



Bridging Operational Gaps: A Thematic Analysis of Police Disaster Management Practices in Aceh, Indonesia

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Abstract. While the roles and responsibilities of police in disaster preparedness and emergency response have been legislated, there is a lack of empirical evidence regarding how police personnel interpret and operationalize these roles. This article examines the role of police in disaster management in Aceh Province, a region highly exposed to hydrometeorological and geological hazards. A qualitative exploratory design was adopted, in which seven (7) senior and mid-level police officers with direct responsibility for disaster operations at both provincial and district levels participated in in-depth semi-structured interviews. Braun and Clarke's method of thematic analysis was used to analyse the data. The findings show that police officers have good contextual knowledge and high motivation for emergency response with effective coordination, yet there are still significant inconsistencies in the distribution of training, very limited specialist equipment, delayed information flows, and low collaboration during preparedness phases. This study suggests that enhancement of police preparedness for disasters requires not only structural improvement but also integration of frontline experiential knowledge into institutional planning and policymaking. These insights contribute to the improvement of multi-agency disaster governance and to the advance of comparative research into policing in disaster contexts.

Keywords: *Police; Disaster Management; Interagency Coordination; Organizational Capacity; Risk Governance*

1 Introduction

One of the most devastating disasters to ever hit Indonesia was the Aceh tsunami in 2004, which killed around 173,741 people and caused physical losses of 13.8 trillion rupiah [1]. This disaster marked a significant milestone in the history of national disasters, drawing the attention of many parties to the importance of a resilient, coordinated, and community-based disaster management system. Natural forces did not solely cause the sheer number of casualties and damage, but also reflected the low mitigation and preparedness capacity at the time. Weak public knowledge of disaster risk and limited institutional response are the primary contributing factors to the high level of vulnerability, which leads to multidimensional losses [2,3].

In global disaster studies, risk awareness has been demonstrated to play a crucial role in mitigating losses, enhancing preparedness, and encouraging communities and institutions to become more resilient in responding to crises [4,5]. A good understanding of disaster risks and potentials allows individuals and institutions to take preventive measures and respond more quickly when disasters occur. Therefore, the disaster risk reduction (DRR) approach is no longer only about emergency response, but rather about strengthening capacity from upstream to downstream, which includes education and training [6], information system development [7], and multi-level coordination between actors [8,9].

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Indonesia, as an archipelagic country situated on the Pacific Ring of Fire, faces a high risk of disasters. The government has recognized the importance of a holistic and inclusive disaster management system. Several policies and programs have been implemented, including an early warning system, the Disaster Resilient Village program, the integration of disaster curriculum into primary and secondary education, training for state officials, and the strengthening of institutional regulations [10,11]. However, in its implementation, there is a disparity in effectiveness between regions, depending on local commitments, resource support, and institutional capacity [12]

In the context of Aceh, these challenges are increasingly complex. Apart from its position prone to earthquakes, tsunamis, floods, landslides, and the threat of climate change, Aceh also has a diverse topography, a fluctuating level of disaster literacy, and unique socio-political dynamics [13]. Therefore, the development of the disaster system in Aceh requires the active role of all sectors [14], including security actors such as the Aceh Regional Police (Polda Aceh).

As a state institution with a strong command structure and presence in remote areas, the Police have great potential to support all phases of disaster management, from mitigation and preparedness to emergency response and recovery. In addition to providing public protection and security, police personnel are also directly involved in evacuation, aid distribution, logistics security, traffic management, and post-disaster order restoration. However, the effectiveness of this role is primarily determined by the personnel's capacity, both in terms of theoretical knowledge and practical skills. The police, an institution with a vertical line of command, have different roles at each level. At the national level, the Police have a role as policymakers, strategists, and designers of procedures that will be carried out at the level below. At the provincial level, the regional police serve as a liaison between the national and local levels. In addition, the Regional Police also have a role as a provider of facilities and infrastructure in strengthening the capacity and capabilities of personnel. At the district/city level, the Police are the spearhead of implementing actions in disaster areas, encompassing rescue activities, interaction with victims and communities, law enforcement, and the restoration of social conditions.

