



Mainstreaming Disaster Risk Reduction into Local Governance: The Contribution of Focal Points, Participatory Workshops, and Technical Assistance in Pidie Jaya Regency, Indonesia

Risma Sunarty^{1*}, Muhammad Nur Akmal¹

¹ Disaster Management Study Program, Faculty of Engineering, Universitas Muhammadiyah Aceh, Banda Aceh, Indonesia.

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Corresponding Author:

Risma Sunarty

risma.sunarty@unmuha.ac.id

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Abstract: This study examines the contribution of focal point mechanisms, participatory workshops, and technical assistance in mainstreaming disaster risk reduction (DRR) into local governance in Pidie Jaya Regency, Indonesia. The study employed a descriptive approach combining qualitative and simple quantitative analyses through document review, institutional role mapping, surveys, and observations of cross-sectoral socialization and workshop activities involving 25 local government agencies. The findings reveal that the establishment of focal points and task-based socialization significantly enhanced institutional understanding of disaster management responsibilities and inter-agency coordination, with comprehension levels ranging from 86.7% to 96.4% and overall assessment scores exceeding 91%. In addition, participatory workshops and continuous technical assistance effectively facilitated the identification of institutional roles, strengthened cross-sectoral collaboration, and supported the integration of disaster risk reduction priorities into sectoral planning documents, including strategic plans and annual work plans. All workshop indicators recorded positive scores ranging from 88.5% to 94.5%, with an overall effectiveness score of 90.91%. These findings demonstrate that participatory and collaborative approaches supported by continuous technical assistance play a significant role in embedding disaster risk reduction into local governance systems. The study concludes that mainstreaming disaster risk reduction requires more than formal planning instruments; it depends on institutional capacity, effective coordination mechanisms, and sustained stakeholder engagement. Focal point mechanisms, participatory workshops, and technical assistance represent complementary strategies for promoting integrated and sustainable local disaster governance.

Keywords: Disaster risk reduction; Focal points; Local governance; Participatory workshops; Technical assistance

Introduction

Indonesia is widely recognized as one of the most disaster-prone countries in the world (Khafian, 2023). Its geographical location at the intersection of major tectonic plates, combined with complex climatic conditions, exposes the country to a wide range of natural hazards, including earthquakes, tsunamis, floods, landslides, droughts, and extreme weather events (Rayawan et al., 2026; Yolanda et al., 2025). These

hazards not only threaten human lives but also disrupt social stability and hinder long-term development (Vidyattama et al., 2021; Wijatmoko et al., 2023). Consequently, disaster risk reduction (DRR) has become an essential component of sustainable development and resilience building (Yusima, 2026).

To address these challenges, disaster management in Indonesia is governed by Law No. 24 of 2007 on Disaster Management, which emphasizes that disaster management is a shared responsibility among the

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central government, local governments, and communities. This legal framework is further reinforced by Government Regulation No. 21 of 2008 and Minister of Home Affairs Regulation No. 101 of 2018, which provide technical and operational guidance for disaster management at the local level (Asmara, 2023a). At the national planning level, the government established the National Disaster Management Master Plan (RIPB) 2020–2044, which promotes an integrated, adaptive, and sustainable disaster management system (Sunarty et al., 2026). The framework highlights that disaster risk reduction should not be treated as a stand-alone agenda but should be mainstreamed into national and regional development planning processes (Suasa et al., 2026).

Previous studies have primarily focused on disaster risk assessment, hazard mapping, and policy formulation. Several studies have also emphasized the importance of institutional coordination and community preparedness in disaster management. However, relatively limited attention has been paid to how disaster risk reduction is practically mainstreamed into local governance systems (da Fonseca et al., 2025; Marlina et al., 2025). Existing studies tend to focus on the existence of planning documents and regulatory frameworks, while less attention has been devoted to the institutional mechanisms and capacity-building processes required to translate disaster risk reduction priorities into sectoral planning and routine government practices (Toyoda et al., 2023). In particular, empirical evidence regarding the roles of focal point mechanisms, participatory workshops, and technical assistance in strengthening inter-agency collaboration and facilitating the integration of DRR into local governance remains scarce (Pescaroli et al., 2022). This represents an important research gap in understanding the practical dimensions of disaster risk reduction mainstreaming at the local level.

