

Received: 17 July 2025

Revised: 20 August 2025

Accepted: 21 August 2025

GOVERNING DISASTERS THROUGH CAPACITY BUILDING: CIVIL-MILITARY RELATIONS IN THE ROYAL THAI ARMED FORCES

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Handling Editor:

Professor Dr. Jamaluddin AHMAD

UMS Rappang, Indonesia

(This article belongs to Theme 2: Public Organization & Management)

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Abstract

This study investigates personnel capacity development within the Royal Thai Armed Forces' Disaster Relief Training Center as a critical governance mechanism. Transcending conventional human resource frameworks, the research conceptualizes military capacity building as an inherently political process that profoundly shapes civil-military relations, inter-agency coordination, and institutional legitimacy. Using a robust mixed-methods case study design, the study systematically gathered empirical data from ninety commissioned and non-commissioned officers through structured questionnaires and in-depth executive interviews. Quantitative analyses reveal a significant positive correlation ($r = .653$) between personnel's comprehension of organizational objectives and their active engagement in strategic capacity-building initiatives. The findings successfully identify four vital dimensions of governance-oriented capacity: communication clarity, organizational learning, ethical alignment, and structured career advancement. However, structural constraints, such as misaligned training modules and limited access to education, significantly moderate overall developmental effectiveness. Ultimately, integrating operational competency-based training with transparent governance indicators is essential to recalibrate civil-military interactions and strengthen Thailand's overarching disaster resilience framework.

Keywords: Civil-Military Relations, Disaster Governance, Capacity Building, Institutional Legitimacy, Military Professionalization

Citation Information: Kanin, P., Wipawan, P., & Kajornatthapol, P. (2026). Governing Disasters Through Capacity Building: Civil-Military Relations in the Royal Thai Armed Forces. *Asian Political Science Review*, 10(1), Article 6. <https://doi.org/10.14456/apsr.2026.6>

Introduction

In the twenty-first century, disaster governance has emerged as a critical arena in which states negotiate questions of authority, legitimacy, institutional coordination, and public accountability. The increasing frequency and severity of natural disasters intensified by climate change, rapid urbanization, demographic concentration, and transnational environmental risks have compelled governments worldwide to reconsider the institutional foundations of national resilience (Caballero-Anthony, 2018; United Nations Office for Disaster Risk Reduction, 2015). In Southeast Asia, where disaster vulnerability intersects with evolving political systems and hybrid civil-military arrangements, disaster management has become more than a technical emergency-response function. It represents a politically consequential domain in which institutional capacity, public trust, and governance legitimacy are continuously negotiated.

Thailand presents a particularly compelling case for examining these dynamics. Historically characterized by fluctuating civil-military relations and intermittent military interventions in political governance, Thailand's institutional landscape reflects complex patterns of authority between civilian administrations and the armed forces (Chambers & Waitoolkiat, 2016; Croissant, 2018). While periods of democratization have strengthened civilian institutions, the military continues to maintain substantial organizational autonomy and political influence. In recent decades, the Royal Thai Armed Forces have expanded their mandate beyond conventional territorial defense to include humanitarian assistance, disaster relief operations, and regional security cooperation. This expansion situates disaster governance within broader debates about military professionalism, civilian oversight, and institutional legitimacy.

Disaster response operations require intensive coordination among the military, civilian ministries, provincial administrations, local governments, and non-governmental organizations (NGOs). These interactions create governance spaces in which authority is exercised, shared, or contested. Effective coordination depends not only on logistical capabilities but also on trust, communication, and inter-organizational learning. Consequently, the institutional design and personnel capacity of disaster-response agencies carry significant implications for civil-military relations. Where coordination mechanisms are transparent and collaborative, disaster response may reinforce democratic accountability and public confidence. Conversely, opaque or centralized arrangements may consolidate institutional dominance without sufficient oversight.

