The State of HADR in Southeast Asia 2024

Militaries

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Executive Summary

Southeast Asia faces escalating disaster risks, intensified by climate change. Militaries play a critical role in humanitarian assistance and disaster relief (HADR) missions by supplementing and complementing civilian efforts with their specialised capabilities. This report examines the military's role in HADR within ASEAN from 2014 to 2024 through defence budgets, assets, exercises, and disaster deployments. The supporting evidence is drawn from the RSIS HADR Database. The study employs a data-driven approach using time-series, social network, and matrix analyses to identify trends and relationships. Findings reveal the United States as a global leader while Singapore, Malaysia, and Indonesia lead regionally, supported by strong defence budgets, assets, and active roles in exercises. However, regional interoperability can be hampered by capacity and engagement disparities. Therefore, this report recommends establishing a centralised military HADR data repository and strengthening participation in ASEAN-led exercises. By doing so, these measures could bolster interoperability and enhance the region's resilience.

Introduction

Southeast Asia is one of the most disaster-prone regions globally, with climate change exacerbating impacts. Effective humanitarian assistance and disaster relief (HADR) requires coordination among diverse actors, including militaries, whose unique resources and specialised capabilities either supplement or complement civilian-led responses. As disaster complexities evolve, cohesive coordination among these actors becomes essential. When disasters exceed national response capacity, collaboration with foreign actors, including foreign militaries, may also be necessary.

Approaches to military engagement in HADR vary across ASEAN, shaped by political systems, national capacities, institutional frameworks, and the scale of events. For some member states, their role is legally mandated, such as in Thailand under the Disaster Prevention and Mitigation Act, B. E. 2550 (2007), and in Indonesia under Law No. 34/2004. In contrast, the Philippines integrates its military within an adapted humanitarian cluster system working alongside civilian agencies and non-governmental organisations (NGOs). In some cases, the military forms part of a broader whole-of-government strategy, such as in Singapore. These varied approaches underscore the importance of frameworks to facilitate coordination, particularly in cases requiring international military HADR assistance.

The ASEAN Agreement on Disaster Management and Emergency Response (AADMER) is a legally binding framework that facilitates the use of military and civilian resources for disaster response. In 2016, the ASEAN Declaration on 'One ASEAN, One Response' designated the ASEAN Coordinating Centre for Humanitarian Assistance on disaster management (AHA Centre) as the primary agency for coordinating both military and civilian efforts. While these frameworks provide a foundation for military engagement in HADR, a critical gap remains in understanding how militaries interact, their networks, and the factors that enable their engagement.

The HADR team at RSIS has developed a database to serve as a repository of information on military HADR engagements in Southeast Asia. The RSIS HADR Database includes information on defence budgets, HADR assets and equipment, and HADR exercises and training. This publication reports the main findings of an investigation into the state of HADR in Southeast Asia from 2014 to 2024.

Regional Overview

The 2004 Indian Ocean Tsunami sparked a series of conferences and discussions in 2005, which led to the establishment of the Asia-Pacific Conference on Military Assistance in Disaster Response Operations (APC-MADRO) Guidelines in 2011. Since then, military involvement in regional HADR has been conspicuous and was further institutionalised in the ASEAN Militaries Ready Group on HADR (AMRG on HADR) terms of reference adopted in 2016. The significance of military coordination was evidently demonstrated in 2018 when Indonesia's National Armed Forces (TNI) led the coordination of 17 foreign military assets to operate an air bridge between Balikpapan and Palu.[1]

Between 2014 and 2024, ASEAN has witnessed approximately 192.9 million people affected by disasters—an average of 48,712 people per day.[2] This number is likely to rise with climate change, further straining national and regional response capacities. This growing disaster burden underscores the role of militaries as an "immediate responder" acknowledged by the APC-MADRO Guidelines, particularly in large-scale emergencies where civilian capacities are overwhelmed.[3] Therefore, the increased significance of military engagement in international HADR warrants more comprehensive and systematic research.

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[1] RSIS Policy Report, "Recalibrating Disaster Governance in ASEAN", December 2019, https://www.rsis.edu.sg/wp-content/uploads/2019/12/PR191206_Recalibrating-Disaster-Governance-in-ASEAN_v3.pdf.
[2] AHA Centre, ASEAN Disaster Information Network (ADINet), accessed 31 January 2025, https://adinet.ahacentre.org/
[3] BERNAMA, "2,800 Army Personnel Ready for Flood Relief Efforts in Sabah, Sarawak", 1 February 2025, https://www.bernama.com/en/general/news.php?id=2388484

Methodology

This report presents findings from the RSIS HADR Database on four key areas between 2014 and 2024:

i. Defence budgets of ASEAN militaries and percentage share in Gross Domestic Product (GDP)

ii. Military assets and equipment used in HADR, with a focus on airlift and sealift capabilities

iii. Military HADR exercises and training network

iv. Military deployments to disasters requiring international humanitarian assistance across ASEAN

To analyse these areas, the study employs three approaches:

i. **Time-Series Analysis** – To identify trends in ASEAN militaries' HADR-related asset inventories over time

ii. **Social Network Analysis (SNA)** – To map the military HADR exercise network using Gephi and analyse the network using SNA metrics

iii. **Matrix Analysis** – To assess military involvement frequency (national, ASEAN, non-ASEAN) in disasters requiring international humanitarian assistance using a grid structure (matrix)

The focus on defence budgets, assets, exercises, and deployments reflects the military's role in HADR. Exercises and training build interoperability and trust,[4] assets enable HADR operations,[5] defence budgets reflect strategic priorities, and deployments see these elements in action.

Data was sourced from multiple platforms including Janes, which consolidates open-source defence intelligence; the International Institute for Strategic Studies' Military Balance+ which aggregates global defence data (budgets, assets, exercises); and the ASEAN Disaster Information Network, the United Nations Office for the Coordination of Humanitarian Affairs' ReliefWeb, and the ASEAN Member States' disaster management agency portals for information on deployments.