During the Aceh tsunami incident, the National Police deployed and distributed personnel from various other regions to the Aceh area, as the number of personnel available at that time was inadequate. The National Police then coordinates and bridges communication with police personnel who work alongside local personnel, ensuring that orders and rescue processes are carried out accurately and efficiently. Then, the police, together with existing aid personnel, carried out rescue operations, victim identification, evacuation, and security measures, utilizing local expertise and knowledge, including information on the area, road access, and affected areas.

Furthermore, the operational readiness of institutions such as the Aceh Regional Police does not only depend on the number of personnel or equipment owned, but also on systems that support decision-making, procedural readiness, and cross-sector coordination capacity [15]. In many cases, operational constraints such as logistical limitations, lack of access to real-time information, and the unavailability of up-to-date risk maps hamper the effectiveness of institutional responses in emergencies [16]. Therefore, it is essential to assess the level of readiness of the Aceh Police in responding to disasters within their area of responsibility.

In addition to internal factors, personnel also face significant external challenges. Psychological pressure when handling casualties, conflicts of interest between agencies, and public expectations of police personnel performance can be a burden for personnel in the field [15]. In the context of disasters, police personnel are not only required to be physically alert, but also mentally and emotionally challenged.

Cross-agency coordination is a crucial aspect of modern disaster management. Based on the working principles of the disaster management system, the synergy between the Aceh Regional Police, National Disaster Management Agency (BNPB), Regional Disaster Management Agencies (BPBDs), the Indonesian National Armed Forces (TNI), and elements of civil society forms the foundation for building a fast and effective response system [14]. In practice, this pattern of collaboration requires clarity of roles, established communication protocols, a division of responsibilities, and an understanding of the organizational culture of each institution. Disharmony in this aspect can lead to operational confusion, duplication of duties, and conflicts of authority, all of which negatively impact the quality of services provided to the affected communities.

The communication and collaboration pattern of the Aceh Regional Police in disaster management operates on two different lines: vertical and horizontal. The vertical communication scheme begins at the highest level of police command, starting from the National Police Headquarters, and extends to the Regional Police (Polres). This vertical flow uses Standard Operating Procedures (SOPs). SOPs are essential to maintain the consistency of instructions and ensure compliance with the chain of command [17]. This mechanism is crucial for clarifying the division of duties and preventing overlapping of authority in emergencies. Meanwhile, the horizontal path emphasizes cross-actor collaboration, including BNPB, BPBD, TNI, local governments, and civil society organizations, which together form

a more flexible and adaptive multi-actor coordination pattern [14]. This form of collaboration is seen in all stages of disaster management, starting from pre-disaster through joint planning and exercise; during emergency response through integrated posts, evacuation, and security of logistics distribution; to the post-disaster phase in the form of data collection, rehabilitation, and social recovery of the community [18]. However, several challenges remain, including limited access to real-time information, differences in organizational culture between institutions, and potential conflicts of authority that can slow down responses [16]. Therefore, the communication and collaboration pattern carried out by the Aceh Police not only reflects the formal mechanism in the police structure, but also shows the urgency of cross-sector synergy to realize a more integrated and effective disaster management system

2 Method

2.1 Research Informant

Research informants are people who provide information about the data that the researcher wants related to the research being carried out. The informants in this study are determined purposively, namely the Chief of Police and the Director of the Directorate/work unit, with the consideration that the informant is the highest authority giver in each region and work unit. The list of research informants can be seen in Table 1.

