governance of military AI and promote regional stability amid intensifying global technological rivalry.

CONCLUSION

The study concludes that the military's artificial intelligence (AI) rivalry between the United States and China in the Natuna Sea and Malacca Strait regions has shifted the regional security structure from a conventional pattern to an algorithmic and non-traditional one. Military AI systems such as Project Maven, Replicator Drones, and JARI USV have created strategic tensions in geopolitically and economically sensitive regions, while challenging the validity of international legal frameworks that have not been able to comprehensively regulate the use of AI in the defense domain. In this context, Indonesia appears as a normative diplomatic actor that plays an important role in navigating international regulations and maintaining regional stability through the concept of AI Governance Diplomacy. Indonesia's defense diplomacy operates in two layers of high-level diplomacy in global forums such as the UNSC, G20, and ADMM+, as well as low-level diplomacy in technical cooperation between the military and research.

First, theoretically, this study expands the understanding of the relationship between defense diplomacy and military AI governance by introducing the conceptual framework of AI Governance Diplomacy as a form of preventive diplomacy based on ethics, law, and algorithmic transparency.

Second, empirically, this study enriches the literature on non-traditional security studies by placing Indonesia as an example of an entrepreneur norm a developing country that initiated a new norm in global defense AI governance. Third, in terms of policy, the results of this study offer a strategic approach for non-aligned countries to maintain diplomatic autonomy in the midst of the technological rivalry of the world's two major powers.

However, this study has methodological and contextual limitations. The empirical data used is limited to the period 2022–2025, while the dynamics of military AI continue to evolve rapidly, both technologically and politically. In addition, limited access to classified diplomatic documents has led some analyses to rely on triangulation of secondary data. Domestic aspects such as the politics of the national defense industry and public perception of military AI have also not been analyzed in depth. For future research, it is suggested that the focus be directed to longitudinal analysis of Indonesia's and ASEAN's defense AI policies, including a quantitative study on the perception of the security elite towards military AI governance. Further research also needs to examine the dimension of

"AI sovereignty", namely data sovereignty and algorithms as a new variable in national security. By expanding this perspective, future research can contribute to the formulation of more adaptive, ethical, and equitable global policies in the face of an artificial intelligence-based military revolution.

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