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[4]Lloyd M. Puckett, Civil-military coordination in disaster preparedness and response," *Natural Hazards Review* 22, no. 2 (2021): https://doi.org/10.1061/(ASCE)NH.1527-6996.0000446.
[4] Angelo Paolo L. Trias and Alistair D. B. Cook, "Military humanitarian and disaster governance networks in Southeast Asia: framework and analysis", Disasters, 2023, 47(1): 205−241.
[5]Lloyd M. Puckett, Civil-military coordination in disaster preparedness and response," *Natural Hazards Review* 22, no. 2 (2021): https://doi.org/10.1061/(ASCE)NH.1527-6996.0000446.
[5] Angelo Paolo L. Trias and Alistair D. B. Cook, "Military humanitarian and disaster governance networks in Southeast Asia: framework and analysis", Disasters, 2023, 47(1): 205−241.

Data Overview

I. Military Deployments to Disasters

This study examined 33 disasters in Southeast Asia (2014-2024), as determined by respective national governments (see Appendix 1). Appendix 1 disaggregates the disasters based on the jurisdiction of military assistance: national and foreign (ASEAN and non-ASEAN).

Within ASEAN, Singapore's military was the most active in providing HADR (six deployments), followed by Malaysia (five), Indonesia (four), and the Philippines (two). The Philippines, Indonesia, and Myanmar were frequent recipients. Among non-ASEAN militaries, the US led with five responses, followed by Japan, China, Australia, and the United Kingdom, each with three responses. Table 1 classifies all militaries with a record of providing HADR into three categories: Frequent, Moderately Active, and Occasional.

Table 1. Classification of militaries based on frequency of deployment (2014-2024)

	Frequent (5-6)	Moderately Active (3-4)	Occasional (1-2)
ASEAN	Singapore (6), Malaysia (5)	Indonesia (4)	Philippines (2), Brunei (1), Thailand (1)
Non-ASEAN	United States (5)	Japan (3), China (3), Australia (3), United Kingdom (3)	India (1), Türkiye (1), France (1), Switzerland (1), South Korea (1), New Zealand (1)

II. Defence Budgets

Defence budgets provide insights into a country's military capacity to manage HADR-related assets and ability to engage in HADR activities. While militaries offer unique capabilities such as rapid deployment and logistics, studies indicate that military-led responses tend to be costlier than civilian alternatives,[6] reinforcing the budget-HADR interdependence. Analysing budgets as a percentage of GDP also provides context on strategic priorities as well as fiscal constraints.

From 2014 to 2024, Singapore and Indonesia consistently maintained the largest defence budgets in ASEAN (Figure 1), with Singapore reaching US$15.17 billion and Indonesia US$10.93 billion in 2024. In contrast, Brunei had the smallest budget at US$596.7 million. Cambodia experienced the most significant growth over the decade, increasing by 192% from US$446 million in 2014 to US$1.3 billion in 2024, while Malaysia saw the largest contraction, declining 12% from US$4.9 billion in 2014 to US$4.3 billion in 2024.

In terms of defence budgets as share of the country's GDP (Figure 2), Myanmar exhibited the most volatility, reaching 10.02% in 2021—the largest year-on-year increase (3.88%), followed by the largest decline (-3.58%) in 2022. Brunei consistently

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[6] Lydia Poole, "Counting the cost of humanitarian aid delivered through the military", Global Humanitarian Assistance, March 2013, http://www.globalhumanitarianassistance.org/wp-content/uploads/2013/04/gha-2013- briefing-military-involvement-humanitarian-aid.pdf.

allocated a high percentage of its GDP to defence, peaking at 7.6% in 2024, while Indonesia recorded the lowest, 1.36% in 2019 and 2022. Most ASEAN countries saw their budgets peak between 2020 and 2021, likely due to pandemic-related factors. Thailand and Vietnam maintained stable allocations, whereas the Philippines and Singapore saw gradual declines.
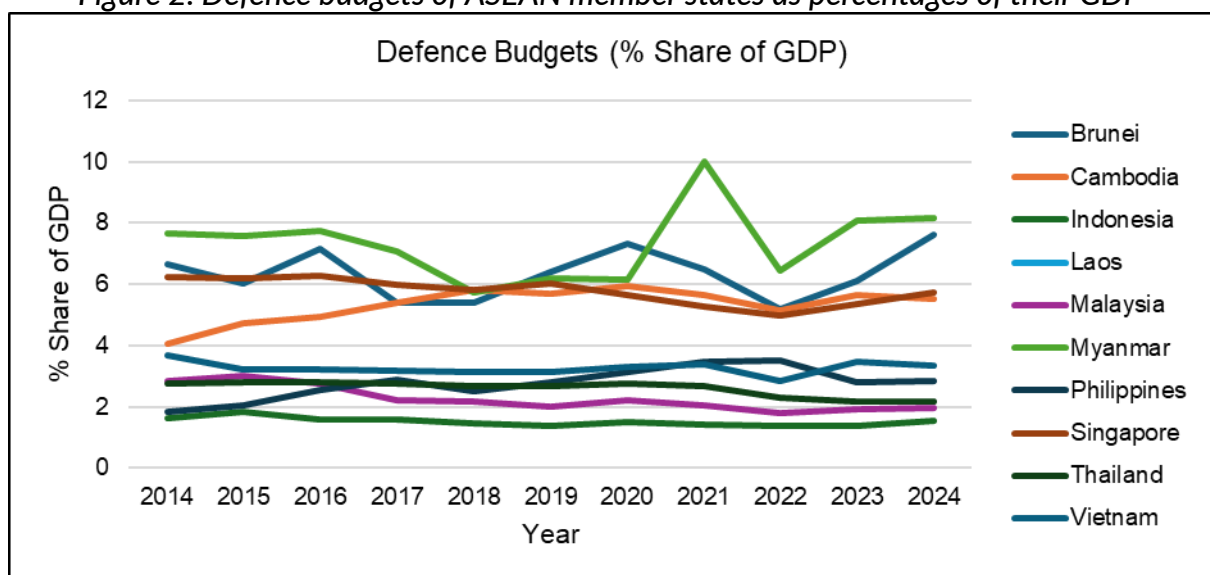
Figure 1. Defence budgets of ASEAN member states
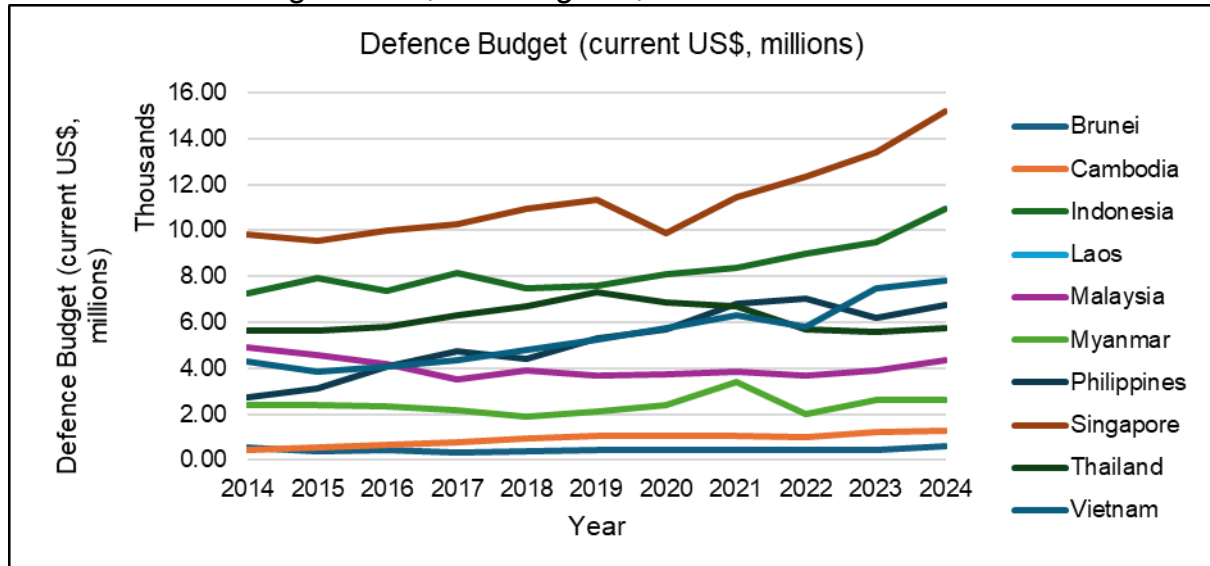
Note: Laos data is not available
Source: Military Balance+