At the regional level, these policy directions are reflected in the Disaster Management Plan (Rencana Penanggulangan Bencana/RPB) of Pidie Jaya Regency 2025–2029, which outlines disaster risk assessments, strategic priorities, and action plans to guide Regional Government Organizations (OPD) in integrating disaster management into their respective development programs (Government of Bireun, 2025). However, disaster management is not solely the responsibility of the Regional Disaster Management Agency (BPBD); rather, it requires active participation and coordination among multiple sectors in accordance with their respective mandates and functions (Isya et al., 2021; Sunarty et al., 2026). Effective disaster governance therefore depends on institutional collaboration, shared responsibilities, and the integration of disaster risk reduction considerations into planning and decision-

making processes across government agencies (Januarti et al., 2021).

Pidie Jaya Regency, located in Aceh Province, faces significant disaster risks, including floods (Yamani et al., 2015), extreme weather events, tsunamis, earthquakes (Apriyadi et al., 2021), landslides, and coastal erosion. In addition, the Disaster Management Plan 2025–2029 identifies several strategic challenges, including limited integration of disaster management into development planning and budgeting processes, inadequate preparedness capacities, insufficient mitigation measures, low public awareness, and the need to improve the professionalism and technical competence of government personnel (Haque et al., 2024). These challenges indicate that disaster management should be viewed not merely as a technical issue but also as a governance issue requiring strong institutional coordination and continuous capacity development (Dwirahmadi et al., 2023). In response to these challenges, various institutional approaches have been introduced in Pidie Jaya Regency, including the establishment of focal point mechanisms, participatory workshops, and technical assistance programs aimed at strengthening inter-agency coordination and facilitating the integration of disaster risk reduction into sectoral planning. Nevertheless, the effectiveness of these mechanisms in promoting disaster risk reduction mainstreaming within local governance has not been adequately examined (Sunarty et al., 2026).

Therefore, the novelty of this study lies in its investigation of how focal point mechanisms, participatory workshops, and technical assistance contribute to mainstreaming disaster risk reduction into local governance. Unlike previous studies that mainly focus on disaster policies and risk assessments, this study emphasizes institutional processes and collaborative mechanisms that enable disaster risk reduction to be embedded within sectoral planning and development practices. Accordingly, this study aims to analyze the contribution of focal points, participatory workshops, and technical assistance in promoting the integration of disaster risk reduction into local governance in Pidie Jaya Regency, Indonesia.

Method

Research Design

This study employed a descriptive research design utilizing a qualitative approach complemented by simple quantitative analysis. The qualitative component was used to examine policy content, institutional roles, and the implementation process of the disaster management framework. Meanwhile, the quantitative component was applied to assess the levels of

understanding and the effectiveness of coordination among OPDs.

The study focused on the implementation of the RPB Kabupaten Pidie Jaya 2025–2029 (Disaster Management Plan of Pidie Jaya Regency 2025–2029), with particular emphasis on the alignment between the Disaster Management Plan and the mandates, duties, and functions of local government agencies.

Data Collection Techniques

Document Analysis

A systematic document analysis was conducted using several key sources, including: (a) The Rencana Penanggulangan Bencana (RPB) Kabupaten Pidie Jaya 2025–2029 (Disaster Management Plan of Pidie Jaya Regency 2025–2029); (b) The Kajian Risiko Bencana (KRB) 2023–2028 (Disaster Risk Assessment 2023–2028); (c) Relevant national regulatory frameworks, including Law No. 24 of 2007 on Disaster Management and Government Regulation No. 21 of 2008 concerning the Implementation of Disaster Management; and (d) Regional development planning documents, including the Regional Medium-Term Development Plan (RPJMD), Strategic Plans (Renstra), and Annual Work Plans (Renja). (e) The document analysis was undertaken to identify key strategic issues, i.e. priority disaster risks, policy directions, and institutional mandates relevant to disaster management.

Institutional Mapping of OPD Functions

Institutional mapping was conducted to identify and classify the roles of OPD throughout the disaster management cycle, encompassing the pre-disaster, emergency response, and post-disaster phases. This process involved reviewing formal mandates, organizational structures, and sector-specific responsibilities to assess their alignment with the objectives and implementation RPB framework.

Survey

A structured questionnaire was administered to representatives from 25 Regional Government Organizations in Pidie Jaya Regency. The survey instrument comprised 15 indicators designed to assess: (a) Understanding the contents of the RPB; (b) Clarity of institutional roles; (c) Effectiveness of inter-agency coordination mechanisms; (d) Understanding of the focal point approach; and (e) Readiness to integrate disaster risk reduction measures into sectoral planning and development programs.

Survey responses were analyzed using descriptive statistical techniques based on percentage distributions to evaluate levels of institutional understanding and organizational preparedness for implementing disaster management initiatives.

