

Implementation of the Collaborative Governance Model in Disaster Mitigation: A Process Analysis of the Regional Disaster Management Agency (BPBD) of Batu City

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Abstract

Collaborative governance has become a crucial paradigm in complex disaster management, yet its implementation at the local level in Indonesia still faces various challenges. This study aims to comprehensively analyze the collaborative governance process in disaster mitigation management orchestrated by the Regional Disaster Management Agency (BPBD) of Batu City. Using a qualitative case study approach and the theoretical framework of the collaborative process by Ansell and Gash (2007), this research dissects the dynamics of cross-sectoral interactions. Data were collected through in-depth interviews with 13 key stakeholders from BPBD, related Regional Government Organizations (OPD), the Indonesian Red Cross (PMI), and the Disaster Risk Reduction Forum (FPRB), as well as through observation and document analysis. The findings reveal that the collaboration process in Batu City substantively operates through the five dimensions of the Ansell and Gash model: (1) Face-to-Face Dialogue is institutionalized through formal forums and accelerated by informal digital platforms; (2) Trust Building is catalyzed by facilitative leadership and intensive communication; (3) Commitment to the Process is manifested through routine activities and strong community participation; (4) Shared Understanding has been established at the community level but remains hindered by sectoral egos at the OPD level; and (5) Intermediate Outcomes, such as the formation of an active FPRB and shared knowledge products, have strengthened the legitimacy and momentum of the collaboration. This study concludes that while the collaborative model is effective at the operational and community levels, structural challenges at the bureaucratic level, particularly sectoral egos and human resource capacity gaps, are major impediments. The contribution of this article is to provide empirical validation and elaboration of the Ansell and Gash model in the Indonesian disaster context and to offer policy recommendations for strengthening local disaster governance.

I. Introduction

Contemporary disaster risk management faces increasingly complex dual challenges: an increase in the frequency and intensity of disasters due to climate change, and the close interconnectivity between natural and socio-economic systems (Danil, 2021; Machruf et al., 2020; Suwaryo & Yuwono, 2017). This phenomenon has forced a paradigm shift from reactive, state-centered crisis management approaches to a more proactive, preventive and inclusive risk governance framework. Indonesia, as an archipelago located on the Pacific Ring of Fire, is inherently exposed to a wide spectrum of disaster threats, making the urgency of this paradigm shift very high (Adri et al., 2020; Febrianto, 2025; Kota Batu Dalam Angka 2023, 2023). A governance model is needed that is able to integrate various knowledge, resources and interests to build sustainable resilience. The *Collaborative Governance* paradigm offers a strong theoretical framework to address this challenge, emphasizing the importance of synergy and joint decision-making between government and non-government actors (Khafian, 2023; Sholeh, 2024).

The context of this research is Batu City, an autonomous city in East Java that represents the paradox of development in many regions in developing countries. On the one hand, Batu City is experiencing rapid economic growth, driven by tourism and agriculture (Batu City Regional Statistics 2023, 2023). On the other hand, this development increases the level of vulnerability to disasters. Data from the local Disaster Management Agency (BPBD) shows a dramatic escalation of disaster events, from 95 incidents in 2018 to 206 in 2023 (Kota Batu Dalam Angka 2023, 2023). This increased risk is not only triggered by natural factors such as steep topography and high rainfall, but also accelerated by anthropogenic factors such as land conversion in protected areas for the construction of hotels, villas and intensive agriculture (Febrianto, 2025; Hadi, 2024; Zagarino et al., 2021). This complex relationship between economic growth, environmental degradation and increased disaster risk creates a *wicked problem* that by definition cannot be addressed through traditional unilateral or command-and-control approaches.

Responding to this challenge, BPBD Batu City has proactively adopted a collaborative approach, seeking to build networks with various Regional Apparatus Organizations (OPDs), the Indonesian Red Cross (PMI), and civil society through the Disaster Risk Reduction Forum ((Hidayat & Jumansyah, 2023; Hidayatullah et al., 2023)FPRB) . However, the literature on *collaborative governance* in the context of disasters in Indonesia often stops at the level of identifying supporting and inhibiting factors, or describing the actors involved. There is still a significant knowledge gap regarding how the dynamics of the collaboration process actually take place in the "*black box*" of daily interactions. How do actors with different interests negotiate? What mechanisms are used to build trust? And how can commitment be maintained in the long term amidst various constraints? These processual questions are the main focus of this research.