Figure 2. Defence budgets of ASEAN member states as percentages of their GDP


Note: Laos data is not available
Source: Military Balance+

III. HADR Military Assets and Equipment

A time-series analysis of military assets and equipment used in HADR across ASEAN from 2014 to 2024 shows a steady increase (Figure 3), attributed to a general increase in budgets. Regional total assets grew from 316 in 2014 to 384 in 2024, with notable rises after 2022 driven by Laos (+8), Indonesia (+10), and Myanmar (+10). Table 2 shows that Thailand had the most assets in 2024 (123), demonstrating significant growth from 2017 onwards. Indonesia consistently ranked high, peaking at 111 in 2023 before a slight drop to 108 in 2024. The Philippines displayed steady growth, reaching 43 assets in 2024, while Brunei showed rapid recent progress, from one in 2022 to three in 2024. Singapore consistently maintained a total of 7 HADR assets throughout.

Figure 3. Regional total military HADR assets (2014-2024)

HADR Military Assets and Equipment in the ASEAN Region

$y = 3.9364x + 319.84$
$R^2 = 0.4836$
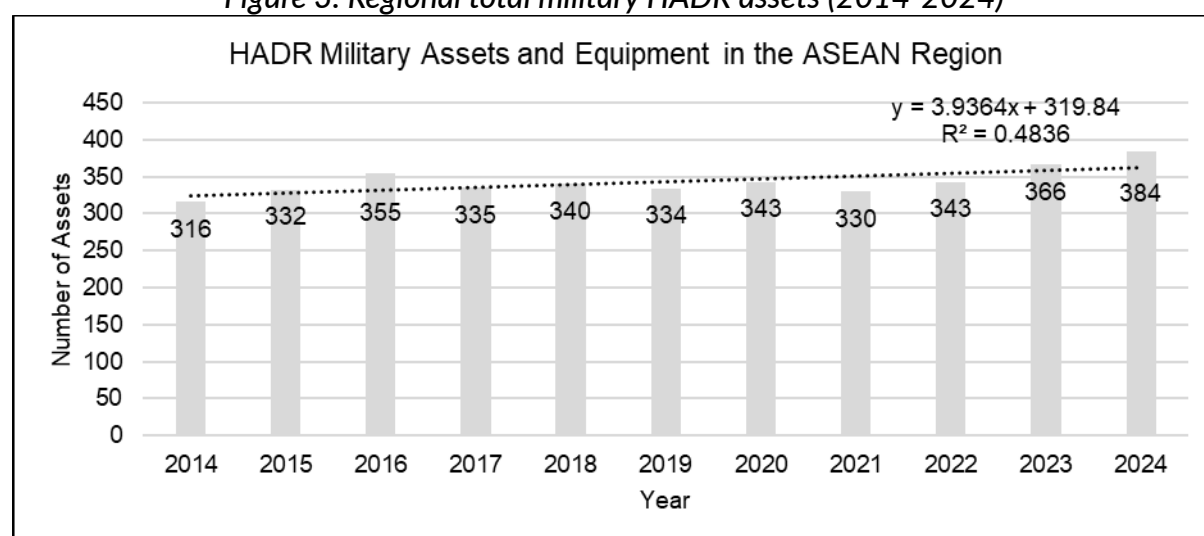
Source: Military Balance+

Table 2. Military HADR assets per ASEAN member state (2014-2024)

Member State	Year										
	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Brunei	-	-	-	-	-	-	-	-	1	1	3
Cambodia	10	10	10	12	12	9	9	9	9	10	10
Indonesia	87	92	102	95	94	95	98	100	101	111	108
Laos	15	15	15	5	5	5	5	5	5	13	13
Malaysia	32	33	36	37	33	30	30	27	27	25	25
Myanmar	23	23	30	26	26	26	26	25	25	35	30
Philippines	22	23	26	29	33	32	32	33	40	41	43
Singapore	7	7	7	7	7	7	7	7	7	7	7
Thailand	98	102	101	96	100	100	106	106	110	105	123
Vietnam	22	27	28	28	30	30	30	18	18	18	22
Year Total	316	332	355	335	340	334	343	330	343	366	384

Source: Military Balance+

IV. HADR Military Exercises

This study analysed military exercises conducted between 2014 and 2024 involving ASEAN engagement either as hosts or participants. The findings reveal Exercise Cobra Gold, co-hosted by the Royal Thai Armed Forces and the United States Indo-Pacific Command, had the highest ASEAN participation with 29 instances (Figure 4). This is followed by the ASEAN Solidarity Exercise hosted by Indonesia's TNI (9 instances), and Balikatan, a bilateral military exercise between the Philippines and the US (8 instances). Appendix 2 lists in detail the exercises, year of conduct, and frequency of participation.