Participatory Workshops and Technical Assistance

The study further employed participatory approaches through interactive workshops, focus group discussions (FGDs), disaster scenario simulations, and planning clinics. These activities were designed to: (a) Strengthen cross-sectoral coordination; (b) Identify gaps in existing programs and institutional capacities; (c) Support the formulation of disaster risk reduction initiatives; and (d) Facilitate the integration of disaster risk reduction priorities into OPD strategic plans and annual work plans.

Data derived from observational records, workshop discussions, and planning outputs were analyzed qualitatively to assess institutional engagement and readiness for the implementation of disaster management strategies.

Data Analysis

Qualitative data were analyzed using content analysis techniques to examine policy alignment, institutional coordination, and governance dynamics associated with the implementation of the Disaster Management Plan. Quantitative data obtained from the survey were analyzed using descriptive statistical methods, primarily percentage distributions, to illustrate response patterns across the measured indicators.

Result and Discussion

Literature Review and Document Analysis

This study commenced with a comprehensive review of the Disaster Management Plan (RPB) of Pidie Jaya Regency 2025–2029, relevant regulatory frameworks, and disaster management literature. The RPB serves as the principal policy instrument for guiding disaster risk reduction efforts at the local level. It encompasses disaster risk assessments, regional capacity analyses, strategic priorities, and action plans that provide operational direction for Regional Government Organizations (OPD) and other stakeholders in mainstreaming disaster risk reduction into regional development planning. According to the United Nations Office for Disaster Risk Reduction (UNDRR) (Benson et al., 2004), disaster risk reduction should be systematically integrated into development policies and planning processes to reduce potential losses and enhance community resilience (Jaya, 2024).

The development of the RPB is founded upon Indonesia's national disaster management framework, particularly Law No. 24 of 2007 on Disaster Management (Asmara, 2023b), Government Regulation No. 21 of 2008 concerning the Implementation of Disaster Management, and Minister of Home Affairs Regulation No. 101 of 2018 regarding Minimum Service Standards

in the disaster management sub-sector (Kemendagri, 2018). In substantive terms, the RPB is aligned with both national and regional development planning documents, including the National Disaster Management Master Plan 2020–2044, the National Medium-Term Development Plan (RPJMN), the Aceh Development Plan, and the Regional Medium-Term Development Plan (RPJMD) of Pidie Jaya Regency. Such alignment ensures that disaster management objectives are integrated within broader regional development strategies. As emphasized by UNDRR, the integration of disaster risk reduction into development planning is essential to prevent disaster-related losses from undermining long-term development outcomes. According to the Disaster Management Plan of Pidie Jaya Regency 2025–2029, the regency faces eleven potential disaster hazards. Among these, six have been identified as priority hazards: floods, extreme weather events, coastal erosion, landslides, tsunamis, and earthquakes. This prioritization reflects a risk-based approach to disaster management, enabling decision-makers to allocate resources more strategically and implement targeted risk reduction measures (Sunarty et al., 2026).

Furthermore, the RPB identifies five major strategic challenges: (a) Limited integration of disaster management and climate change adaptation into regional planning and budgeting processes; (b) Inadequate preparedness and emergency response capacities; (c) Insufficient implementation of structural mitigation measures; (d) Low levels of public awareness and disaster risk literacy; and (e) Limited professional capacity among disaster management personnel.

These strategic challenges provide the foundation for pursuing the overarching goal of disaster management in Pidie Jaya Regency, namely the enhancement of community resilience through an effective, integrated, and climate-responsive disaster management system. From a theoretical perspective, the pentahelix approach is recognized as a key framework for strengthening regional resilience through collaboration among government institutions, the private sector, communities, academic institutions, and the media. Such multi-stakeholder engagement facilitates the mobilization of resources, knowledge sharing, and collective action in disaster risk reduction initiatives. Furthermore, the Build Back Better principle serves as a guiding framework for post-disaster rehabilitation and reconstruction, ensuring that recovery efforts contribute to enhanced long-term resilience and reduced vulnerability rather than merely restoring pre-disaster conditions. These perspectives are consistent with the findings of Djalante et al. (2011), who emphasized that strengthening disaster resilience requires adaptive and collaborative governance

involving multiple stakeholders across different sectors. Similarly, Wisner et al. (2012) argued that disaster risk reduction should be embedded within development processes and supported by coordinated actions among governments, communities, and other actors. In addition, Kennedy et al. (2008) highlighted that the Build Back Better principle plays a crucial role in ensuring that post-disaster recovery enhances long-term resilience and reduces future vulnerabilities rather than merely restoring pre-disaster conditions



Figure 1. Multi-disaster risk map of Pidie Jaya Regency
(Source: 2023 Analysis Results)

