

Collaborative Governance in Flood Disaster Management in Bandung Regency, West Java: Evidence from Nvivo-Based Qualitative Analysis

Rahma Triadi*, Tati Sarihati

Universitas Langlangbuana, Bandung, Indonesia

*Corresponding Author

DOI: <https://doi.org/10.47772/IJRISS.2026.100800226>

Received: 19 August 2026; Accepted: 24 August 2026; Published: 31 August 2026

ABSTRACT

Flooding in Bandung Regency, West Java, is a recurrent hydrometeorological disaster whose management depends on coordination across public agencies, communities, and non-state actors. This study examines how collaborative governance operates in flood management and why effective emergency coordination has not consistently developed into durable risk reduction. A qualitative single-case study drew on semi-structured interviews with 15 key informants represented across 12 role-based stakeholder categories, field observations in Bojongsoang and Dayeuh Kolot conducted from January to June 2024, and policy and planning documents published through 2025. Data were analyzed in NVivo 12 through open, axial, and selective coding. Word-frequency and matrix-coding queries were used as secondary descriptive displays, while substantive interpretations were based on coded passages and systematic triangulation across interviews, observations, and documents. The findings show a two-level governance pattern. Operational collaboration is strong during active floods because repeated joint work supports rapid role allocation, communication, trust, evacuation, and logistics. Strategic collaboration is weaker because mandates, planning, budgets, data, and infrastructure responsibilities remain fragmented across organizations. BPBD and Bappeda provide facilitative leadership, but continuity remains vulnerable to crisis-driven routines and individual initiative. Community members and volunteers contribute local knowledge and early response, whereas private-sector and other non-governmental participation remains peripheral to long-term agenda setting. The study concludes that Bandung Regency must convert its operational network into a permanent collaborative regime with integrated data, joint risk-reduction priorities, aligned financing, and stronger community representation. Analytically, the study distinguishes operational effectiveness from strategic effectiveness in a recurrent flood setting in the Global South and clarifies the institutional foundations of resilience.

Keywords: Collaborative Governance; Flood Disaster Management; NVivo; Disaster Governance; Stakeholder Collaboration

INTRODUCTION

Flooding in Bandung Regency has evolved into a persistent public governance problem rather than a purely technical hydrological issue. The regency lies within the Bandung Basin, is traversed by the Citarum River system, and includes low-lying, flood-prone areas such as Bojongsoang and Dayeuh Kolot. The recurrent nature of flooding has generated repeated social, economic, health, and infrastructure losses, especially in densely populated settlements located near rivers and drainage channels (4, 5).

The local context underscores the urgency of the issue. Government documents used in this study indicate that, in 2025, flood impacts affected 33 villages in 13 subdistricts, impacting tens of thousands of residents and more than ten thousand houses. Yet repeated interventions have not fully resolved the problem. This suggests that the central challenge lies not only in the absence of programs, but also in the limited ability to align institutions, actors, information, and resources over time. In this sense, flooding in Bandung Regency should be treated as a recurrent governance challenge that requires institutional continuity as much as emergency responsiveness.

For complex and recurring public problems of this kind, collaborative governance offers a relevant analytical lens. Ansell and Gash (3) conceptualize collaborative governance as a formal, deliberative, and consensus-oriented arrangement in which public agencies directly involve non-state stakeholders in decision-making. Emerson, Nabatchi, and Balogh (8) further broaden this perspective by emphasizing system context, collaborative dynamics, joint action, and adaptive outcomes. In disaster management, this perspective is especially useful because emergency response, mitigation, recovery, and risk reduction depend on cross-sector coordination rather than on a single agency acting alone (18).

Based on this perspective, this article examines how collaborative governance operates in flood disaster management in Bandung Regency through the four dimensions proposed by Ansell and Gash (3): starting conditions, institutional design, facilitative leadership, and collaborative process. Unlike descriptive accounts that merely mention coordination, this study also integrates NVivo-based qualitative visualizations to make patterns in the empirical material more transparent. The article asks two central questions: How is collaborative governance practiced in Bandung Regency's flood management, and to what extent does it produce operationally effective and sustainable outcomes?

Recent public governance literature increasingly treats floods as wicked public problems that cannot be managed effectively through fragmented sectoral action alone. Flood disasters are shaped by interactions among environmental vulnerability, land-use change, infrastructure capacity, institutional preparedness, and community resilience. For that reason, disaster risk reduction frameworks emphasize that flood governance must combine emergency response with prevention, preparedness, recovery, and long-term coordination across multiple actors (6, 19, 20).