Figure 4. Frequency of ASEAN participation in military HADR exercises

Note: *2014-2019 considered as the "pre-pandemic" period; 2020-2022 as the COVID-19 pandemic period; and 2023-2024 as "post-pandemic" period.*
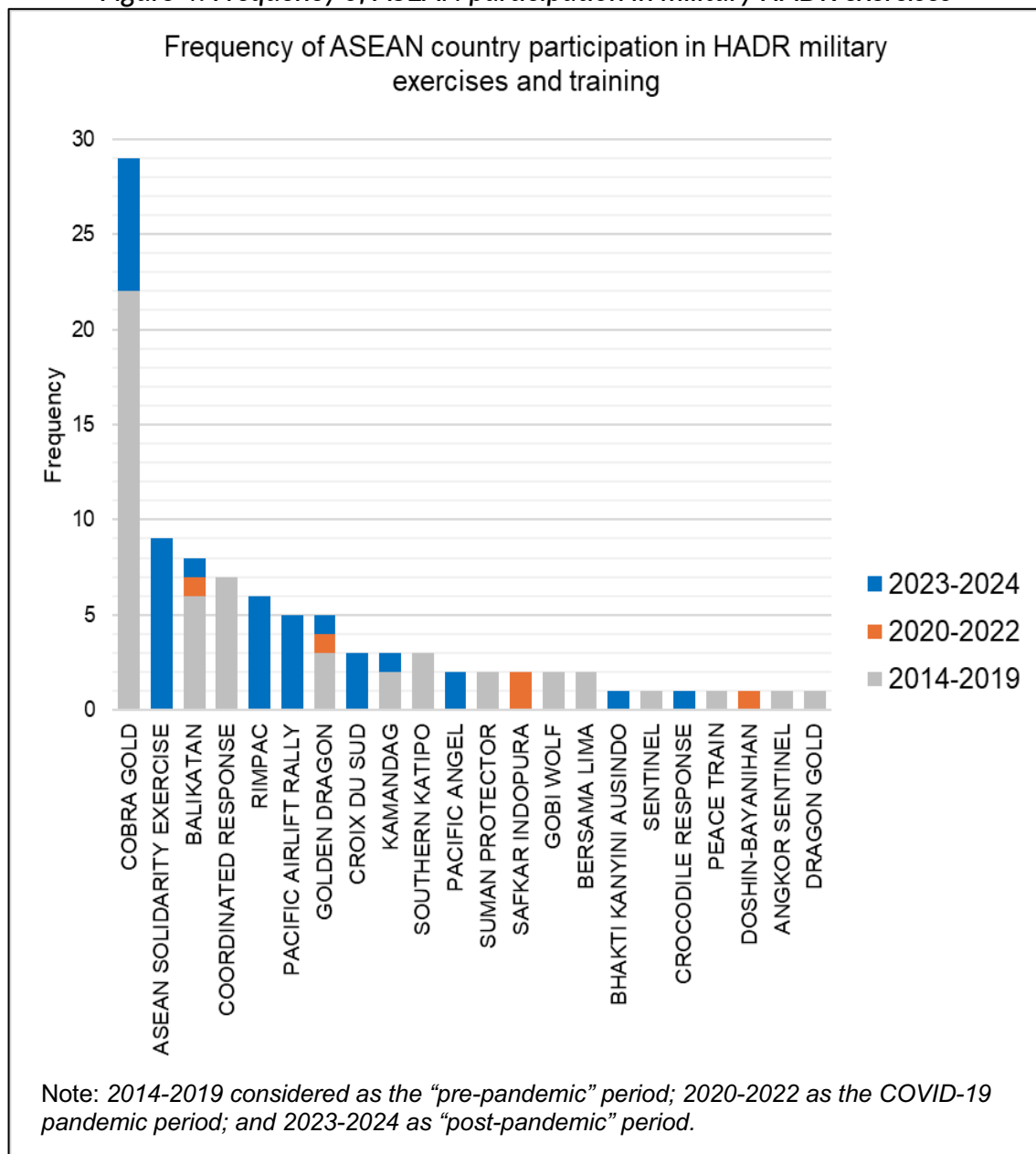
Source: Military Balance+

For SNA, hosts/organisers were encoded as "Source" and participants as "Target" into a Gephi-compatible format. Connections were classified as "Edges" within a many-to-many network relationship structure. The analysis assumed exercises were

mutually beneficial, hence the use of an "undirected" network model. The metrics used to evaluate the network is detailed in Table 3.

Table 3. Social Network Analysis metrics

Metric	Description
Degree	The number of connections of a node. A high degree indicates a node is well-connected.
Betweenness Centrality	Measure of how often a node lies on the shortest path between nodes. High betweenness indicate a node is crucial for information flow within the network.
Eigenvector Centrality	Measure of how influential a node is based on the importance of its neighbours. Nodes connected with important nodes have higher eigenvector centrality.

Source: Gephi

Findings and Observations

I. Analysis of the HADR Military Exercise Network

The analysis of HADR exercises (42 nodes, 125 edges) involving ASEAN and non-ASEAN militaries highlights the US as the most influential node, ranking highest in degree (38), betweenness centrality (0.643), and eigenvector centrality (1) (Figure 5). This reflects its extensive involvement and influence with multinational exercises Pacific Airlift Rally 2023 (14 instances of participation), Pacific Angel 2023 (7 instances), and Cobra Gold (2014–2024, 63 instances), as well as Gobi Wolf (2017, 2018), Balikatan (2014–2023), Kamandag (2018, 2024), and Angkor Sentinel (2016). The participation count reflects total instances including recurring country participation. See Appendix 3 for a detailed list of exercises specifying the year, hosts, and participants.