The disaster profile of Pidie Jaya Regency was assessed using composite indicators of hazard, vulnerability, and capacity, which collectively determine the overall level of disaster risk. The analysis indicates that both the Disaster Risk Index/*Indeks Risiko Bencana* (IRB) over the past six years and the Regional Preparedness Index for the 2017–2024 period remain within the moderate-risk category. The Multi-Hazard Risk Map of Pidie Jaya Regency (see Figure 1) further illustrates the spatial distribution of disaster risk across the region. Most areas are categorized as moderate risk (orange), while several locations are identified as high-risk zones (red), and only a limited number of areas fall within the low-risk category (green). This pattern suggests that, despite improvements in regional preparedness and institutional capacity, substantial levels of exposure and vulnerability persist across the regency. Furthermore, the findings indicate that disaster

risk conditions remain dynamic and are influenced by changes in environmental, socio-economic, and governance factors.

Therefore, comprehensive and well-coordinated efforts in disaster mitigation, adaptation, and resilience building are essential to reduce the Disaster Risk Index and achieve a lower risk classification in the subsequent planning period. These findings are consistent with the principles of the Sendai Framework for Disaster Risk Reduction, which advocates for the integration of disaster risk reduction into development planning and governance processes. They also align with the perspective of the United Nations Office for Disaster Risk Reduction (UNDRR), which emphasizes that disaster risk reduction initiatives are most effective when measures to reduce hazards, manage vulnerabilities, and enhance institutional capacities are pursued in a coordinated and mutually reinforcing manner.

Mapping of OPD Duties and Functions

In addition to the document analysis, this study undertook an institutional mapping of the duties and functions (Tupoksi) of Regional Government Organizations (OPD) to evaluate their alignment with the framework. The mapping process examined the roles and responsibilities of each OPD throughout the disaster management cycle, encompassing the pre-disaster, emergency response, and post-disaster recovery phases. The results provide a systematic overview of institutional responsibilities and demonstrate how sector-specific mandates contribute to the implementation of disaster management policies and programs. This mapping also facilitates a clearer understanding of the interrelationships among government agencies and their respective contributions to disaster risk reduction efforts.

Table 1. Identification and Function Map of Each OPD

Institution/ Agency	Pre-Disaster Phase	During Disaster (Emergency Response)	Post-Disaster Phase
Regional Disaster Management Agency (BPBD)	Risk assessment, contingency planning, community outreach, and training	Emergency command coordination, evacuation, and logistics management	Rehabilitation and reconstruction coordination, and evaluation
Regional Development Planning Agency (Bappeda)	Integration of Disaster Risk Reduction (DRR) into RPJMD/RKPD and development planning forums	Coordination of disaster impact data	Formulation of post-disaster recovery development policies
Public Works and Spatial Planning Agency	Structural mitigation, including drainage systems, embankments, and spatial planning regulations	Emergency repair of critical infrastructure	Reconstruction of roads, bridges, and public facilities
Transportation Agency	Evacuation route mapping and transport fleet readiness	Traffic management and alternative routes	Restoration of transportation systems and accessibility
Land Affairs Agency	Disaster-safe spatial planning policies	Provision of emergency and evacuation sites	Spatial analysis for relocation and permanent housing development
Dayah Education Agency	Disaster risk reduction education for students (santri)	Provision of temporary shelters, clothing, and food assistance	Rehabilitation of dayah education facilities
Education and Culture Agency	Integration of DRR into the school curriculum	Provision of emergency schools and shelters	Rehabilitation of schools and education services
Health Agency	Public health education and preparedness of health centers and hospitals	Medical posts, emergency services, and drug distribution	Health recovery programs and psychosocial services
Social Affairs Agency	Identification of vulnerable groups and logistics warehouse management	Shelter management, aid distribution, and social services	Social rehabilitation and victim protection services
Agriculture and Food Security Agency	Agricultural risk identification and farmer outreach	Monitoring of disaster impacts on agriculture	Provision of seeds and fertilizers and strengthening of food security
Marine and Fisheries Agency	Coastal vulnerability and fisherfolk risk identification	Monitoring of damage to marine infrastructure	Livelihood recovery support for fishers