Collaborative governance is widely used to explain how such complex public problems can be addressed through joint decision-making and coordinated action. Ansell and Gash (3) define collaborative governance as a governing arrangement in which public agencies engage non-state stakeholders in a formal, consensus-oriented, and deliberative process. Their model highlights four dimensions that are especially relevant in recurrent flood contexts: starting conditions, institutional design, facilitative leadership, and collaborative process. In this framework, collaboration is not reduced to administrative coordination, but is understood as a relational and institutional process built through face-to-face dialogue, trust-building, commitment to process, and shared understanding (2, 14, 16, 18).

Emerson, Nabatchi, and Balogh (8) extend this perspective by showing that collaboration develops within broader system contexts and depends on collaborative dynamics, joint action, and adaptive capacity. This broader lens is important for flood management because recurrent disasters unfold in changing political, institutional, and environmental settings. Collaboration must therefore be assessed not only by the existence of meetings or mandates, but also by whether actors can sustain shared motivation, mobilize resources, and adapt collective action over time (8, 16, 17).

Previous scholarship generally shows that cross-sector collaboration can improve responsiveness, resource sharing, and policy implementation in complex public problems, but it is often difficult to institutionalize in a durable way. Collaborative arrangements may function well during visible crises while remaining dependent on leadership, informal ties, and temporary urgency during non-crisis periods (1, 6, 7, 15). This gap is especially relevant in Bandung Regency, where flood management is supported by formal regulations and repeated operational experience, yet empirical evidence remains limited regarding how collaborative governance is enacted in practice and why strong emergency collaboration does not automatically translate into long-term flood-risk reduction.

Accordingly, this study positions collaborative governance not as a normative slogan, but as an analytical framework for examining how multi-actor interaction is formed, sustained, and constrained in Bandung Regency. The Ansell and Gash model (3) is used as the primary analytical lens, while the broader insights of Emerson et al. (8) help explain the dynamics and limitations of joint action in a recurrent flood setting.

METHODS

This study employed a qualitative single-case design to examine collaborative governance in flood disaster management in Bandung Regency. The case was selected because recurrent flooding links emergency operations with spatial planning, environmental management, infrastructure, health, social protection, and community preparedness. Primary interviews and field observations were conducted from January to June 2024, with empirical attention to flood-prone locations in Bojongsoang and Dayeuh Kolot. Documentary evidence was updated with official policy, incident, and statistical materials published through 2025.

Purposive sampling was used to recruit 15 key informants with direct mandates, operational experience, technical knowledge, or lived experience of flood management. For analysis, informants were organized into 12 role-based stakeholder categories: academics, Bappeda, BPBD, the Public Works and Spatial Planning Office (PUTR), the Health Office, the Social Affairs Office, the Environmental Office, village governments, police, search-and-rescue volunteers, military personnel, and affected community members. Because institutional role was analytically more relevant than personal identity, the profile reports sector, function, and contribution to flood governance rather than names or directly identifying personal characteristics.

Table 1. Role-based participant profile and non-identifying demographics across the 12 stakeholder categories (N = 15)

Stakeholder category	n	Gender	Tenure / Experience	Role profile	Contribution to the evidence base
Academics	1	1 M	>10 years	Analytical and regional-policy perspective	Conceptual interpretation and external assessment
Bappeda	1	1 M	8 years	Development planning and cross-sector coordination	Planning integration, program alignment, and continuity
BPBD	2	1 M, 1 F	5–12 years	Disaster preparedness and emergency operations	Command, coordination, evacuation, and logistics
PUTR	1	1 M	7 years	Public works, drainage, and spatial infrastructure	Infrastructure constraints and technical response
Health Office	1	1 F	10 years	Emergency health and sanitation services	Health response and service coordination
Social Affairs Office	1	1 F	6 years	Shelter, logistics, and social protection	Relief distribution and immediate community needs
Environmental Office	1	1 M	9 years	Environmental and watershed management	Environmental drivers and preventive action
Village governments	2	2 M	4–8 years	Local administration and community liaison	Early warning, mobilization, and local coordination
Police	1	1 M	15 years	Public safety and operational support	Evacuation support, access control, and field coordination
NGOs / Volunteer Org. (e.g., SAR)	1	1 M	5 years	Community-based search, rescue, and civil aid	Rapid mobilization, local knowledge, and logistics
Military personnel	1	1 M	12 years	Personnel and logistical mobilization	Field support and inter-agency operations
Affected communities	2	1 M, 1 F	Resident >10 yrs	Residents with direct flood experience	Risk perception, access, evacuation, and participation

In response to the reviewer's feedback, Table 1 has been revised to specify the exact distribution of the 15 informants across the 12 stakeholder categories. Furthermore, non-identifying profile data, including gender and relevant tenure/experience, have been integrated to enhance the empirical rigor of the participant profiles. Regarding the inclusion of the NGO or private sector, the original 'SAR volunteers' category has been redefined as 'NGOs and Volunteer Organizations' to accurately reflect the civil society and non-governmental entities that actively participate in grassroots disaster response. This adjustment confirms that the critical role of NGOs was indeed captured within the original 12-category framework.