Among the network's top 15 most connected (Table 4), Mongolia follows the US with a degree of 19 (eigenvector 0.654) due to its co-hosting of Gobi Wolf, while France (degree 17, eigenvector 0.621) and New Zealand (degree 17, eigenvector 0.567) rank highly for their hosting of Croix du Sud and Southern Katipo respectively. Among ASEAN countries, Indonesia (degree 15, betweenness 0.096, eigenvector 0.52) leads the list, followed by Singapore (degree 15, betweenness 0.053, eigenvector 0.6), the Philippines, Malaysia, Thailand, and Cambodia. Indonesia's influence is due to its active participation, co-hosting, and hosting of exercises.

Apart from participation, the frequency (annual, semi-annual, bi-annual, or single instance) and nature (bilateral or multilateral) of the exercises themselves appear to also affect network influence.
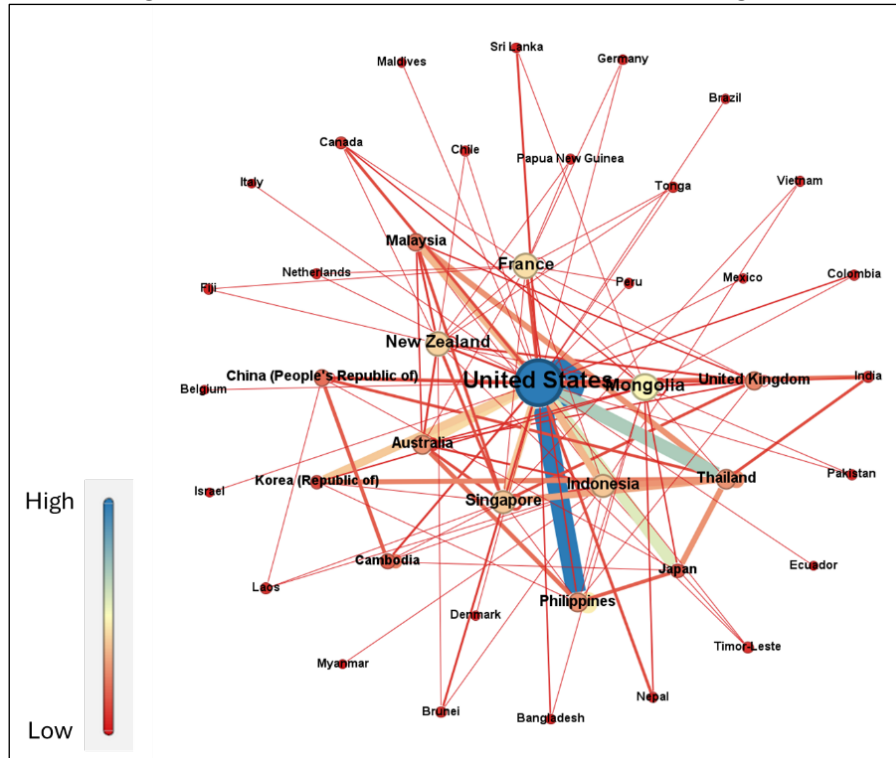
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Figure 5. HADR Military Exercises Network (degree)

Table 4. Social Network Analysis Statistics: HADR Military Exercises (top 15 countries with highest degrees)

Country	Degree	Betweenness Centrality	Eigenvector Centrality
United States	38	0.6426	1.000
Mongolia	19	0.0689	0.643
France	17	0.0843	0.615
New Zealand	16	0.0642	0.567
Indonesia	15	0.0960	0.520
Singapore	15	0.0530	0.603
Australia	11	0.0025	0.546
Philippines	11	0.0063	0.509
Thailand	11	0.0112	0.436
United Kingdom	10	0.0011	0.497
Malaysia	9	0.0019	0.423
China (People's Republic of)	8	0.0127	0.288
Cambodia	7	0.0024	0.278
Japan	6	0.0016	0.294
Korea (Republic of)	5	0.0004	0.295

The SNA was refined to focus exclusively on exercises hosted or participated by ASEAN militaries, as shown in Figure 6. The resulting network (10 nodes, 22 edges) identifies Indonesia and Singapore as the most connected and influential. Table 5 details the network metrics, highlighting the Philippines, Malaysia, Thailand, and Cambodia with moderate connectedness and ties to key militaries. In contrast, Laos, Vietnam, Brunei, and Myanmar are the least engaged.

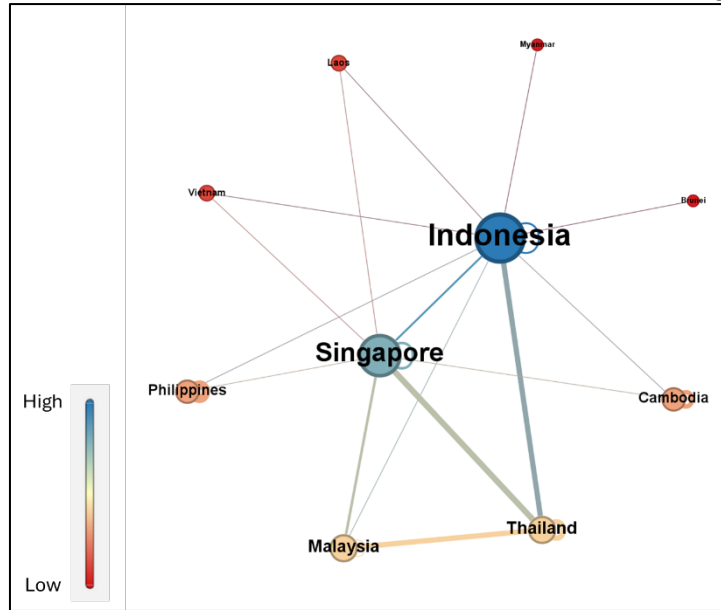*Figure 6. HADR Military Exercises Network in ASEAN (degree)*

Table 5. Social Network Analysis Statistics: HADR Military Exercises (ASEAN)

Country	Degree	Betweenness Centrality	Eigenvector Centrality
Indonesia	11	0.61111	1.00000
Singapore	9	0.19444	0.92282
Malaysia	5	0.00000	0.60135
Thailand	5	0.00000	0.60135
Cambodia	4	0.00000	0.45984
Philippines	4	0.00000	0.45984
Laos	2	0.00000	0.37092
Vietnam	2	0.00000	0.37092
Brunei	1	0.00000	0.19360
Myanmar	1	0.00000	0.19360

II. Analysis of Military Engagement in HADR

A. Extraregional Leadership

The US is a dominant HADR actor, leading both in disaster deployments and military exercises. Its centrality in the network, as revealed by the SNA, underscores its significant role in linking militaries through major exercises such as Cobra Gold, Gobi Wolf, Balikatan, Kamandag, Pacific Airlift Rally, and Pacific Angel. Its five disaster deployments to Southeast Asia further highlights its role as a key player and partner in the region.