Climate change further intensifies these governance pressures. Thailand remains highly vulnerable to floods, tropical storms, droughts, and sea-level rise, with profound socio-economic consequences (Asian Development Bank, 2021). As disaster risks escalate, the effectiveness of state institutions becomes central to both sustainable development and political stability. This linkage is explicitly recognized in the Sendai Framework for Disaster Risk Reduction and the United Nations Sustainable Development Goals (SDGs), particularly SDG 13 (Climate Action) and SDG 16 (Peace, Justice, and Strong Institutions), which emphasize institutional preparedness, transparency, and inclusive governance as pillars of resilience (United Nations Office for Disaster Risk Reduction, 2015; United Nations, 2015). In this context, personnel capacity development within key disaster-response institutions acquires strategic political significance.

Within Thailand's disaster governance architecture, the Disaster Relief Training Center (DRTC) under the Royal Thai Armed Forces Development Command occupies a central institutional role. The DRTC prepares military and selected civilian personnel for humanitarian assistance and disaster response missions, including flood mitigation, post-storm recovery, earthquake response, and participation in regional cooperation under the Association of Southeast Asian Nations (ASEAN) framework (Disaster Relief Training Center, 2023). ASEAN's institutionalization of disaster governance mechanisms, such as the ASEAN Coordinating Center for Humanitarian Assistance (AHA Center), has embedded national

disaster capacity within broader regional diplomatic and cooperative networks (Caballero-Anthony, 2018). As such, personnel training at the DRTC intersects not only with domestic governance but also with Thailand's regional engagement strategy and soft-power projection. Existing scholarship on capacity development has predominantly focused on competency-based training, organizational performance, and human resource management (McClelland, 1973; Sun & Ma, 2019). These frameworks emphasize knowledge acquisition, skill formation, and institutional efficiency. While such approaches are indispensable for understanding technical performance, they often underemphasize the political dimensions of capacity building within military institutions. In contexts where the military retains substantial influence in governance, personnel development may function as a strategic instrument that shapes institutional legitimacy, recalibrates civil-military relations, and defines the scope of military engagement in non-traditional security domains.

From a political science perspective, personnel capacity development can thus be conceptualized as a governance mechanism. It influences how authority is exercised, how inter-agency coordination is structured, and how public trust is cultivated. Training systems that integrate operational competence with ethical standards, communication skills, and inter-sectoral coordination capabilities may reinforce civilian oversight and collaborative governance. Conversely, capacity-building initiatives that prioritize internal cohesion without transparency may inadvertently strengthen institutional autonomy at the expense of accountability.

This study advances this conceptualization by explicitly examining how personnel capacity development at the DRTC operates within Thailand's complex disaster management system. Specifically, the research investigates how personnel capacity development within the Royal Thai Armed Forces functions as an active governance mechanism that critically influences both civil-military relations and the overall effectiveness of disaster management in Thailand. To answer this comprehensively, the study analyzes three interrelated dimensions of capacity development. The first dimension encompasses operational competencies, specifically technical disaster-response skills, logistical preparedness, and seamless technological integration. The second examines political and interpersonal competencies, which include communication clarity, leadership capabilities, ethical conduct, and effective coordination with civilian actors. The final dimension evaluates institutional knowledge management through the lenses of organizational learning, knowledge transfer, and robust inter-agency collaboration. By integrating these diverse dimensions, the study conceptualizes personnel capacity as a multidimensional construct that decisively shapes not only operational effectiveness but also critical governance outcomes. This comprehensive framework enables a profound analysis of how training systems actively influence institutional legitimacy, public accountability, and regional cooperation.