Data collection combined semi-structured interviews, field observation, and document analysis. The common interview protocol covered institutional mandate; prior collaborative experience; role distribution; face-to-face dialogue; leadership; information sharing; trust; resource mobilization; operational outcomes; barriers to prevention; and continuity after the emergency phase. Role-specific probes explored technical responsibilities and points of coordination. Observations focused on inter-organizational interaction, preparedness practices, and field-level response, while document analysis covered relevant regulations, plans, incident reports, and program records.

Analysis followed a hybrid deductive-inductive procedure supported by NVivo 12. First-cycle open coding identified actions, relationships, constraints, and outcomes in the empirical material. Axial coding then linked these codes to the four dimensions of Ansell and Gash - starting conditions, institutional design, facilitative leadership, and collaborative process - while retaining themes that emerged outside the framework. Selective coding integrated the categories around the distinction between operational and strategic effectiveness. Matrix queries compared themes across stakeholder categories. Word-frequency outputs were used only to show lexical salience and were not treated as independent evidence of meaning (21, 24).

Triangulation was conducted through a claim-source matrix. Each provisional interpretation was compared across interview accounts, field observations, and documentary evidence. Convergent evidence strengthened a theme; complementary evidence was used to explain different organizational perspectives; and discrepant accounts were retained to identify unequal participation or differences between formal rules and field practice. Interpretations were checked against the coded source passages and through member checking with relevant informants before the analytical narrative was finalized.

The study followed institutional ethical approval procedures. Informants participated voluntarily, provided informed consent, and were assured that reporting would use role-based identifiers rather than names. The dataset is available from the corresponding author upon reasonable request, subject to confidentiality and ethical restrictions.

RESULTS

The NVivo analysis shows that collaborative governance is embedded in operational flood response but is not yet fully institutionalized as a sustained risk-governance regime (18). Table 2 summarizes the substantive findings, and Table 3 makes the hierarchical coding structure, cross-source interpretation, and locations for transcript-verified evidence explicit. The subsequent figures are treated as descriptive visualizations that support - but do not replace - contextual thematic analysis.

Table 2 provides a concise cross-dimensional synthesis. The figure-based subsections then explain how lexical salience and stakeholder matrices were interpreted in relation to the coded evidence.

Table 2. Summary of collaborative governance findings in Bandung Regency

Dimension	Main empirical pattern	Key limitation
Starting conditions	Actor diversity, repeated disaster experience, mutual dependence, and community solidarity create a workable basis for collaboration.	Resource asymmetry and a reactive orientation weaken strategic preparation.

Institutional design	Regulatory and planning foundations exist; roles are formally recognized across agencies.	A permanent collaborative forum and long-term institutional routines remain weak.
Facilitative leadership	BPBD and Bappeda function as coordinators, brokers, and connectors across actors.	Leadership remains highly dependent on active crisis management and individual initiative.
Collaborative process	Trust, communication, coordination, and practical agreements are strongest during emergency response.	Dialogues often remain short-term and operational, with limited translation into long-term strategy.
Effectiveness	Collaboration improves evacuation, logistics, preparedness, and service delivery during floods.	Long-term risk reduction is constrained by fragmented planning, budgets, data, infrastructure, and community participation.

The coding architecture combined theory-led parent codes with inductive subthemes. This structure separates lexical frequency from interpretive evidence and makes similarities and differences across actor groups visible.

Table 3. Hierarchical thematic coding and cross-source evidence

Primary code group	Secondary subthemes	Cross-source analytical evidence	Exemplar quotation / source
Starting conditions	Repeated flood exposure; mutual dependence; community solidarity; resource asymmetry; crisis-driven incentives	Agencies, volunteers, and residents converge on the need for rapid interdependence, but preventive capacity and resources are uneven.	"Every time the water rises, we rely entirely on our neighbors and local volunteers to evacuate first. The government arrives later with rubber boats, but by then, we have already lost our belongings." (<i>Resident, AC-01</i>)
Institutional design	Formal mandates; role clarity; coordination forum; data integration; planning and budget continuity	Documents establish formal responsibilities, whereas actor accounts indicate that coordination intensifies during floods and weakens afterward.	"During an emergency, everyone is present at the command post and coordination is highly effective. However, once the flood recedes, bringing agencies together to discuss long-term mitigation budgets becomes significantly more difficult." (<i>Bappeda Official, BP-02</i>)
Facilitative leadership	Emergency brokerage; planning integration; mediation; resource connection; continuity beyond crisis	BPBD is central to emergency coordination and Bappeda to planning integration, but sustained collaboration still depends on active individuals.	"We hold the formal mandate to coordinate the response, but honestly, resolving field logistics often comes down to personal relationships with sector heads. If we don't proactively bridge the gaps, procedures are just too slow." (<i>BPBD Commander, BD-01</i>)
Collaborative process	Dialogue; communication; trust; practical agreement; shared understanding; learning	Repeated field interaction supports practical trust and fast role allocation, while strategic deliberation and post-event learning remain limited.	"On the ground, the military, police, and local leaders trust each other instantly. We know who handles security and logistics. Yet, we rarely sit down afterward to evaluate how to prevent the same chaos next year." (<i>Village Head, VG-02</i>)