Other than the US, Japan, China, Australia, and the United Kingdom have also conducted three deployments each in Southeast Asia. These countries also demonstrate considerable network influence—China through Cobra Gold and Golden Dragon, and Australia and New Zealand through exercises Crocodile Response and Southern Katipo respectively.

Overall, the US remains a leading actor in HADR, reinforcing its strategic role in ASEAN. Its defence spending has consistently been the highest globally from 2014 to 2024 at approximately 3-5% of its GDP, peaked at $317 billion in 2023.[7] This is despite HADR exclusion from its defence budget priorities, reflecting substantial resources and capability. ASEAN needs to strategically assess the implications of US leadership. While engagement with the US provides access to a wide network and exposure to advanced defence capabilities, ASEAN must improve self-reliance, considering the US's evolving foreign aid policy that prioritises national interests.[8] This could involve more ASEAN-focused and ASEAN-led initiatives.

B. **Regional Leadership**

In ASEAN, the active responders are also among the best-funded militaries in the region. For example, Singapore has six instances of deployment and tops the list of defence budgets ($15.17 billion in 2024), followed by Indonesia with a budget of $10.93 billion with four deployments.

In terms of disaster response assets, however, asset availability does not necessarily correlate with active deployment in HADR. For example, Singapore (7 assets) and Malaysia (25 assets) have actively deployed (6 and 5 instances respectively) despite having fewer assets compared to Thailand and Indonesia. A notable growth in regional assets since 2022 signals an ongoing enhancement of regional HADR due to factors related to Laos-China military cooperation, Indonesia's modernisation efforts, and Myanmar's internal dynamics.

There is a noticeable link between disaster deployments and network influence in exercises. Indonesia and Singapore, the most connected ASEAN militaries, are also actively involved in deployments. Indonesia holds the highest centrality in the network, indicating a strategic role in regional coordination. These countries actively participate in exercises such as Cobra Gold, Croix du Sud, RIMPAC, and the ASEAN Solidarity Exercise.

Other active responders, such as Malaysia and the Philippines, maintain moderate connectivity, reflecting their involvement in both exercises and disaster deployments. In contrast, Laos, Vietnam, Brunei, and Myanmar are less engaged given that they are more frequently on the receiving end of HADR (except Brunei). This could affect ASEAN's collective capacity and its goal of "responding to disasters as one".[9]

Overall, Indonesia and Singapore are the most connected and influential ASEAN militaries, showing that military assets, defence spending, disaster response participation, and engagement in regional military exercises are factors contributing to their leadership in ASEAN's HADR efforts. Engagement with these more active and connected militaries—whether through increased bilateral exchange or joint exercises—

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[7] The International Institute for Strategic Studies, "Defence Budgets and Forecasts", Military Balance+, accessed 31 January 2025, www.iiss.org/militarybalanceplus.

[8] Tammy Bruce, "Implementing the President's Executive Order on Reevaluating and Realigning United States Foreign Aid", Press Statement, U.S. Department of State, 26 January 2025, https://www.state.gov/implementing-the-presidents-executive-order-on-reevaluating-and-realigning-united-states-foreign-aid/.

[9] ASEAN, "About One ASEAN, One Response", 13 October 2014, https://mneawp.asean.org/asean-declarations#:~:text=About%20One%20ASEAN%2C%20One%20Response&text=The%20term%20%E2%80%9COne%20ASEAN%20One,Meeting%20of%20the%20JTF%2DHADR.

may provide opportunities to enhance capacities, interoperability, and coordination. A more inclusive and integrated military HADR network would not only improve response effectiveness, but also ensure that disaster-affected communities receive timely and well-coordinated assistance.

Future Research Directions

The analysis of military engagement in HADR within ASEAN can be refined by exploring three key areas. First, distinguishing between the nature of exercises, whether political that focuses on confidence-building, or operational that focuses on interoperability. This may provide additional insights into their objectives and impact. Second, categorising contributions by military branch could clarify their distinct roles in HADR operations. Third, employing a dynamic social network analysis (SNA) approach may offer a more comprehensive understanding of how military cooperation evolves. This approach could help identify patterns and shifts in response to geopolitical developments or disaster occurrences, and contribute to a more detailed assessment of the military's role in HADR within ASEAN.

Policy Recommendations

The following policy recommendations could improve cooperation among militaries in HADR, particularly through the ADMM-Plus process.

1. **Establish a centralised military HADR data repository in the Asia-Pacific**

   To address the fragmented data on military engagement in HADR in the Asia-Pacific, ASEAN should establish a centralised data repository. The repository could focus on non-sensitive, HADR-specific data and develop data standards to support interoperability.

   Through the ADMM-Plus process in collaboration with organisations with an established coordinating role such as the AHA Centre or the Changi Regional HADR Coordination Centre, a pilot initiative with voluntary contributions could be tested.

2. **Develop partnerships with Institutes of Higher Learning for knowledge management**

   ADMM-Plus member countries should agree to collaborate with Institutes of Higher Learning (IHL) through the ADMM-Plus to provide document repositories for knowledge management. These IHLs can provide data sustainability, offer data integrity, and a common data location across the region.

3. **Identify niche military capabilities and gaps for collaboration and improvement**

   ASEAN-led HADR exercises should identify niche military capabilities and gaps to provide the ADMM-Plus process with HADR areas for collaboration and improvement to promote greater complementarity during disaster response.

About the Authors

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Vision: To be the one of the world's top reputable think tanks on Asia-Pacific defence and security affairs, whose views are highly sought after.

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The graduate school offers Master of Science Programmes in Strategic Studies, International Relations, International Political Economy and Asian Studies. As a school, RSIS fosters a nurturing environment to develop students into first-class scholars and practitioners.