TABLE 1. List of Informants in Research

Informant	Rank	Position	Educational Background
1	Police Commissioner (Kombes Pol)	Head of Operations Bureau, Aceh Regional Police	Bachelor's Degree
2	Police Commissioner (Kombes Pol)	Director of Samapta, Aceh Regional Police	Master's Degree
3	Police Commissioner (Kombes Pol)	Director of Vital Object Security (Pamobvit), Aceh Regional Police	Bachelor's Degree
4	Police Commissioner (Kombes Pol)	Director of Criminal Investigation, Aceh Regional Police	Master's Degree
5	Adjunct Senior Police Commissioner (AKBP)	Chief of North Aceh Police	Master's Degree
6	Adjunct Senior Police Commissioner (AKBP)	Chief of Central Aceh Police	Bachelor's Degree
7	Adjunct Senior Police Commissioner (AKBP)	Chief of Southeast Aceh Police	Master's Degree

2.2 Data Collection Techniques

Qualitative data collection was carried out through in-depth interviews using semi-structured interview guidelines. This interview technique is carried out face-to-face or online, depending on the availability and condition of the informant. During the interview process, the researcher takes notes and recordings to ensure that all the information conveyed is properly recorded and can be thoroughly analyzed at the next stage. This approach allows for a deeper exploration of the experiences, perceptions, and challenges faced by personnel in the implementation of disaster management in the field.

The study examines several key indicators related to police capacity in disaster management. Knowledge capacity focuses on officers' understanding of disaster types within their operational areas, their familiarity with disaster management standard operating procedures, and their exposure to disaster-related training or briefings. Technical skills emphasize practical experience in evacuating victims, procedures for securing vital objects during disasters, technical challenges encountered in the field, and the readiness and adequacy of equipment used in emergency response. Coordination and collaboration assess how the police coordinate with regional disaster management agencies, the military, and other relevant institutions, the effectiveness of inter-agency communication, the existence of coordination forums or joint meetings, and constraints that may hinder coordination efforts. Attitude and commitment explore the perceived role of the police in protecting the public during disasters, the level of personnel commitment to disaster response tasks, dilemmas arising from balancing routine policing duties with disaster

responsibilities, and the motivation of officers during field operations. Resource availability examines the adequacy of personnel assigned to disaster management, the availability of supporting facilities and infrastructure, access to disaster-related information and data, and additional resources or support required to enhance disaster response effectiveness.

2.3 Thematic Analysis

Thematic analysis (TA) is a widely used qualitative method that offers a flexible yet systematic approach to identifying, analysing, and reporting patterns or themes within data. Braun and Clarke’s six-phase framework has been extensively applied across disciplines such as health, education, and the social sciences, emphasizing researcher reflexivity and theoretical transparency to ensure analytical rigor and credibility [19].

TA is not tied to a specific theoretical perspective, making it suitable for both inductive and deductive approaches. The six phases include: data familiarization, initial coding, theme development, theme review, theme definition and naming, and report writing. These processes provide a structured process for generating meaningful insights while maintaining close engagement with the data [18].

3 Result and Discussion

This study employed Braun and Clarke’s six-phase thematic analysis to examine how policing institutions in Aceh operationalize disaster management and how existing operational gaps are navigated in practice. Analysis of interview transcripts with senior police officials at provincial and district levels revealed six interrelated themes (see Fig. 1) that collectively explain the challenges and adaptive strategies shaping police disaster response in Aceh.

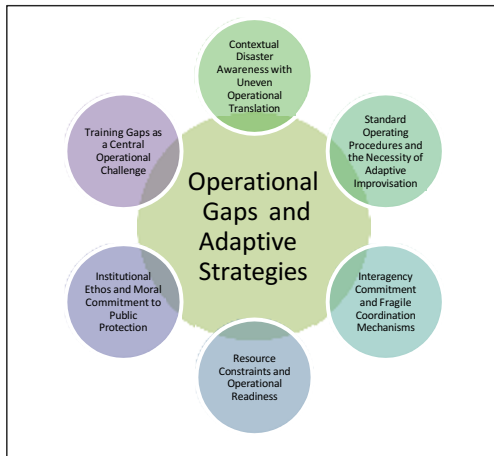


FIGURE 1. Thematic structure of police disaster management practices in Aceh, illustrating key operational gaps and adaptive strategies.