The study's contributions are multifold, bridging competency-based human resource development literature with contemporary civil-military relations scholarship to situate personnel training within the broader governance debates shaping Southeast Asia. Furthermore, it yields critical empirical evidence from Thailand, vividly illuminating how military-led disaster capacity initiatives structurally interact with established civilian institutional frameworks. Crucially, the research proposes a robust conceptual foundation necessary for developing replicable, governance-oriented capacity models highly applicable across diverse ASEAN contexts where the military maintains a substantial role in disaster management. By reframing personnel capacity as an essential governance mechanism, this study contributes to the ongoing scholarly and policy discourse on the evolving role of military institutions in non-traditional security domains. Ultimately, it underscores the strategic imperative of comprehensively aligning training systems with democratic governance

principles, sustainable development objectives, and cohesive regional resilience strategies amidst an era defined by escalating climate risks and profound institutional complexity.

Literature Review

Personnel capacity development within military institutions occupies an interdisciplinary space at the intersection of organizational theory, strategic human resource development, civil-military relations, and disaster governance. While traditional human resource frameworks prioritize efficiency, performance optimization, and competency enhancement, political science scholarship underscores the governance implications of capacity-building processes, particularly in contexts where military institutions assume expanded roles in non-traditional security domains (Croissant, 2018; He, 2017). In disaster-prone societies such as Thailand, where the armed forces maintain a historically prominent political presence, personnel capacity development cannot be examined solely as an administrative endeavor. Instead, it must be understood as a governance mechanism embedded within broader institutional, political, and regional dynamics.

Organizational Development (OD) theory provides an analytical foundation for understanding institutional adaptation. OD conceptualizes organizations as dynamic systems that must evolve in response to environmental uncertainty and structural complexity (Nijaneat, 2016). In high-risk environments such as disaster response, adaptive learning, structural coherence, and interdepartmental collaboration become central determinants of effectiveness (Fast et al., 2014). However, within military institutions, organizational reform carries political implications. Alterations to training structures, leadership hierarchies, and performance evaluation systems may reshape patterns of authority and recalibrate relations between civilian oversight bodies and military command structures. Thus, OD within disaster-oriented military institutions intersects with questions of accountability, legitimacy, and power distribution.

Human Resource Development (HRD) further expands this analytical scope by emphasizing knowledge acquisition, experiential learning, and competency formation as drivers of institutional resilience (Suthamdee & Suthamdee, 2017). In disaster governance contexts, HRD plays a pivotal role in enabling rapid inter-agency coordination and effective crisis management. However, HRD within military settings extends beyond technical proficiency. Professionalization processes such as ethical training, leadership cultivation, and scenario-based simulations may enhance public trust and institutional credibility (Bruneau & Matei, 2008). When military personnel demonstrate technical competence and humanitarian commitment, the armed forces may consolidate legitimacy within civilian society. Consequently, HRD initiatives function not only as performance-enhancement mechanisms but also as instruments that influence civil-military relations.

Strategic Human Resource Development (SHRD) integrates workforce planning with long-term national objectives. Garavan et al. (1995) argue that SHRD must align personnel development systems with strategic policy frameworks to sustain competitive and institutional advantage. In Thailand, national modernization policies such as Thailand 4.0 position innovation, technological advancement, and human capital development at the center of state transformation. Military capacity-building programs thus operate within a broader modernization agenda. However, the embedding of SHRD within military institutions raises governance considerations. Without transparent oversight, strategic planning mechanisms may consolidate institutional autonomy and reinforce entrenched hierarchies (Croissant, 2018). Therefore, the strategic alignment of personnel development must be evaluated not only for efficiency but also for democratic accountability and civilian control.

Civil-military relations scholarship provides critical insights into these governance dimensions. Huntington's (1957) classical theory of objective civilian control emphasizes professionalization as a means of stabilizing civil-military balance. Contemporary analyses in

Southeast Asia, however, highlight hybrid configurations characterized by negotiated authority and enduring military influence in political domains (Chambers & Waitookiat, 2016; He, 2017). In Thailand, historical patterns of military intervention have shaped a governance environment in which the armed forces retain substantial institutional autonomy. Participation in humanitarian and disaster-relief operations may contribute to what Croissant (2018) describes as legitimacy-building through non-traditional security engagement. Personnel capacity development in disaster contexts thus intersects with soft-power projection, public perception management, and institutional normalization.