Institution/Agency	Pre-Disaster Phase	During Disaster (Emergency Response)	Post-Disaster Phase
Communication and Informatics Agency	Disaster awareness dissemination through media	Emergency information dissemination and early warnings	Communication system recovery
Environmental Agency	Ecosystem-based mitigation outreach	Environmental impact control	Ecosystem and environmental restoration
Industry, Trade, Cooperatives, and SMEs Agency	Ensuring the availability of essential goods	Price stabilization and logistics distribution	SME recovery support
Manpower and Transmigration Agency	Mapping of vulnerable workforce groups	Data collection on affected workers	Job training and economic empowerment programs
Housing and Settlement Agency	Mapping of disaster-prone housing areas	Provision of temporary housing	Permanent housing construction and rehabilitation
Population and Civil Registration Agency (Disdukcapil)	Population data management	Registration of victims and evacuees	Emergency population document services
Tourism Agency	Disaster mitigation planning in tourism areas	Protection of tourist destinations	Tourism sector recovery
Inspectorate	Audit of DRR funding preparedness	Oversight of emergency budget utilization	Post-disaster financial audit
Civil Service Police Unit and Fire and Rescue Service	Personnel readiness and evacuation drills	Security enforcement, evacuation, and firefighting	Post-disaster security and public order enforcement
Agency for Civil Service and Human Resources Development (BKPSDM)	Capacity building and civil servant training	Personnel mobilization	Certification and evaluation of disaster-related human resources
Regional Secretariat	Inter-agency coordination and DRR regulation	Coordination support during emergency response	Policy harmonization for recovery
Indonesian National Armed Forces and National Police (TNI/Polri)	Personnel readiness, heavy equipment, and logistics preparedness	Evacuation, rescue operations, and site security	Security and logistics support during recovery
Indonesian Red Cross (PMI) and Social Organizations	Volunteer training and preparedness	Emergency medical services and blood donation	Social and psychological rehabilitation support

The institutional mapping results indicate that disaster management responsibilities in Pidie Jaya Regency are distributed among multiple OPD in accordance with their respective sectoral mandates. Each institution contributes to different stages of the disaster management cycle, including pre-disaster preparedness, emergency response, and post-disaster recovery. This finding is consistent with previous studies, which emphasize that effective disaster management requires strong cross-sectoral coordination and clearly defined institutional roles to ensure that disaster risk reduction is systematically integrated into regional governance and development planning processes.

Berchtold et al. (2020) demonstrated that interorganizational cooperation serves as a critical factor in improving disaster management effectiveness and overcoming institutional barriers. Similarly, Nespeca et al. (2020) argued that coordinated actions supported by well-defined actor responsibilities and communication systems enhance collective disaster response capacities. Furthermore, Vij et al. (2020) emphasized that disaster governance relies on institutional arrangements and collaboration among multiple actors to strengthen resilience and support integrated risk management.

More recently, Danar et al. (2024) found that collaborative governance mechanisms significantly contribute to the successful implementation of disaster governance and the achievement of more adaptive and sustainable disaster management practices. These findings suggest that the distribution of sector-specific responsibilities among OPD provides an important institutional foundation for strengthening disaster risk governance and mainstreaming disaster risk reduction into local development processes.

Socialization Based on OPD Mandates and the RPB Focal Point Approach

One of the key strategies employed in implementing the 2025–2029 RPB in Pidie Jaya Regency was the delivery of socialization activities tailored to the mandates and functional responsibilities of OPD. This strategy was developed in response to the limited cross-sectoral understanding of institutional roles within the disaster management cycle. Rather than relying on a generic dissemination approach, the socialization program was specifically designed according to the responsibilities assigned to each OPD under the RPB framework, thereby promoting more effective, consistent, and measurable implementation.

A central component of this strategy is the focal point approach. Under this mechanism, each OPD designates a focal point who serves as the primary liaison responsible for facilitating coordination between the BPBD, as the lead institution for disaster management, and the internal units of the respective agency. The establishment of focal points aims to reduce coordination barriers, improve communication flows, and strengthen inter-agency collaboration. By assigning dedicated personnel who possess a thorough understanding of the RPB and its implementation requirements, each OPD is better positioned to translate disaster management priorities into sectoral programs, operational activities, and institutional planning processes. For example, focal points within the Health Office are assigned from the public health services division, whereas those within the Public Works and Spatial Planning Office are drawn from divisions responsible for infrastructure development and spatial planning.

The content of the socialization activities was customized according to the specific mandates of each OPD. The Education Office received guidance on integrating disaster risk reduction into educational programs and optimizing school facilities as potential emergency evacuation sites. Meanwhile, the Agriculture Office was provided with materials related to maintaining food security and agricultural resilience during disaster events. Similar adaptations were made for other OPDs to ensure that the information delivered was directly relevant to their respective responsibilities. Through this approach, disaster management is no longer perceived solely as the responsibility of BPBD but is increasingly recognized as an integral component of the functional mandate of each government institution.