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Appendix

Appendix 1: Military Deployments to Disasters Requiring International Humanitarian Assistance (2014-2024)

Year	Disaster	National Military	International Military (ASEAN)	International Military (non-ASEAN)
2014	Typhoon Rammasun (Philippines)	●	○	○
	Typhoon Rammasun (Vietnam)	●	○	○
	Typhoon Hagupit (Philippines)	●	Brunei*, Indonesia*, Malaysia*, Singapore*, Thailand*	Australia*, Canada*, China (People's Republic of)*, Japan*, United States, United Kingdom*
2015	Floods (Malaysia)	●	○	○
	Floods (Myanmar)	●	○	○
	Typhoon Koppu (Philippines)	●	○	○
	Typhoon Haima (Philippines)	●	○	○
2016	Aceh Earthquake (Indonesia)	●	○	○
	Typhoon Melor (Philippines)	●	○	○
	Typhoon Nock-Ten (Philippines)	●	○	○
2017	Flash floods and landslides (Vietnam)	●	○	○
	Typhoon Damrey (Vietnam)	●	○	United States
2018	Tropical Storm Son-Tinh (Laos)	○	○	○
	Monsoon Floods (Myanmar)	●	○	○
	Earthquake in Lombok (Indonesia)	●	○	United States
	Typhoon Mangkhut (Philippines)	●	○	United States
	Sulawesi Earthquake and Tsunami (Indonesia)	●	Philippines*, Singapore, Malaysia	Australia, China (People's Republic of), Japan, Switzerland, United Kingdom, United States, New Zealand, India, Korea (Republic of), France
2019	Tropical Storm PODUL and Tropical Depression KAJIKI (Laos)	●	Malaysia	○
2020	Massive Floods in Greater Jakarta Area (Indonesia)	●	○	Türkiye*
	Flooding in Central Vietnam (Vietnam)	●	○	India
	Super Typhoon GONI (Philippines)	●	○	○
2021	Typhoon RAI (Philippines)	●	Singapore	○
2022	Tropical Cyclone NORU (Philippines)	●	○	○

	Event			
	Tropical Cyclone NORU (Vietnam)	●	○	○
	Tropical Cyclone NALGAE (Philippines)	●	○	○
2023	Tropical Cyclone MOCHA (Myanmar)	●	Indonesia, Singapore, Malaysia	○
	Southwest Monsoon and Tropical Cyclone DOKSURI (Philippines)	●	○	○
2024	Southwest Monsoon and Tropical Cyclone PRAPIROON and GAEMI (Philippines)	●	○	○
	Tropical Cyclone YAGI and Southwest Monsoon (Laos)	○	Singapore	○
	Tropical Cyclone YAGI and Southwest Monsoon (Myanmar)	●	Singapore	○
	Tropical Cyclone YAGI and Southwest Monsoon (Philippines)	●	○	○
	Tropical Cyclone YAGI and Southwest Monsoon (Thailand)	●	○	○
	Tropical Cyclone YAGI and Southwest Monsoon (Vietnam)	●	Singapore	○

● – with record

○ – no information available

* – offer of support

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Appendix 2: Frequency of ASEAN Participation in HADR Military Exercises and Training (2014-2024)

Main Exercise Name	Year Conducted	Frequency of ASEAN participation
COBRA GOLD	COBRA GOLD 14	4
	COBRA GOLD 15	4
	COBRA GOLD 2016	4
	COBRA GOLD 2017	3
	COBRA GOLD 2018	3
	COBRA GOLD 2019	4
	COBRA GOLD 23	4
	COBRA GOLD 24	3
COBRA GOLD Total		**29**
ASEAN SOLIDARITY EXERCISE	ASEAN SOLIDARITY EXERCISE 23	9
ASEAN SOLIDARITY EXERCISE Total		**9**
BALIKATAN	BALIKATAN 14	1
	BALIKATAN 15	1
	BALIKATAN 2016	1
	BALIKATAN 2017	1
	BALIKATAN 2018	1
	BALIKATAN 2019	1
	BALIKATAN 2021	1
	BALIKATAN 2023	1
BALIKATAN Total		**8**
COORDINATED RESPONSE	COORDINATED RESPONSE 2017	7
COORDINATED RESPONSE Total		**7**
RIMPAC	RIMPAC 2024	6
RIMPAC Total		**6**
PACIFIC AIRLIFT RALLY	PACIFIC AIRLIFT RALLY 23	5
PACIFIC AIRLIFT RALLY Total		**5**
GOLDEN DRAGON	GOLDEN DRAGON 2016	1
	GOLDEN DRAGON 2018	1
	GOLDEN DRAGON 2019	1
	GOLDEN DRAGON 2020	1
	GOLDEN DRAGON 2023	1
GOLDEN DRAGON Total		**5**
CROIX DU SUD	CROIX DU SUD 23	3
CROIX DU SUD Total		**3**
KAMANDAG	KAMANDAG 2017	1
	KAMANDAG 2018	1
	KAMANDAG 8	1
KAMANDAG Total		**3**
SOUTHERN KATIPO	SOUTHERN KATIPO 2017	3
SOUTHERN KATIPO Total		**3**
PACIFIC ANGEL	PACIFIC ANGEL 23-2	1
	PACIFIC ANGEL 23-3	1
PACIFIC ANGEL Total		**2**
SUMAN PROTECTOR	SUMAN PROTECTOR 2017	2
SUMAN PROTECTOR Total		**2**
SAFKAR INDOPURA	SAFKAR INDOPURA 2020	2
SAFKAR INDOPURA Total		**2**
GOBI WOLF	GOBI WOLF 2017	1
	GOBI WOLF 2018	1
GOBI WOLF Total		**2**
BERSAMA LIMA	BERSAMA LIMA 2019	2
BERSAMA LIMA Total		**2**
BHAKTI KANYINI AUSINDO	BHAKTI KANYINI AUSINDO 2024	1
BHAKTI KANYINI AUSINDO Total		**1**
SENTINEL	SENTINEL 2016	1
SENTINEL Total		**1**
CROCODILE RESPONSE	CROCODILE RESPONSE 23	1
CROCODILE RESPONSE Total		**1**
PEACE TRAIN	PEACE TRAIN 2018	1
PEACE TRAIN Total		**1**
DOSHIN-BAYANIHAN	DOSHIN-BAYANIHAN 2-22	1
DOSHIN-BAYANIHAN Total		**1**
ANGKOR SENTINEL	ANGKOR SENTINEL 2016	1
ANGKOR SENTINEL Total		**1**
DRAGON GOLD	DRAGON GOLD 2018	1
DRAGON GOLD Total		**1**
Grand Total		**96**