The political economy of disaster governance adds further complexity. Disaster response operations entail significant budget allocations, procurement processes, and inter-agency resource distribution (Olson, 2000). These processes generate opportunities for institutional strengthening but also expose vulnerabilities related to transparency and corruption. Effective training in ethics, accountability, and inter-sectoral coordination can mitigate governance risks and enhance public confidence. Conversely, misalignment between training content and strategic objectives may weaken accountability structures and reduce the effectiveness of disaster interventions. Personnel capacity development therefore contributes to both operational integrity and governance quality.

At the regional level, ASEAN has institutionalized cooperative disaster governance through mechanisms such as the ASEAN Agreement on Disaster Management and Emergency Response (AADMER) and the ASEAN Coordinating Center for Humanitarian Assistance (AHA Center). These frameworks promote interoperability, joint exercises, and information sharing among member states (Caballero-Anthony, 2018). Military institutions frequently participate in regional disaster-response exercises, thereby embedding national capacity-building initiatives within diplomatic and cooperative security networks. Comparative evidence from Indonesia and the Philippines shows similar dynamics, where armed forces play central roles in disaster relief while navigating complex civil-military arrangements (Ng & Kurniawan, 2024). These regional experiences highlight the dual function of disaster capacity development: strengthening domestic operational readiness while contributing to regional governance norms and cooperative security frameworks.

Sustainability and climate governance considerations further expand the analytical lens. The Sendai Framework for Disaster Risk Reduction underscores institutional preparedness, risk governance, and inclusive coordination as pillars of resilience (United Nations Office for Disaster Risk Reduction, 2015). Similarly, the United Nations Sustainable Development Goals (SDGs), particularly SDG 13 (Climate Action) and SDG 16 (Peace, Justice, and Strong Institutions), link disaster resilience to institutional integrity and transparent governance (United Nations, 2015). In climate-vulnerable regions such as Southeast Asia, personnel capacity development within disaster institutions becomes a central component of long-term adaptation strategies. Military institutions that integrate technical competence with ethical governance standards may enhance both operational effectiveness and sustainable development outcomes.

Despite the convergence of these literatures, relatively limited scholarship has explicitly conceptualized personnel capacity as a governance mechanism within civil-military disaster systems. Existing research often treats competency development as a managerial variable disconnected from power structures, legitimacy processes, and regional security dynamics. This study addresses this gap by synthesizing organizational development theory, strategic human resource development, civil-military relations scholarship, and disaster governance frameworks. By doing so, it advances a multidimensional understanding of personnel capacity as both an operational asset and a political instrument shaping institutional resilience, civilian oversight, and regional cooperation within Thailand's disaster management system.

Research Methods

This study employed a mixed-methods case study design to examine how personnel capacity development functions as a governance mechanism within Thailand's disaster management system. The study adopted a convergent parallel design to collect and analyze quantitative and qualitative data simultaneously, allowing triangulation and integration during interpretation (Creswell & Poth, 2018). The case study approach was selected because the Disaster Relief Training Center (DRTC) represents a strategically significant institution within Thailand's civil-military disaster governance architecture. Given the political and institutional specificity of the research context, the design emphasizes analytical generalization rather than statistical generalization (Flick, 2018).