The socialization process incorporated visual, digital, and interactive learning methods, including infographics, digital learning modules, and educational videos, to improve OPDs personnel understanding of the RPB. The adoption of digital communication tools represents an important innovation in accelerating the institutionalization of disaster management policies, particularly within the broader context of digital governance. Similar findings were reported by Izumi et al. (2019), who emphasized that innovation and knowledge-sharing mechanisms play a crucial role in strengthening institutional capacities and enhancing the implementation of disaster risk reduction policies. Likewise, Weichselgartner et al. (2015) argued that effective disaster risk reduction requires not only the dissemination of information but also the transformation of information into actionable knowledge that supports coordinated decision-making and policy implementation. In addition, focal points functioned as internal change agents who continuously

disseminated knowledge and facilitated information sharing within their respective organizations.

Focal points functioned as internal change agents who continuously disseminated knowledge and facilitated information sharing within their respective organizations. These findings support previous studies highlighting that effective disaster risk reduction depends on strong institutional coordination, clearly defined sectoral responsibilities, and the integration of disaster management functions across government agencies. Based on data collected from 25 OPDs, the levels of understanding regarding institutional duties and functions (Tupoksi), as well as the effectiveness of inter-agency coordination, are presented in Figure 2.



Figure 2. Levels of understanding of institutional roles and coordination effectiveness among OPDs

Figure 2 presents the distribution of understanding among 25 respondents across 15 indicators related to the socialization of the 2025–2029 RPB Plan. The level of understanding among OPD personnel ranges from 86.7% to 96.4%, indicating a very high degree of acceptance and internalization of the policy. Variations across indicators illustrate differences in how the Tupoksi-based socialization approach and the focal point concept were perceived in various aspects of RPB implementation. For the initial indicators concerning understanding of the RPB substance and its alignment with OPD duties and functions (Questions 1–3), the level of understanding ranges from 90.2% to 93.6%. These findings suggest that most OPDs have comprehensively understood the content of the RPB and the relevance of their institutional roles within the disaster management cycle. This result confirms that a socialization strategy tailored to organizational mandates effectively addresses cross-sectoral understanding gaps, which were among the key considerations in the formulation of the 2025–2029 RPB.

Indicators directly related to the RPB focal point concept (Questions 4 and 6) show understanding levels

of 96.4% and 86.7%, respectively. These results indicate that the focal point mechanism has been well understood by most respondents. Nevertheless, continuous efforts are required to strengthen the focal point's strategic role as a liaison for inter-OPD coordination.

This finding is consistent with the characteristics of effective bureaucratic coordination, which emphasize role clarity, communication flow, and consistency in policy implementation across sectors. Regarding coordination and OPD involvement (Questions 5, 9, 10, and 11), understanding levels range from 88.9% to 94.5%. The findings suggest that the establishment of focal points has contributed significantly to improving coordination both among OPDs and between OPDs and the BPBD as the lead coordinating institution for disaster management. The high scores indicate that cross-sectoral collaboration has become increasingly integrated and effective. Indicators assessing the relevance of the socialization materials and delivery methods (Questions 7 and 8) show very high levels of understanding, reaching 93.0% and 94.1%, respectively. These results demonstrate that visual, digital, and interactive communication approaches effectively enhance officials' comprehension of the technically oriented RPB content. The use of infographics, digital modules, and educational videos appears to facilitate faster internalization of the RPB within the regional bureaucracy.

Furthermore, for indicators related to preparedness and integration of the RPB into OPD work programs (Questions 12 and 13), understanding levels range from 88.9% to 89.5%. This suggests that the socialization process has not only strengthened conceptual understanding but has also encouraged OPDs to incorporate RPB objectives into planning processes and routine institutional activities. Such outcomes align with the primary objective of the Tupoksi-based socialization approach, namely embedding disaster management responsibilities within the core functions of government institutions.

Indicators measuring implementation effectiveness and overall evaluation of the socialization process (Questions 14 and 15) obtained very high scores of 91.0% and 91.1%, respectively. These findings indicate that respondents generally perceive the Tupoksi-based and focal point-oriented socialization strategy as highly effective. The positive assessment reflects a growing sense of ownership among OPDs toward the RPB and enhanced institutional capacity to support integrated disaster management implementation.

The findings demonstrate that the socialization strategy successfully improved understanding, strengthened coordination, and promoted institutional integration of disaster management responsibilities.

These results are consistent with previous studies emphasizing that disaster risk reduction policies are more effective when institutional responsibilities are clearly defined and supported by strong inter-agency coordination. Furthermore, research on disaster governance has shown that targeted capacity-building and knowledge dissemination within government institutions significantly enhance policy internalization and implementation effectiveness at the local level. This observation is consistent with the findings of Imperiale et al. (2021), who emphasized that institutional learning and knowledge dissemination are fundamental for strengthening local governance and enhancing resilience. Similarly, Oktari et al. (2020) highlighted that knowledge management practices, including lesson-learning and knowledge-sharing processes, contribute significantly to improving disaster management performance throughout the disaster management cycle. These findings suggest that continuous capacity-building initiatives and effective communication mechanisms are essential for supporting policy internalization and strengthening disaster governance at the local level.