Appendix 3: HADR Military Exercises (2014-2024)

Exercise	Hosts/Organisers	Year	Participating Country/ies
COBRA GOLD 14	Thailand, United States	2014	China (People's Republic of), Indonesia, Japan, Korea (Republic of), Malaysia, Singapore, Thailand, United States
BALIKATAN 14	Philippines, United States	2014	Philippines, United States
COBRA GOLD 15	Thailand, United States	2015	China (People's Republic of), Indonesia, Japan, Malaysia, Singapore, Thailand, United States
BALIKATAN 15	Philippines, United States	2015	Philippines, United States
COBRA GOLD 2016	Thailand, United States	2016	China (People's Republic of), India, Indonesia, Japan, Korea (Republic of), Malaysia, Singapore, Thailand, United States
ANGKOR SENTINEL 2016	Cambodia, United States	2016	Cambodia, United States
SENTINEL 2016	Cambodia	2016	Cambodia, United States
BALIKATAN 2016	Philippines, United States	2016	Australia, Philippines, United States
GOLDEN DRAGON 2016	Cambodia, China	2016	Cambodia, China (People's Republic of)
COORDINATED RESPONSE 2017	Singapore	2017	Australia, Cambodia, Korea (Republic of), Laos, Malaysia, Philippines, Singapore, Thailand, United Kingdom, United States, Vietnam
COBRA GOLD 2017	Thailand, United States	2017	India, Japan, Korea (Republic of), Malaysia, Singapore, Thailand, United States
GOBI WOLF 2017	Mongolia, United States	2017	Australia, Bangladesh, Canada, China (People's Republic of), Colombia, India, Japan, Korea (Republic of), Mongolia, Nepal, New Zealand, Pakistan, Philippines, United Kingdom, United States
BALIKATAN 2017	Philippines, United States	2017	Australia, Japan, Philippines, United States
BALIKATAN 2017	Philippines, United States	2017	Philippines, United States
SUMAN PROTECTOR 2017	Singapore	2017	Australia, Malaysia, New Zealand, Singapore, United Kingdom
KAMANDAG 2017	Philippines, United States	2017	Philippines, United States
SOUTHERN KATIPO 2017	New Zealand	2017	Australia, Brunei, Canada, Chile, Fiji, Malaysia, New Zealand, Papua New Guinea, Singapore, Timor-Leste, Tonga, United Kingdom, United States
COBRA GOLD 2018	Thailand, United States	2018	India, Indonesia, Japan, Korea (Republic of), Malaysia, Singapore, Thailand, United States
GOLDEN DRAGON 2018	Cambodia, China	2018	Cambodia, China (People's Republic of)
DRAGON GOLD 2018	Japan	2018	Cambodia, China (People's Republic of)
BALIKATAN 2018	Philippines, United States	2018	Australia, Japan, Philippines, United States
GOBI WOLF 2018	Mongolia, United States	2018	Australia, Canada, France, Japan, Korea (Republic of), Mongolia, Nepal, Sri Lanka, Thailand, United Kingdom, United States
PEACE TRAIN 2018	China	2018	China (People's Republic of), Laos
KAMANDAG 2018	Philippines, United States	2018	Japan, Philippines, United States
COBRA GOLD 2019	Thailand, United States	2019	China (People's Republic of), India, Indonesia, Japan, Korea (Republic of), Malaysia, Singapore, Thailand, United States
GOLDEN DRAGON 2019	Cambodia, China	2019	Cambodia, China (People's Republic of)
BALIKATAN 2019	Philippines, United States	2019	Australia, Philippines, United States
BERSAMA LIMA 2019	Malaysia, Singapore, Australia, New Zealand, United Kingdom	2019	Australia, Malaysia, New Zealand, Singapore, United Kingdom
GOLDEN DRAGON 2020	Cambodia, China	2020	Cambodia, China (People's Republic of)
SAFKAR INDOPURA 2020	Singapore, Indonesia	2020	Indonesia, Singapore
BALIKATAN 2021	Philippines, United States	2021	Philippines, United States
DOSHIN-BAYANIHAN 2-22	Philippines	2022	Japan, Philippines
COBRA GOLD 23	Thailand, United States	2023	Indonesia, Japan, Korea (Republic of), Malaysia, Singapore, Thailand, United States
GOLDEN DRAGON 2023	Cambodia, China	2023	Cambodia, China (People's Republic of)

BALIKATAN 2023	Philippines, United States	2023	Australia, Philippines, United States
CROIX DU SUD 23	France	2023	Australia, Canada, Fiji, France, Germany, Indonesia, Netherlands, New Zealand, Papua New Guinea, Peru, Philippines, Singapore, Tonga, United Kingdom, United States
CROCODILE RESPONSE 23	Australia	2023	Australia, Indonesia, United States
PACIFIC AIRLIFT RALLY 23	United States	2023	Bangladesh, Brunei, Canada, Indonesia, Japan, Malaysia, Maldives, Mongolia, Nepal, Philippines, Singapore, Sri Lanka, Timor-Leste, United States
PACIFIC ANGEL 23-2	United States	2023	Australia, Mongolia, Nepal, Thailand, United States
PACIFIC ANGEL 23-3	United States	2023	Brunei, United States
ASEAN SOLIDARITY EXERCISE 23	Indonesia	2023	Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, Philippines, Singapore, Thailand, Timor-Leste, Vietnam
COBRA GOLD 24	Thailand, United States	2024	Indonesia, Japan, Korea (Republic of), Malaysia, Singapore, Thailand, United States
RIMPAC 2024	United States	2024	Australia, Belgium, Brazil, Brunei, Canada, Chile, Colombia, Denmark, Ecuador, France, Germany, India, Indonesia, Israel, Italy, Japan, Korea (Republic of), Malaysia, Mexico, Netherlands, New Zealand, Peru, Philippines, Singapore, Sri Lanka, Thailand, Tonga , United Kingdom, United States
BHAKTI KANYINI AUSINDO 2024	Australia, Indonesia	2024	Australia, Indonesia, United States
KAMANDAG 8	Philippines, United States	2024	Australia, France, Japan, Korea (Republic of), Philippines, United Kingdom, United States

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