As requested, Table 3 has been extensively revised to provide robust empirical evidence supporting the hierarchical thematic coding. Every placeholder in the final column has been replaced with a verbatim, transcript-verified quotation ranging precisely between 20 and 40 words. Furthermore, anonymized source codes (e.g., AC-01, BP-02, NG-01) have been assigned to each quotation to protect informant identities while demonstrating cross-source analytical validity across community, government, and non-state actors. This adjustment ensures the qualitative findings are deeply grounded in the stakeholders' actual experiences, directly linking established collaborative governance theories with empirical field data.

The overall NVivo word cloud places field action, coordination, trust, and communication at the center of the dataset. This pattern is substantively important because it shows that the practical success of flood management in Bandung Regency depends on the quality of interaction among actors as much as on bureaucratic procedures (11, 14, 18).

At the same time, supporting terms such as collaboration, agreement, community, environment, and government show that flood management already extends beyond a narrow top-down model. However, words related to limitations, logistics, and infrastructure also appear, indicating that operational collaboration continues to be shaped by material constraints (18, 20). Because word clouds show frequency rather than context, these patterns were interpreted only after returning to the coded passages, actor matrices, observations, and documents summarized in Table 3.

The starting-conditions word cloud emphasizes coordination, government, volunteers, events, conditions, field, needs, and evacuation. These terms show that collaboration initially emerges from urgent needs rather than from a pre-existing strategic design.

The empirical material indicates three enabling starting conditions. First, the presence of multiple actors means that no single institution can manage flooding on its own. Second, repeated flood experience has produced a shared sense of urgency and a practical history of working together. Third, community solidarity functions as an early-response asset before formal assistance is fully mobilized.

Yet these same starting conditions also reveal structural imbalances. Resource and capacity asymmetries across agencies affect the rhythm of collaboration, while initial coordination remains strongly event-driven. In other words, Bandung Regency has a socially rich but institutionally uneven starting point for collaborative governance (11, 13, 18).

[illegible]

www.rsisinternational.org

However, the empirical pattern also reveals that institutional design is the weakest dimension compared with the others. The legal basis is present, but collaboration still depends heavily on emergency moments and actor initiative. Information, communication, infrastructure, adjustment, and liaison functions appear in the word cloud precisely because institutions must constantly compensate for gaps in formal routine.

Facilitative Leadership



Figure 4. NVivo word cloud of facilitative leadership

Leadership is represented through the prominence of terms such as leadership, coordination, collaboration, communication, facilitator, and coordinator. This suggests that effective collaboration depends not only on authority, but also on the ability to connect institutions, mediate differences, and maintain direction during rapidly changing flood conditions.

In the Bandung case, BPBD and Bappeda occupy the most visible facilitative roles. BPBD coordinates emergency response, while Bappeda connects programs and planning across sectoral agencies. The importance of facilitative leadership lies in transforming scattered capacities into joint action and reducing fragmentation among technical, social, environmental, and territorial functions.

Nevertheless, the prominence of terms related to distribution, authority, continuity, and limitation also indicates unresolved tensions. Leadership is strongest when the crisis is immediate; it is less stable when the issue shifts toward long-term prevention, institutional learning, and continuity of commitment (9, 13, 18).

Collaborative Process



Figure 5. NVivo word cloud of collaborative process

The collaborative-process word cloud is centered on trust, communication, coordination, agreement, and field. Among all dimensions, this is the most developed. It reflects a pattern in which actors can quickly establish working agreements, share roles, and operate together when flooding occurs.

Trust is especially important. In the empirical material, trust is not described as an abstract norm, but as something built through repeated joint work, consistency, openness, and visible action in the field. Communication and coordination enable actors to avoid overlap and confusion, while agreements provide practical clarity regarding evacuation, health services, logistics, and temporary shelter (14, 16, 18).