Interactive Workshops and Technical Assistance in the Implementation Strategy of the 2025–2029 Disaster Management Plan (RPB) of Pidie Jaya Regency

The implementation strategy of the 2025–2029 RPB of Pidie Jaya Regency incorporated interactive workshops and technical assistance as key mechanisms for strengthening institutional capacity and enhancing cross-sectoral collaboration among OPDs. These activities were designed not only as learning forums but also as collaborative platforms to facilitate the integration of DRR into sectoral planning and development processes. Hagelsteen et al. (2016) emphasized that capacity development represents one of the most important mechanisms for strengthening disaster risk reduction and improving institutional performance through continuous learning and stakeholder engagement. Similarly, Bosher et al. (2008) highlighted that mainstreaming disaster risk reduction into development planning requires strong institutional capacity and cross-sectoral collaboration.

The workshop commenced with an orientation session and presentation of the RPB document delivered by the BPBD. Participants, consisting of designated focal points from each OPD, were introduced to the strategic issues, priority programs, key activities, and institutional responsibilities outlined in the RPB. This initial session aimed to establish a common understanding among stakeholders and ensure that each institution clearly recognized its role within the broader disaster management framework. A shared understanding of institutional responsibilities is critical

for promoting coordinated implementation and minimizing overlaps or gaps in policy execution.

Following the plenary session, participants engaged in FGDs organized according to thematic sectors, including infrastructure, social affairs, health, education, and economic development. Within these thematic groups, participants reviewed the relevance of existing programs to the RPB framework, identified institutional responsibilities, and assessed discrepancies between ongoing activities and the priorities outlined in the plan. The discussions generated an initial mapping of institutional roles and a gap analysis that served as a basis for integrating DRR measures into regional development planning and sectoral programs.

The workshop subsequently incorporated disaster scenario simulations based on hazards frequently experienced in Pidie Jaya Regency, particularly earthquakes and major floods. During the simulations, each OPD was required to perform its mandated responsibilities under emergency conditions. This exercise moved beyond theoretical understanding by allowing participants to experience practical coordination processes and inter-agency response dynamics in a simulated disaster context. As a result, participants gained a clearer understanding of operational procedures, communication channels, and coordination mechanisms required during disaster emergencies. Izumi et al. (2019) highlighted that innovative and experiential learning approaches, including simulations and collaborative exercises, can strengthen institutional capacities and enhance the implementation of disaster risk reduction policies.

A central component of the workshop was the planning clinic (coaching clinic), during which technical teams from BPBD and the Regional Development Planning Agency (Bappeda) provided direct assistance to individual OPDs in preparing draft DRR activities for integration into their Strategic Plans (Renstra) and Annual Work Plans (*Renja*). Through this process, sectoral agencies translated RPB priorities into concrete programs and activities. For example, the Public Works Office developed flood-mitigation-oriented drainage improvement projects, the Education Office incorporated school evacuation drills into its educational programs, and the Health Office formulated emergency medical response training initiatives. Consequently, the workshop generated not only conceptual discussions but also practical planning outputs that could be directly incorporated into institutional planning and budgeting processes. According to Weichselgartner et al. (2015), disaster risk reduction becomes more effective when knowledge is transformed into actionable information that supports coordination and evidence-based decision-making among institutions (Weichselgartner et al., 2015).

The workshop concluded with the preparation of a Follow-Up Action Plan. Each OPD identified priority activities for implementation, formally designated a focal point responsible for coordination, and established a timeline for execution. The RTL served as a cross-sectoral commitment mechanism to ensure that RPB implementation remained measurable, accountable, and sustainable. To reinforce these commitments, the workshop was followed by a structured technical assistance program consisting of planning clinics, sector-specific mentoring sessions, and quarterly monitoring and evaluation activities. These follow-up mechanisms were designed to ensure that DRR initiatives developed during the workshop were effectively incorporated into institutional planning documents, including the Renstra, Renja, and Regional Government Work Plan (RKPD). Kelman et al. (2016) emphasized that institutional learning and the continuous exchange of experiences are essential components for strengthening resilience and ensuring the sustainability of disaster risk reduction strategies.