The study population consisted of 90 commissioned and non-commissioned officers assigned to the DRTC under the Royal Thai Armed Forces Development Command as of October 2022. These personnel held executive, administrative, and operational roles directly involved in disaster-preparedness training, humanitarian assistance, and emergency-response missions. For the quantitative phase, 50 participants were selected using purposive sampling combined with multi-stage selection procedures to ensure representation across rank levels and functional units. To be included in the study, participants had to have direct operational involvement in disaster-response missions, at least one year of institutional experience, provide voluntary informed consent, and remain available during data collection. Although the overall institutional population was relatively small, the selected sample spanned diverse hierarchical and functional positions, thereby enhancing internal representativeness within the organization. For the qualitative phase, the study purposively selected three senior executives for in-depth, semi-structured interviews based on their direct responsibility for capacity development policy, strategic planning, and inter-agency coordination. These informants were considered key knowledge holders, uniquely positioned to provide authoritative insights into governance processes, institutional legitimacy, and the dynamics of civil-military interaction.

The study used two primary instruments: a structured questionnaire and a semi-structured interview protocol. The questionnaire was developed following an extensive review of the literature on organizational development, strategic human resource development, civil-military relations, and disaster governance. It was divided into sections to capture demographic characteristics, personnel understanding of organizational goals—such as communication, learning culture, ethics, and career development—as well as perceived challenges in strategic capacity development and preferred personnel development approaches. Sections assessing organizational goals and challenges employed a five-point Likert-type scale adapted from John et al. (1974). Although Likert-scale responses are technically ordinal, we treated them as interval-level data for parametric analysis, consistent with common practice in social science research when internal consistency reliability is high and scale distributions approximate normality (Creswell & Poth, 2018). This methodological decision enabled the use of correlation and variance-based statistical techniques. Concurrently, the qualitative interview guide featured open-ended questions designed to explore governance dimensions beyond basic operational performance. These inquiries probed how personnel training influences coordination between military and civilian agencies, the specific governance challenges that arise during disaster-response operations, and the broader effects of capacity development on institutional legitimacy and public trust. Consequently, these questions facilitated a deep exploration of power dynamics, accountability structures, and institutional coherence within the disaster management framework.

The questionnaire's content validity was assessed using the Item-Objective Congruence (IOC) index, evaluated by three subject-matter experts in public administration and military governance. All items achieved IOC scores above 0.67, and one item was removed for insufficient alignment with the study objectives. Internal consistency reliability was measured

using Cronbach's alpha, yielding 0.948, which, according to established benchmarks (Cohen, 1988), indicates excellent reliability and supports the measurement instrument's internal coherence. For the qualitative data, thematic analysis was meticulously conducted following Braun and Clarke's (2021) established framework. This process moved systematically from deep familiarization with the raw data to initial coding, then to the rigorous development, review, and precise definition of emerging themes before final reporting. To enhance trustworthiness, an independent academic reviewer cross-checked coding consistency, and the team resolved discrepancies through iterative discussion, strengthening credibility, dependability, and confirmability (Flick, 2018).

Before initiating data collection, the study secured formal institutional authorization from the Royal Thai Armed Forces Development Command, alongside explicit ethical approval from the Human Research Ethics Committee of Northern College (Approval No. NRED 0011/2568). The research strictly adhered to established ethical standards for human subjects and took special precautions to navigate the sensitive hierarchical structure of military organizations. To minimize perceived coercion, the team recruited participants exclusively through neutral administrative channels. All participants received comprehensive information sheets detailing the study's objectives, potential risks, and their right to withdraw at any time without penalty, after which they provided written informed consent. Furthermore, respondents were explicitly assured that their participation would not affect performance evaluations, promotion opportunities, or institutional standing. To guarantee strict confidentiality and privacy, all collected data were anonymized using coded identifiers and securely stored within encrypted digital repositories.

Quantitative data were subsequently analyzed using descriptive statistics—including frequencies, percentages, and means—alongside inferential statistics such as independent-sample t-tests, one-way ANOVA (F-tests), and Pearson's product-moment correlation coefficients. We interpreted correlation strength according to conventional thresholds for small, moderate, and large effects (Cohen, 1988). We assessed statistical significance at the 0.05 and 0.01 levels. Concurrently, qualitative data underwent systematic thematic coding to identify prevailing patterns related to governance alignment, civil-military coordination, institutional ethics, and strategic capacity development. During interpretation, the quantitative and qualitative findings were integrated to strengthen methodological triangulation and theoretical depth. Although the single-case design inherently limits broad statistical generalizability to other institutions, it yields profound contextual insights that contribute significantly to theory-building on personnel capacity as a crucial governance mechanism within comprehensive disaster management systems.