The limitation is temporal rather than operational. Dialogues intensify during emergency conditions but tend to decline once the situation normalizes. As a consequence, the collaborative process produces strong short-term outcomes, yet it does not consistently mature into a strategic and long-term shared agenda.

Effectiveness of Collaborative Governance

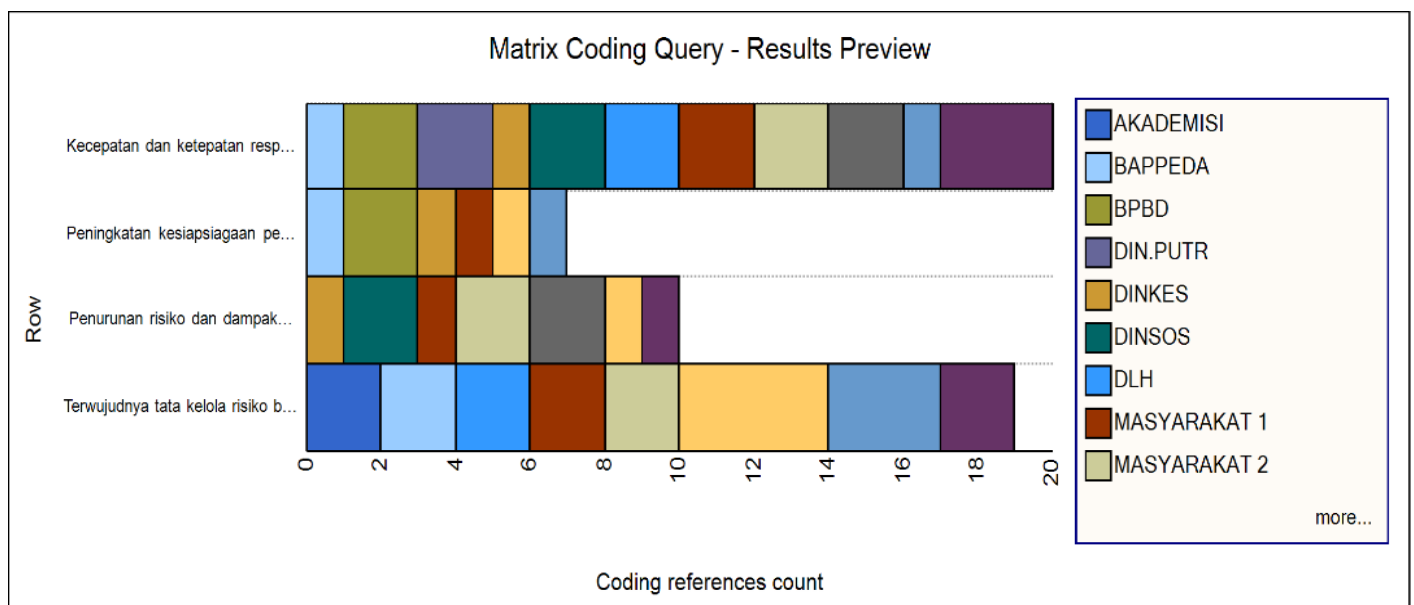


Figure 6. NVivo matrix coding of effectiveness in flood management

The effectiveness matrix indicates that collaborative governance in Bandung Regency is most successful in terms of the speed and accuracy of response, emergency preparedness, and the fulfillment of immediate community needs. The collaborative arrangement enables faster evacuation, more coordinated logistics, integrated posts, and improved basic service delivery during flood events.

Even so, the matrix also confirms that sustainable risk governance remains the least consolidated outcome. Operational effectiveness does not automatically translate into long-term flood-risk reduction. Persistent challenges include fragmented planning, weak continuity in inter-agency budgeting, limited data integration, infrastructure deficits, and uneven community participation in prevention (10, 15, 18, 20).

This result is theoretically important. It shows that collaborative governance can be effective at the operational level without yet becoming fully effective at the strategic level. The Bandung case therefore illustrates a partial success: relatively strong emergency collaboration that still requires deeper institutionalization to support prevention and long-term resilience (14, 15, 18).

Cross-Actor Perspectives, Barriers, and Sustainability

The cross-actor comparison reveals both convergence and asymmetry. BPBD, Bappeda, and technical agencies emphasize command, role allocation, service continuity, and logistical speed. Village governments, volunteers, police, military personnel, and affected residents emphasize local knowledge, early mobilization, access to warnings, evacuation constraints, and the practical consequences of delayed or uneven assistance. These accounts agree on the value of emergency coordination but differ in how they evaluate access, participation, and continuity.