The combination of interactive workshops and sustained technical assistance strengthened institutional ownership of the RPB and facilitated the mainstreaming of disaster risk reduction into regional development planning. This approach supports previous studies demonstrating that participatory workshops, inter-agency collaboration, and capacity-building initiatives are effective strategies for improving institutional coordination and promoting the integration of disaster risk reduction into local development policies and planning frameworks. These findings are in agreement with Hagelsteen et al. (2016), who emphasized the importance of continuous capacity development, and with Bosher et al. (2008), who highlighted the need for cross-sectoral collaboration and institutional strengthening to mainstream disaster risk reduction into development planning.

Based on Figure 3, all indicators achieved scores above 88%, indicating that the workshop and technical assistance activities were perceived very positively by the majority of OPD representatives. The highest score was observed for Question 2 (94.5%), which assessed the alignment of perceptions among OPDs. This finding suggests that respondents considered the workshop to be a highly effective approach for fostering a shared understanding across sectors to support the implementation of the RPB document. Other indicators with notably high scores included Question 13 (94.0%), Question 9 (92.9%), and Question 1 (92.8%), which were related to the role of focal points, the effectiveness of technical assistance, and participants' understanding of strategic issues within the RPB framework, respectively. The strong performance across these indicators demonstrates that the interactive methods employed

during the workshop were successful in enhancing participants' substantive knowledge while simultaneously reinforcing coordination functions essential for RPB implementation. These findings are consistent with previous studies, which have shown that participatory workshops and collaborative learning approaches can substantially strengthen institutional capacity and improve inter-agency coordination in disaster risk reduction initiatives. Similarly, Izumi et al. (2019) emphasized that participatory learning and innovation contribute significantly to strengthening institutional capacities

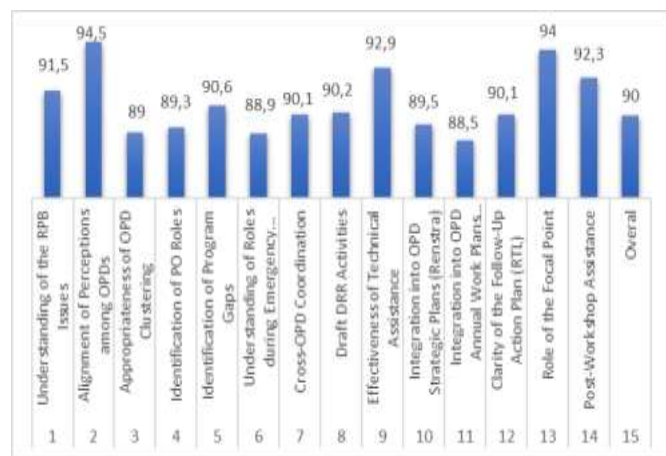


Figure 3. Participants' level of understanding and readiness of DRR draft activities

For indicators related to the identification of OPD responsibilities, understanding of institutional roles during emergency situations, and the provision of post-workshop assistance (Questions 4, 6, and 14), the scores ranged from 88.9% to 92.3%. These results indicate that the workshop served not only as a platform for knowledge dissemination but also as a practical mechanism for assisting OPDs in translating the RPB document into concrete planning processes, preparedness activities, and program implementation. Meanwhile, indicators associated with the alignment of OPD clusters, identification of program gaps, cross-sectoral coordination, and the integration of RPB priorities into the OPD *Renstra* and *Renja* (Questions 3, 5, 7, 10, and 11) yielded scores ranging from 88.5% to 90.6%. Although these values remain within the very strong category, the relatively lower scores suggest that technical coordination and intersectoral program alignment require further strengthening through continuous technical assistance and more structured coordination mechanisms to optimize the integration of RPB principles into sectoral planning processes. Overall, the distribution of scores across the bar chart reveals no substantial disparities among the indicators, suggesting that the positive effects of the workshop and technical

assistance were relatively consistent across the various dimensions of RPB implementation (Kelman et al., 2016) further noted that continuous learning processes and sustained institutional support are critical for maintaining resilience and improving long-term disaster management performance.

Conclusion

The study confirms that disaster risk reduction cannot be effectively achieved through planning documents alone. Successful mainstreaming requires strong institutional capacity, clear coordination mechanisms, and continuous stakeholder engagement. The combination of focal points, participatory workshops, and technical assistance represents complementary strategies that contribute to strengthening collaborative disaster governance and promoting the integration of disaster risk reduction into local development planning. These findings provide practical insights for other local governments seeking to establish more integrated, adaptive, and sustainable disaster management systems.

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Author Contributions

Conceptualization, R.S.; Methodology, R.S.; Validation, M.N.A.; writing—original draft preparation, R.S.; Writing—Review and editing, R.S.

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Conflicts of Interest

The authors declare no conflict of interest.

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