Thus, this article aims to provide in-depth empirical and theoretical contributions by comprehensively analyzing how the *collaborative governance* process in disaster mitigation management is implemented by BPBD Batu City. The

novelty of this research lies in the use of Ansell & Gash's (2008) five-dimensional process framework as an analytical lens to dissect in detail and systematically the mechanism of interaction between actors, starting from the initial dialog to the achievement of results. Through this data-rich case study, this research aims not only to describe, but also to critically analyze the dynamics, successes, and challenges faced, so as to provide validation and elaboration of *collaborative governance* theory in the specific context of local government in Indonesia.

2. COLLABORATIVE GOVERNANCE PROCESS FRAMEWORK

Collaborative governance marks a fundamental shift from traditional hierarchical public administration towards a more horizontal and participatory networking model. Its essence lies in solving public problems through structured and mutually beneficial interactions between governmental and non-governmental actors (Emerson & Nabatchi, 2015). To dissect the complexity of this process, the framework developed by Ansell and Gash (2007) offers a robust analytical model. This model does not treat collaboration as a static state, but rather as a dynamic cycle that evolves through a series of mutually influencing stages. The five process dimensions in this model are:

1. *Face-to-Face Dialogue*: Considered the foundation of all forms of collaboration. Direct interaction allows actors to transcend stereotypes, build mutual understanding, and engage in *meaningful negotiation*. This dialogue is more than just an exchange of information; it is a process of co-creation of meaning.
2. *Trust Building*: Trust is the "social lubricant" that reduces friction and transaction costs in multi-actor interactions. It cannot be imposed, but must be built gradually through repeated interactions, consistency between words and actions, and transparency.
3. *Commitment to Process*: This includes the motivation of actors to continue engaging despite challenges, as well as the willingness to take responsibility for maintaining the collaborative relationship. This commitment is often strengthened by a growing sense of *shared ownership* of the process and goals.
4. *Shared Understanding*: The cognitive process by which actors reach agreement on the definition of the problem, the goals to be achieved, and the fundamental values on which the collaboration is based. Without shared understanding, collective efforts risk becoming unfocused and fragmented.
5. *Intermediate Outcomes*: The achievement of tangible and measurable "*small wins*" throughout the process. These outcomes are crucial for maintaining momentum, validating the approach, and strengthening the legitimacy of the collaboration in the eyes of internal actors and external stakeholders.

These five dimensions form a mutually reinforcing cycle: quality dialogue builds trust, trust drives commitment, commitment facilitates the achievement of shared understanding, and shared understanding enables the realization of intermediate outcomes, which in turn will further strengthen trust and commitment to continue the next cycle of dialogue.

3. Research Methods

This research adopted a qualitative approach with a *single case study* design. This design was chosen for its ability to conduct an in-depth and holistic exploration of contemporary phenomena, in this case the collaborative governance process in a complex real-life context (Burhan, 2017; Sugiyono, 2017). BPBD Batu City was chosen as the unit of analysis because of its central role as a disaster mitigation coordinating agency and its proactive initiative in building collaborative networks with various stakeholders. Data collection was intensively conducted through three main techniques: 1) *In-depth Interviews*: Semi-structured interviews were conducted with 13 key informants selected using purposive and snowballing sampling techniques to ensure representation of the various sectors involved (See Table 1); 2) *Participant Observation*: Researchers were involved in several activities such as cross-OPD coordination meetings, disaster socialization in schools, and meetings with FPRB to directly observe the dynamics of interactions, decision-making processes, and power relations between actors; 3) *Documentary Analysis*: Analysis was conducted on various relevant documents, including the BPBD Strategic Plan, Contingency Plan, activity reports, meeting minutes, and other policy products to validate and complement data from interviews and observations.