Research Results

Demographic Profile of Respondents

The demographic analysis of personnel stationed at the Disaster Relief Training Center (DRTC) revealed a predominantly male workforce, with nearly half of respondents aged between thirty-one and forty years. This age distribution reflects a strong mid-career cohort with substantial operational experience and continued potential for professional advancement. Furthermore, a significant majority of respondents reported being single, a marital status that may facilitate greater mobility and deployment flexibility during unpredictable disaster-response missions. Regarding educational and professional backgrounds, half of the personnel possessed bachelor's degrees, and a substantial portion reported having between one and ten years of dedicated institutional service. From a broader governance perspective, this specific demographic structure suggests strong institutional continuity supported by a relatively young, educated, and professionally active cadre. Consequently, the strong presence of these mid-

career officers indicates favorable potential for long-term consolidation and stabilization of institutional capacity within Thailand's overarching disaster management framework.

Perceptions of Institutional Capacity Development

Overall perceptions of personnel development initiatives were moderately positive, with a mean score of 3.59. Respondents generally affirmed that the existing training programs were suitably modern, operationally relevant, and closely aligned with foundational mission requirements, while actively acknowledging robust supervisory support for both internal and external training endeavors. Despite these positive indicators, pronounced structural constraints remained starkly evident. Personnel frequently cited critical concerns regarding restricted training quotas, noticeably insufficient scholarship funding (particularly affecting administrative staff), and glaringly unequal access to advanced academic opportunities. Consequently, the most prominent developmental challenges reported were a notable misalignment between training content and the overarching organizational strategic direction (Mean = 3.67), significant inconsistencies between training modules and specific job requirements (Mean = 3.61), and a severely limited responsiveness to individual professional needs (Mean = 3.53). These collective findings strongly suggest that while capacity development systems are structurally embedded within the institution, the critical strategic integration between macro-level objectives and micro-level competency pathways remains fundamentally incomplete.

Correlation Analysis: Organizational Understanding and Development Engagement

Pearson product-moment correlation analysis revealed a statistically significant positive relationship at the 0.01 level between personnel understanding of organizational goals and engagement in strategic capacity-building approaches ($r = .653$, $p < .01$). This coefficient indicates a strong positive association, consistent with conventional social science benchmarks (Cohen, 1988). Further analysis demonstrated moderate-to-strong positive correlations across multiple areas, notably between organizational ethics and overall development engagement ($r = .698$), learning organization practices and development ($r = .633$), and career advancement perceptions and development ($r = .544$). Conversely, continuing education demonstrated a weaker, albeit statistically significant, correlation ($r = .442$), suggesting that entrenched institutional barriers may actively moderate its implementation. The reported value of $r = 1.000$ within the composite overall index reflects a mathematical artifact arising from aggregating identical summary variables rather than an empirical perfect relationship between independent constructs, indicating computational identity rather than substantive correlation.

Table 1 Correlation Between Understanding of Organizational Goals and Personnel Capacity Development Approaches.

Understanding of Organizational Goals	Training	Continuing Education	Development	Overall
Communication & Direction	.562**	.442**	.512**	.577**
Learning Organization	.547**	.514**	.600**	.633**
Ethics & Integrity	.619**	.557**	.654**	.698**
Career Advancement	.488**	.512**	.507**	.544**
Overall Index	—	.764**	.714**	.653**

Note: $p < .05^*$, $p < .01^{**}$.