3.1 Disaster Management Practices in Aceh

1. Contextual Disaster Awareness with Uneven Operational Translation

The findings indicate that senior police leadership in Aceh demonstrates a strong contextual awareness of disaster risks, shaped by the province’s geographical vulnerability and its historical exposure to catastrophic events,

particularly the 2004 Indian Ocean tsunami. Informants consistently articulated familiarity with recurrent hydrometeorological and geological hazards, reflecting what Weichselgartner and Pigeon describe as the critical role of risk knowledge in disaster risk reduction processes [4]. This awareness aligns with post-tsunami institutional reforms in Aceh that emphasize disaster risk governance and regulatory strengthening [3,15].

However, this contextual awareness is not uniformly translated into operational readiness across organizational levels. Knowledge of disaster procedures, risk mapping, and preparedness planning tends to be concentrated at leadership and command levels, while frontline personnel often rely on experiential learning acquired during past emergencies. This finding resonates with Hagelsteen and Becker's [9] argument that institutional capacity development in DRR often suffers from a "knowledge-to-practice gap," where strategic understanding fails to permeate routine operational practices. In Aceh, this gap suggests that institutional learning remains uneven, limiting the effectiveness of preparedness measures before disasters occur.

2. Standard Operating Procedures and the Necessity of Adaptive Improvisation

The analysis further reveals that while disaster-related standard operating procedures (SOPs) are formally established and widely acknowledged, their application in the field frequently requires contextual adaptation. Informants emphasized that Aceh's geographical conditions (such as remote mountainous terrain, limited infrastructure, and communication disruptions during disasters) often prevent strict procedural compliance. Consequently, police personnel engage in improvisational decision-making to sustain operational effectiveness.

Rather than being viewed as a procedural failure, such improvisation reflects adaptive capacity, a key component of effective disaster governance in complex and uncertain environments [9]. This finding supports Dudek's [17] observation that police institutions operating within rigid command structures must nonetheless exercise situational flexibility during crises. In line with Hong and Lee [18], adaptive improvisation emerges as a practical response to operational uncertainty, reinforcing the need to balance procedural discipline with contextual responsiveness in disaster policing.

3. Interagency Commitment and Fragile Coordination Mechanisms

A prominent theme concerns interagency collaboration between the police, Regional Disaster Management Agencies (BPBD), the Indonesian National Armed Forces (TNI), and search-and-rescue units. Informants consistently described a strong commitment to cooperation grounded in shared humanitarian objectives and accumulated experience from joint operations. This reflects the collaborative ideals embedded in Indonesia's disaster management framework and Aceh's institutional emphasis on multi-actor synergy [14].

Despite this commitment, coordination mechanisms remain fragile, particularly during the early stages of disaster response. Communication often relies on informal networks, and unified command structures are frequently established only after initial response actions have commenced. Similar coordination challenges have been documented in sub-national disaster governance in Indonesia, where institutional fragmentation and unclear authority lines undermine early response effectiveness [12,15]. The reliance on goodwill rather than institutionalized coordination frameworks exposes vulnerabilities in disaster governance, echoing findings by Husna et al. [16] on information delays and coordination bottlenecks in Aceh's disaster response system.

4. Resource Constraints and Operational Readiness

Resource limitations emerged as a significant constraint on police disaster response capabilities. Informants highlighted shortages of specialized rescue equipment, transportation assets, and logistical support necessary for rapid evacuation and emergency operations. These limitations increase reliance on external agencies, which may delay response times during critical early phases of disaster events.

This finding is consistent with broader DRR literature emphasizing that institutional effectiveness is not solely determined by personnel commitment but also by material and logistical capacity [7,9]. Similar challenges have been reported in studies of disaster preparedness among government agencies in Aceh, where inadequate infrastructure and limited access to real-time information constrain operational readiness [16]. While police personnel frequently compensate for these constraints through improvisation and interagency support, such dependency reflects structural vulnerabilities that hinder sustainable disaster preparedness.