Table 1. List of Research Informants

No.	Initials	Position	Gender
1.	GN	Head of prevention and preparedness	L
2.	DF	Head of Sovereignty and Logistics	L
3.	EH	Budget Programmer and Reporter (Environment Agency)	P
4.	F	Building and Settlement Area Manager	L
5.	R	Policy Analyst (Education Office)	P
6.	NWP	Planning (BAPPELITBANGDA)	P
7.	SN	Head of Preparedness and Response Division of PMI Batu City	P
8.	SI	Head of Health	P
9.	S	Head of FPRB	L
10.	RN	Head of FPRB	L
11.	A	Head of FPRB	L
12.	AC	Head of FPRB	L

Data analysis used an interactive model developed by Miles & Huberman (2014). This process involves three streams of activities that take place simultaneously and iteratively: (a) Data Condensation, which is the process of selecting, focusing, simplifying, and abstracting raw data from interview transcripts and field notes; (b) Data Presentation, which is organizing condensed data into matrices, charts, or structured narratives to facilitate understanding; and (c) Conclusion Drawing/Verification, which is the process of drawing initial conclusions, which are then continuously tested and verified with new data until

reaching a solid and accountable conclusion. To ensure the validity and reliability of the data, this research applied the source triangulation technique, by comparing and cross-checking information obtained from interviews, observations, and documents.

4. Results and Discussion

Face-to-Face Dialogue: Institutionalization of Formal Forums and Acceleration via Digital Platforms

BPBD Batu city has systematically institutionalized dialogue through various formal forums. Three main types of forums were found:

- a. Technical Coordination Forum: Regular meetings that specifically involve DPOs with technical functions related to disasters (PUPR Office, Environment Office, Health Office, Housing Office) as well as operational partners such as PMI. This forum focuses on harmonizing Standard Operating Procedures (SOPs) and synchronizing action plans in the field.
- b. Multi-stakeholder Forum: A broader forum involving actors outside the government, such as academics, community leaders, and the media, with the main driving force being the FPRB at the village/kelurahan level. This forum serves as a forum for socialization, education, and participatory planning.
- c. Simulation and Evaluation Forum: Activities such as tabletop exercises and field simulations are regularly organized to test contingency plans and joint response capacity.

In addition to formal forums, there is also the use of the *WhatsApp Group* "Batu City GIS" which functions as an informal "*command center*". According to the Head of the Prevention and Preparedness Section, "information can be easily obtained and is called a *command center* system" through this group, allowing for very fast coordination without having to wait for a formal meeting. This was echoed by the head of FPRB who stated that the WhatsApp group facilitates direct communication between BPBD, FPRB and volunteers.

Trust Building: Facilitative Leadership as a Cornerstone

Mutual trust is a key asset in the collaboration network in Batu city. From the interviews, the most prominent factor that triggers trust is the leadership style of the Head of BPBD. One informant from another OPD called this leadership "participatory and nurturing," where decisions "are not taken unilaterally, but are always discussed and coordinated."

This trust is strengthened by the intensive communication established by BPBD. A representative of the Health Office stated, "our trust in BPBD is firmly established thanks to the intensity of socialization and communication." Similarly, the chairperson of the FPRB said that he felt "very well looked after" by BPBD, both in formal and informal forums.

Commitment to Process: Active Participation and Shared Ownership

The commitment of the actors is manifested in real terms. First, through the consistency of routine activities such as monthly patrols at vulnerable points

involving joint teams of BPBD and volunteers, as well as continuous socialization in schools.

Second, through an agreed division of functional tasks, where each actor carries out its role. BPBD as the coordinator, PMI in the medical and logistics sector, the Education Office facilitating programs in schools, and FPRB being the eyes and ears in the community.

The third, most significant, is community participation that grows from internal awareness. The head of the FPRB in Sisir Village stated, "mitigation is the responsibility of the community, so without any coercion, the community always monitors the local environment." This shows a high level of *ownership*.