Capacity Development Problems and Implementation Dynamics

A subsequent correlation analysis examined the relationships between perceived development challenges and actual implementation approaches, indicating a strong positive association ($r = .767$, $p < .01$) between identified capacity-development problems and corresponding

institutional responses. The strongest relationships involved job-role mismatch and overall development approaches ($r = .723$), incongruity with individual development needs ($r = .707$), and organizational strategy misalignment ($r = .671$). Additionally, general training ($r = .624$), broader development mechanisms ($r = .606$), and continuing education ($r = .533$) exhibited consistent moderate-to-strong associations. These compelling findings indicate that perceived structural gaps actively stimulate adaptive development mechanisms, suggesting a responsive recalibration of training systems rather than fundamental institutional weakness.

Table 2 Correlation Between Strategic Capacity Development Problems and Implementation Approaches.

Strategic Development Problems	Training	Continuing Education	Development	Overall
Strategic Direction Misalignment	.624**	.533**	.606**	.671**
Job Requirement Mismatch	.634**	.623**	.649**	.723**
Individual Need Incongruity	.574**	.656**	.639**	.707**
Overall Index	.666**	.664**	.691**	.767**

Note: $p < .01^{**}$.

Strategic Determinants of Governance-Oriented Capacity

By synthesizing the quantitative and qualitative findings, four interrelated determinants of governance-oriented personnel capacity emerged. First, human capital development is essential because it actively promotes critical analytical competence, seamless teamwork, and strong leadership. Concurrently, organizational flexibility is a vital determinant because it enables rapid coordination and highly decentralized operational responses during crises. Furthermore, intensive inter-agency networking is a crucial pillar, strengthening complex collaborations across diverse civilian and regional institutions. Ultimately, cohesive cultural and technological integration reinforces strict ethical standards while propelling necessary digital modernization. Together, these four determinants elevate personnel capacity from a simple operational resource to a pivotal, high-level institutional governance mechanism that robustly ensures and supports sustained resilience within Thailand's overarching disaster management system.

Conclusion and Discussion

The findings extend beyond conventional human resource development discourse by positioning personnel capacity as a governance mechanism within Thailand's disaster management system. Rather than functioning solely as an internal administrative process, personnel development at the Disaster Relief Training Center (DRTC) emerges as a strategic instrument that shapes civil-military relations, institutional legitimacy, and inter-agency coordination in non-traditional security domains. A central insight concerns the role of organizational communication and strategic clarity in reinforcing governance alignment. The strong positive correlation between understanding of organizational goals and engagement in development initiatives suggests that institutional coherence contributes to operational commitment. From a governance perspective, communication does more than improve efficiency; it enhances normative integration within hierarchical structures. As Mathieu & Zajac (1990) argue, organizational commitment is closely associated with clarity of purpose and perceived institutional support. In the context of a military disaster institution, such clarity contributes to both mission effectiveness and legitimacy in the eyes of civilian stakeholders. Organizational learning further operates as a stabilizing governance mechanism. Continuous learning practices, technological modernization, and cross-functional training not only improve operational readiness but also facilitate adaptive civil-military interaction. In high-risk disaster

environments, coordinating across bureaucratic boundaries becomes central to state resilience (Wamitu, 2015). The study's findings indicate that personnel perceive learning-oriented structures as strengthening institutional credibility. This aligns with broader scholarship suggesting that professionalized military institutions engaged in humanitarian missions may enhance public trust and soften traditional perceptions of military dominance (Croissant, 2018). Ethics and institutional integrity constitute another significant dimension. The moderate-to-strong correlation between ethical understanding and development engagement suggests that value alignment is embedded in capacity-building processes. In disaster governance, transparency and accountability are crucial for maintaining public confidence, particularly during large-scale resource mobilization. Ethical training and codified accountability frameworks may therefore serve as instruments of civilian reassurance, reinforcing democratic oversight mechanisms even within predominantly military-led operations. This dynamic resonates with civil-military scholarship emphasizing the importance of institutional professionalism in sustaining civilian control (Huntington, 1957; He, 2017).