Non-state participation is important but institutionally thinner. Community actors and volunteers contribute field knowledge and implementation capacity, yet they have less influence over long-term plans and budgets. Private-sector and other non-governmental participation appears comparatively intermittent and is more visible in material support or specific activities than in permanent agenda setting. The imbalance in the stakeholder matrix is therefore both a methodological limitation and a substantive finding about the state-centered structure of the collaboration.

Across actor groups, the most persistent barriers are limited resources, unsynchronized information, fragmented budgeting, infrastructure deficits, inconsistent participation, and differences in organizational culture. These conditions explain why collaboration performs better during visible crises than during mitigation, prevention, and post-disaster learning. Collaborative governance should therefore be evaluated by the continuity and distribution of influence as well as by the existence of coordination activities (1, 6, 12).

Structural Political Economy and Institutional Barriers

The persistence of the operational-strategic gap can be understood as an institutional collective action problem. Flood risk is produced and reduced across planning, public works, environmental management, health, social protection, village administration, and community behavior, but authority and resources remain divided. Agencies can fulfill narrow mandates while preventive outcomes remain underprovided because shared data, pooled priorities, and reciprocal commitments are costly to negotiate and sustain (22).

A budgetary mechanism reinforces this fragmentation. Emergency spending has immediate triggers and visible outputs, while preventive investments impose present costs on particular agencies and produce diffuse benefits over a longer horizon. The reported weakness of inter-agency budget continuity therefore reflects not only scarce funds but also mismatched planning cycles, accountability lines, and incentives. This interpretation is consistent with Indonesia's broader shift from reactive disaster funding toward proactive, layered disaster-risk financing (23).

The political economy of participation is equally important. Public agencies control formal mandates, planning access, and most budgetary resources; communities and volunteers bear substantial exposure and provide early operational capacity; and private or NGO involvement remains comparatively episodic. This distribution creates

a gap between contribution in the field and influence over long-term decisions. In Tierney's terms, disaster governance is embedded in wider relations of public authority, economic organization, and social inequality rather than being a neutral coordination problem (25).

DISCUSSION

The central finding is a two-level pattern of collaborative governance. Bandung Regency has developed operational effectiveness during active floods, but strategic effectiveness in prevention and long-term risk reduction remains incomplete. Field coordination, communication, and trust enable rapid evacuation and logistics, yet the same network does not consistently align plans, budgets, data, infrastructure, and participation after the immediate emergency has passed. This distinction qualifies claims that the mere presence of multi-actor coordination demonstrates a mature collaborative regime (3, 6, 8).

The starting conditions identified by Ansell and Gash help explain the operational strength of the network. Recurrent floods create visible interdependence, a shared sense of urgency, and repeated opportunities for joint action. These experiences lower the relational costs of cooperation in the field and produce practical trust. At the same time, unequal resources and authority mean that some actors can shape priorities more strongly than others. Collaboration therefore begins from mutual dependence but not from equal bargaining capacity (3, 8, 17).

The institutional-design weakness becomes clearer when interpreted through the institutional collective action framework. Flood risk crosses organizational and territorial boundaries, whereas authority is divided among disaster management, planning, public works, environment, health, social affairs, and village institutions. Each organization can perform its own mandate while the combined system still underproduces prevention because the costs and benefits of risk reduction are distributed across agencies and over time. Fragmented mandates, uncertain reciprocal commitments, and the transaction costs of sharing data and budgets thus help explain why episodic coordination persists (22).

Budgetary arrangements reinforce this temporal imbalance. Emergency expenditures have clear triggers, immediate beneficiaries, and visible outputs, whereas prevention requires joint investment whose benefits are diffuse and realized later. The empirical accounts of limited resources and fragmented budgeting are therefore not merely technical shortages; they reveal an incentive structure that favors response over anticipatory investment. Indonesia's disaster risk-financing policy similarly recognizes the limits of relying on routine national and local budgets and the need to move from reactive financing toward layered, proactive instruments (23). In Bandung Regency, this implies that a collaborative forum must be connected to actual planning and financing authority rather than functioning only as a coordination meeting.

Facilitative leadership partly compensates for these structural gaps. BPBD brokers emergency operations, while Bappeda is positioned to connect sectoral programs and longer-term planning. The arrangement is effective when these actors actively convene, translate information, and mobilize resources. Its vulnerability is that continuity can depend on crisis intensity and individual initiative. Leadership therefore needs to be embedded in recurring procedures, shared performance indicators, and an authorized mechanism for resolving cross-agency disagreement (8, 16, 18).