Table 2. Increasing Trend of Disaster Events in Batu City (2018-2023)

Year	Number of Disaster Events
2018	95
2019	98
2020	114
2021	154
2022	203
2023	206
<i>Source: Data processed from Thesis (Azmy, 2024)</i>	

Shared Understanding: The Gap between Community and Bureaucracy

Efforts to build *shared understanding* have shown contrasting results. At the community level, this effort was very successful. Through intensive socialization and the active role of FPRB, communities and volunteers have a good understanding of local risks, evacuation routes and actions to take. However, at the inter-OPD level, achieving a common understanding remains a challenge. An informant from BPBD revealed "differences in priority orientation and strong sectoral ego." He gave an example, "Other DPOs (such as the Tourism Office) sometimes prioritize tourism events in vulnerable areas." This difference in focus makes it difficult to harmonize programs and integrate budgets for disaster mitigation, which often leads to a "tug of war."

Results Between: "Small Victories" that Strengthen Collaboration

The collaboration process has resulted in a series of tangible intermediate outcomes:

- a. FPRB institutionalization: The existence of an active and functional FPRB in all villages, even with coordinators down to the RT level, is a significant institutional achievement at the grassroots level.
- b. Shared Knowledge Products: Participatory strategic documents have been produced, such as detailed risk maps, evacuation route maps and mitigation

SOPs.

- c. Educational Innovation: Educational programs such as the "Ular Tangga Kebencanaan (UNGGANA)" game implemented in schools are small wins that demonstrate the success of creative and collaborative approaches.

DISCUSSION

Dynamics of Collaborative Processes: Positive Cycles and Evolution Toward Hybrid Governance

The findings in Batu city convincingly show that the collaboration process is not a series of linear stages, but rather a positive *virtuous cycle*, as implied by Ansell & Gash's (2008) model. Structured face-to-face dialogue in formal forums was the initial catalyst, creating a deliberative space that allowed actors to get to know each other and exchange perspectives. These initial interactions, when moderated by facilitative leadership, gradually build social capital in the form of trust. It is this trust that then allows actors to go beyond short-term interests and make a commitment to invest their resources. Solid commitment, as seen in the consistency of routine activities, facilitates deeper negotiations to reach a common understanding (Rusmawan et al., 2023; Zagarino et al., 2021). In turn, this shared understanding gives birth to tangible intermediate outcomes, such as the FPRB.

These tangible successes become proof of concept, validate the collaborative process, and inject new energy that thickens trust and commitment to continue the cycle. This reciprocal dynamic is the main engine that maintains the sustainability of the collaboration network in Batu city, a rich empirical illustration of how collaboration process theory works in practice (Masyhuri et al., 2021; Sholeh, 2024).

Moreover, this research also elaborates on the theoretical model by revealing the evolution towards a hybrid governance model. On the one hand, formal forums provide structure, legitimacy and an arena for strategic decision-making. On the other hand, informal digital platforms such as *WhatsApp Groups* function as networked nervous systems, providing operational agility that is impossible to achieve through formal mechanisms. These platforms facilitate tactical coordination, rapid early warning, and the maintenance of social relationships among actors, effectively cutting through bureaucratic lines and hierarchies. This co-existence of stable formal structures and dynamic informal networks represents a clever adaptation of modern governance practices. It contributes to the *e-governance* and *network governance* literature, by showing how technology does not necessarily replace, but can integrate and complement formal institutions to create more resilient and responsive governance systems.

Facilitative Leadership and Community Participation: Two Pillars of Collaboration

Two factors emerged as key pillars that enabled the collaborative cycle in Batu city to be effective: facilitative leadership and community participation. The leadership role of the BPBD should be understood not in the traditional command-and-control framework, but rather as *network leadership*. The "participatory and nurturing" style expressed by informants is a manifestation of the leader's ability to

facilitate processes, empower other actors, mediate conflicts and consistently articulate a shared vision. This is in line with Emerson & Nabatchi's (2015) argument that emphasizes the role of leaders as facilitators and catalysts. This kind of leadership does not dominate, but rather creates space for other actors to contribute maximally, which ultimately becomes the main foundation for the growth of trust and commitment.