Career development and mentorship structures also carry profound governance implications. Structured promotion pathways and competency-based advancement systems contribute to institutional stability and reduce reliance on informal patronage networks. In contexts where military institutions historically intersect with political authority, transparent career systems may mitigate power concentration and strengthen internal meritocracy. The study's findings suggest that personnel perceive professional development opportunities as reinforcing fairness and institutional trust. Nevertheless, persistent structural misalignment between training content and organizational strategy reveals governance vulnerabilities. Misalignment can weaken institutional coherence and reduce the strategic impact of capacity-building investments (Kaplan & Norton, 2001). Furthermore, insufficient customization of training for diverse operational roles may limit adaptive flexibility (Morgeson & Humphrey, 2006). Addressing these gaps requires rigorously integrating competency frameworks with measurable performance indicators that connect individual learning outcomes directly to national disaster governance objectives.

Financial barriers to advanced education add another structural constraint. Although personnel demonstrate strong motivation for postgraduate study, limited institutional support restricts equitable professionalization. In the broader political context, unequal access to advanced training may reproduce internal stratification and impede long-term modernization efforts. Expanding scholarship programs and academic partnerships would strengthen institutional capacity while aligning with Thailand's national human capital agenda under Thailand 4.0.

At the regional level, these findings have implications for ASEAN disaster governance cooperation. The increasing institutionalization of joint exercises and interoperability mechanisms under ASEAN frameworks positions military disaster institutions as actors in regional diplomacy (Caballero-Anthony, 2018). Personnel capacity development, therefore, contributes not only to domestic resilience but also to Thailand's soft power and regional credibility. Professionalized disaster response may enhance cooperative security norms across Southeast Asia. Sustainability considerations further contextualize these findings. Climate change intensifies the frequency and severity of disasters in Thailand, linking personnel capacity directly to SDG 13 (Climate Action) and SDG 16 (Peace, Justice, and Strong Institutions). By integrating technological innovation, ethical governance, and inter-agency coordination, the DRTC can strengthen institutional resilience in alignment with the Sendai Framework for Disaster Risk Reduction (United Nations Office for Disaster Risk Reduction, 2015). Personnel capacity thus functions as both an adaptive mechanism and a long-term sustainability strategy.

While this study provides critical insights, certain methodological limitations warrant consideration. The single-case design, inherently tied to a relatively small and bounded

institutional population at the DRTC, naturally restricts broader statistical generalizability. Furthermore, the reliance on self-reported survey responses introduces the potential for social desirability bias, a factor particularly pronounced within highly hierarchical military environments. The cross-sectional design also limits the ability to draw definitive causal inferences about long-term governance outcomes. To build on these foundational findings and strengthen external validity, future research should use comparative case studies of diverse military disaster institutions across the broader ASEAN region.

This study conceptualizes personnel capacity as a vital governance mechanism operating directly at the intersection of military professionalism, institutional legitimacy, and disaster resilience. Empirical evidence clearly shows that communication clarity, organizational learning, ethical alignment, and structured career pathways are positively associated with development engagement and institutional coherence. However, strategic misalignment and persistent financial barriers continuously constrain the full realization of this capacity-building potential. To effectively strengthen governance outcomes, three strategic priorities must be addressed: integrating competency-based frameworks with measurable governance indicators, expanding equitable access to advanced education alongside cross-sector training, and institutionalizing stringent ethical and accountability systems that reinforce civilian trust. By implementing these measures, the DRTC can significantly enhance its operational effectiveness while substantially contributing to Thailand's broader disaster governance architecture and regional resilience strategy. Ultimately, in an era of profound climate uncertainty and complex emergencies, personnel capacity development transcends technical functionality; it is a deeply political process that shapes how military institutions interact with civilian authorities, regional partners, and society at large.

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Data Availability Statement: The raw data supporting the conclusions of this article will be made available by the authors, without undue reservation.

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