5. Institutional Ethos and Moral Commitment to Public Protection

Despite structural and logistical constraints, the analysis reveals a strong institutional ethos centered on public protection and humanitarian responsibility. Informants consistently framed disaster response as an intrinsic policing

duty rather than an auxiliary task. This moral commitment is deeply shaped by Aceh's historical experience with large-scale disasters, which has fostered a collective sense of obligation among police personnel to prioritize community safety.

This normative orientation aligns with Wisner et al.'s [5] emphasis on the ethical dimensions of disaster risk reduction and public service responsibility. In Aceh, institutional memory of past disasters appears to function as a motivational force that sustains police engagement even under constrained conditions. However, as noted by Sufri et al. [15], strong normative commitment alone is insufficient without corresponding institutional support systems to translate motivation into consistent operational effectiveness.

6. Training Gaps as a Central Operational Challenge

The most critical theme identified concerns gaps in disaster-related training. While certain specialized units receive targeted training, such programs are not consistently institutionalized across the police organization. Training opportunities are described as irregular, unit-specific, and insufficiently integrated into routine professional development pathways.

This finding mirrors broader concerns in DRR capacity-building literature, which highlights the importance of continuous, institutionalized learning rather than ad hoc training interventions [6,8]. The absence of regular joint simulations with external agencies further exacerbates coordination challenges, limiting shared situational understanding and preparedness. As a result, operational readiness depends heavily on individual experience rather than standardized organizational competence, reinforcing systemic vulnerability in disaster response capacity.

3.2 Synthesizing the Operational Gaps

Taken together, these themes illustrate that police disaster management in Aceh is shaped by a dynamic interplay between strong institutional commitment and persistent operational constraints. The findings reveal interconnected gaps spanning knowledge translation, procedural adaptability, coordination fragility, resource dependency, and training deficiencies. These challenges are consistent with systemic issues identified in disaster governance literature, particularly in decentralized and resource-constrained contexts [9,12].

Bridging these operational gaps requires not only procedural refinement but also the institutionalization of continuous training, strengthened interagency coordination mechanisms, and improved resource allocation. Importantly, integrating frontline experiential knowledge into institutional planning processes may help align strategic awareness with operational realities, thereby enhancing police preparedness and contributing to more resilient disaster governance systems in Aceh and comparable settings.

3.3 Limitations and Further Research

The paper recognizes a methodological shortcoming; the interviewees were limited to senior and mid-level police officials, which might not have reflected the usual operational experiences of frontline personnel in responding to disaster situations. The reason for this deliberate methodological choice lies in the intention of the research endeavor aimed at exploring how disaster management could be understood from the strategic and decision-making perspective of police officials, including administrative responsibility regarding planning and coordination at the provincial and district administrative levels.

These leadership viewpoints play a crucial role in understanding how formal mandates or standard operating procedures are interpreted within the police institution. However, a more inclusive approach may be called for in subsequent research studies to gain a full understanding of disaster policies and how they are enacted in practice through a multi-viewpoint approach that includes the viewpoints of police officers as well as non-sworn emergency responders like disaster management organizations or military assistance, search and rescue organizations.

4 Conclusion

This study examined police disaster management practices in Aceh, Indonesia, using Braun and Clarke's thematic analysis to identify key operational gaps and adaptive responses. The findings indicate that the Aceh Regional Police possess strong contextual awareness of disaster risks and a deeply embedded institutional commitment to public protection, shaped by geographical vulnerability and historical disaster experience. This normative strength enables

police personnel to respond rapidly and adaptively during disaster events. However, the translation of this commitment into consistent operational effectiveness remains constrained by several interrelated gaps. Disaster-related knowledge and standard operating procedures are unevenly internalized across organizational levels, resulting in disparities between strategic planning and frontline implementation. Interagency collaboration is characterized by high commitment but relies heavily on informal coordination, particularly in the early response phase, leading to delays in unified command. Resource limitations, especially in evacuation equipment and logistical support, further increase dependence on external agencies. Most critically, disaster preparedness training remains irregular and insufficiently institutionalized, causing operational readiness to depend largely on individual experience rather than standardized organizational capacity.

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