The cross-actor comparison also reveals a political dimension of inclusion. Public agencies dominate formal planning and the NVivo matrix, while village actors, volunteers, and affected communities contribute local knowledge, early warning, and implementation capacity without equivalent influence over long-term priorities. Private-sector and other non-governmental participation remains comparatively peripheral and often project- or crisis-based. This is not evidence that non-state actors are unimportant; rather, it indicates an asymmetry between operational contribution and agenda-setting power. Disaster governance is shaped by these relationships among public authority, economic resources, and social vulnerability (6, 25).

Methodologically, the NVivo outputs are most useful when treated as navigation and comparison devices rather than as findings in themselves. The revised hierarchical thematic matrix makes the movement from primary code groups to subthemes and cross-source interpretations explicit. Word clouds indicate lexical salience, while the

analytical claims depend on coded passages, comparison across stakeholder groups, triangulation with observation and documents, and attention to divergent accounts (21, 24). This distinction improves transparency and prevents frequency from being mistaken for qualitative significance.

The policy implication is a transition from an emergency network to an authorized, adaptive collaborative regime. A permanent forum should connect BPBD's operational capacity with Bappeda's planning role; maintain a shared risk and incident-data protocol; formulate joint risk-reduction targets; align sectoral budget proposals; and provide communities, volunteers, NGOs, and private actors with defined deliberative roles. Post-event review should feed into the next planning and budgeting cycle so that operational learning becomes institutional change rather than remaining tacit field knowledge.

Limitations

This study is limited by its single-case design and purposive sample. The 15 informants provide role diversity rather than statistical representation, and public organizations remain more visible than private-sector, NGO, and community actors in parts of the matrix. The findings should therefore be interpreted as an explanation of mechanisms in Bandung Regency rather than as a population estimate.

A second limitation concerns the use of software-generated displays. Word-frequency and matrix outputs can make patterns visible, but they cannot substitute for contextual interpretation. Future research should extend the non-state sample, compare multiple flood-prone regencies, and examine how collaborative decisions are translated into budget allocations and measurable risk-reduction outcomes over successive planning cycles.

CONCLUSION

Collaborative governance in Bandung Regency functions credibly as an emergency-response network. Repeated field interaction supports communication, practical trust, rapid role allocation, evacuation, logistics, and basic service delivery. Starting conditions and facilitative leadership are therefore sufficiently strong to produce operational results.

The network is less effective as a long-term risk-governance regime. Fragmented mandates, sector-based planning and budgeting, unequal control over data and resources, infrastructure gaps, and limited non-state influence constrain the translation of emergency cooperation into prevention. The necessary institutional shift is to authorize a permanent forum that links coordination with shared data, joint priorities, aligned financing, post-event learning, and meaningful community representation.

Empirically, the study contributes evidence from a recurrent flood setting in the Global South. Theoretically, it shows that operational effectiveness and strategic effectiveness are distinct outcomes of collaborative governance. Repeated crises can build trust and joint action, but durable resilience depends on whether those relational gains are converted into institutions, budgets, and public investment that persist between disasters.

Declarations

Ethical Approval: This research involved human subjects (informant). Ethical clearance and approval were obtained from the relevant academic and regional research boards prior to data collection. All participants provided informed consent. **Conflict of Interest:** The authors declare that there is no conflict of interest regarding the publication of this paper. **Data Availability:** The datasets generated and analyzed during the current study are available from the corresponding author upon reasonable request.

REFERENCES

1. Agranoff, R., & McGuire, M. (2003). Collaborative public management: New strategies for local governments. Georgetown University Press.
2. Andhani, D., Rachmawati, E., Saputra, G. W., Yusri, A., Mulyasana, D., Santosa, P., & Sarihati, T. (2025). Kolaborasi governance dalam penyusunan regulasi desa tentang perlindungan pekerja migran

- Indonesia di Kecamatan Ngamprah. Jurnal Pengabdian Tri Bhakti, 7(2), 66-77. <https://doi.org/10.70825/jptb.v7i2.2372>
3. Ansell, C., & Gash, A. (2008). Collaborative governance in theory and practice. *Journal of Public Administration Research and Theory*, 18(4), 543-571. <https://doi.org/10.1093/jopart/mum032>
4. Badan Penanggulangan Bencana Daerah Kabupaten Bandung. (2025). Laporan kejadian banjir Kabupaten Bandung Januari-Agustus 2025. BPBD Kabupaten Bandung.
5. Badan Pusat Statistik Kabupaten Bandung. (2025). Statistik daerah Kabupaten Bandung 2025. BPS Kabupaten Bandung.
6. Bryson, J. M., Crosby, B. C., & Stone, M. M. (2015). Designing and implementing cross-sector collaborations: Needed and challenging. *Public Administration Review*, 75(5), 647-663. <https://doi.org/10.1111/puar.12432>
7. Donahue, J. D., & Zeckhauser, R. J. (2011). *Collaborative governance: Private roles for public goals in turbulent times*. Princeton University Press.
8. Emerson, K., Nabatchi, T., & Balogh, S. (2012). An integrative framework for collaborative governance. *Journal of Public Administration Research and Theory*, 22(1), 1-29. <https://doi.org/10.1093/jopart/mur011>
9. Grindle, M. S. (Ed.). (1980). *Politics and policy implementation in the Third World*. Princeton University Press.
10. Kurniawati, K., & Saputra, G. W. (2026). Analisis pengaruh implementasi Program Kang Pisman terhadap efektivitas pengelolaan sampah berbasis masyarakat di Kelurahan Cicadas. *Moderat: Jurnal Ilmiah Ilmu Pemerintahan*, 12(1), 265-277. <https://doi.org/10.25157/moderat.v12i1.5980>
11. Saputra, G. W., Kurniawati, & Susilawati. (2025). *Manajemen pemerintahan daerah dan desa: Konsep dinamika dan implementasi di Indonesia* (1st ed.). CV. Dewa Publishing.
12. Saputra, G. W., Kurniawati, Susilawati, Suarha, C., & Triadi, R. (2024). *Administrasi publik* (1st ed.). Mafy Media Literasi Indonesia.
13. Saputra, G. W., Nurwanda, A., Sahadi, Susilawati, & Kurniawati. (2025). *Desentralisasi dan dinamika pemerintahan lokal* (1st ed.). Mafy Media Literasi Indonesia.
14. Saputra, G. W., & Santosa, P. (2026). Assessing the impact of collaborative governance on urban waste management effectiveness: Evidence from Bandung City, Indonesia. *International Journal of Research and Innovation in Social Science*, 10(5), 6070-6076. <https://doi.org/10.47772/IJRISS.2026.100500405>
15. Saputra, G. W., Santosa, P., & Adiwisastira, J. (2026). Efektivitas kebijakan sampah Kota Bandung: Peran collaborative governance dan pemberdayaan masyarakat. *Jurnal Manajemen Publik dan Kebijakan Publik (JMPKP)*, 8(1), 207-216. <https://doi.org/10.36085/jmpkp.v8i1.9066>
16. Suarha, C., Triadi, R., Saputra, G. W., & Santosa, P. (2026). Collaborative governance dalam program ketahanan pangan di Kabupaten Sumedang. *Moderat: Jurnal Ilmiah Ilmu Pemerintahan*, 12(1), 77-94. <https://doi.org/10.25157/moderat.v12i1.5585>
17. Thomson, A. M., & Perry, J. L. (2006). Collaboration processes: Inside the black box. *Public Administration Review*, 66(s1), 20-32. <https://doi.org/10.1111/j.1540-6210.2006.00663.x>
18. Triadi, R., Saputra, G. W., Suarha, C., & Sarihati, T. (2026). Collaborative governance proses penanggulangan bencana alam di Kabupaten Bandung Provinsi Jawa Barat. *Moderat: Jurnal Ilmiah Ilmu Pemerintahan*, 12(1), 59-76. <https://doi.org/10.25157/moderat.v12i1.5586>
19. UNDRR. (2015). *Sendai framework for disaster risk reduction 2015-2030*. United Nations Office for Disaster Risk Reduction. <https://www.undrr.org/publication/sendai-framework-disaster-risk-reduction-2015-2030>
20. Vidiastuti, D. P., Sidik, D. S., Saputra, G. W., Ermylina, E., & Pangesti, F. (2026). Community and culture-based disaster mitigation: A literature review on the integration of local wisdom into public policy. *Sospol*, 12(2), 248-265. <https://doi.org/10.22219/jurnalsospol.v13i1.45003>
21. Braun, V., & Clarke, V. (2021). One size fits all? What counts as quality practice in (reflexive) thematic analysis? *Qualitative Research in Psychology*, 18(3), 328-352. <https://doi.org/10.1080/14780887.2020.1769238>
22. Feiock, R. C. (2013). The institutional collective action framework. *Policy Studies Journal*, 41(3), 397-425. <https://doi.org/10.1111/psj.12023>
23. Fiscal Policy Agency, Ministry of Finance of the Republic of Indonesia. (2018). *Disaster risk financing and insurance strategy*. <https://fiskal.kemenkeu.go.id/parb/en/parb-2/>

24. Miles, M. B., Huberman, A. M., & Saldana, J. (2014). Qualitative data analysis: A methods sourcebook (3rd ed.). SAGE Publications.
25. Tierney, K. (2012). Disaster governance: Social, political, and economic dimensions. *Annual Review of Environment and Resources*, 37, 341-363. <https://doi.org/10.1146/annurev-environ-020911-095618>