The second pillar is community participation that has been institutionalized through FPRB. The phenomenon where the community views mitigation as a "shared responsibility" that is carried out "without coercion" shows a high level of empowerment and social capital. This is a tangible manifestation of the concept of *co-governance* by citizens at the grassroots level. This strong *bottom-up* commitment not only eases the burden on the government, but also provides strong social legitimacy to mitigation programs. However, this success also presents a paradox of participation: the heavy reliance on *volunteerism* is prone to volunteer burnout in the long run. Without sustainable institutional and financial support mechanisms for FPRB, this pillar of participation risks weakening over time.

Critical Analysis of Barriers: Bureaucratic Pathologies and Systemic Gaps

Despite the successes at the operational level, this research reveals serious obstacles rooted in bureaucratic pathologies and systemic inequalities. The "sectoral ego" phenomenon found is not simply a difference of opinion between individuals, but a manifestation of the "silo mentality" inherent in the structure of public administration in Indonesia (Christensen & Lægreid, 2007). This pathology is rooted in several things: (1) Budget and Performance Structure, where each OPD is assessed based on its own sectoral KPIs, creating a disincentive to collaborate on cross-sectoral issues; (2) Policy Fragmentation, where disaster mitigation is considered to be the "business" of BPBD alone, not an integrated responsibility in every aspect of development; and (3) Power Asymmetry, where BPBD as the coordinator has no formal authority to "force" other OPDs to align programs and budgets.

In addition, human resource capacity gaps and the absence of significant private sector involvement (CSR) are systemic barriers. The lack of certified personnel reflects a larger problem of low long-term investment in human capital in the disaster sector (Hidayat & Jumansyah, 2023; Riska et al., 2023). Meanwhile, the absence of *the* private sector indicates the "*missing helix*" in the collaboration model. The failure to involve the private sector deprives the collaboration network of its huge potential in terms of financial resources, technology and innovation, which are crucial for sustainability. This suggests that while the lower-level collaboration "engine" is running well, it lacks "fuel" and support from higher systemic levels.

Implications and Recommendations: Towards Integrated Disaster Risk Governance

An analysis of the above dynamics and obstacles calls for strategic and structured policy interventions. Overcoming bureaucratic pathologies requires more than a call for collaboration; it demands reforms at the level of incentives and institutional structures. One of the most fundamental solutions is to mainstream Disaster Risk Reduction (DRR) into the accountability framework of all local governments. This can be realized by making DRR-related performance indicators part of the performance contracts of all relevant OPD heads, such as the Public Works Office, Tourism Office and Licensing Office (Anggraini et al., 2023; Putri, 2022). Thus, the success of disaster mitigation is no longer only the responsibility of BPBD, but a collective performance measure of the city government. Furthermore, to break down budget silos, it is necessary to establish a DRR Joint Budget Forum led by a higher authority such as the Regional Secretary (Sekda), where budget allocations across OPDs for priority mitigation programs can be jointly negotiated and agreed upon, ensuring synergy and efficiency.

On the external side, strengthening collaboration networks demands proactive efforts to institutionalize partnerships and ensure sustainability of participation. To address the "missing helix", BPBD and the city government need to establish a "Multi-stakeholder Strategic Partnership for City Resilience" that formally invites the chamber of commerce (KADIN), hotel and restaurant association (PHRI), and universities to design long-term collaborative programs. These partnerships should go beyond charitable CSR, towards integrating disaster mitigation into core business practices (Suleman & Apsari, 2017). To overcome the participation paradox and prevent volunteer burnout, the city government should formulate a sustainability support scheme for FPRBs. This could include the allocation of basic operational funds through village funds, the provision of insurance for volunteers while on duty, the organization of regular advanced training programs, and the creation of a formal reward and recognition system for disaster activists at the community level.

Finally, overall system strengthening relies on continued investment in adaptive capacity. This means going beyond ad-hoc training towards the development of professional career pathways and an institutionalized certification system for disaster practitioners at the local level. In addition, it is necessary to create a formal learning mechanism within the collaboration network. For example, by establishing a joint evaluation committee tasked with regularly reviewing the successes and failures of any disaster response or mitigation program. The results of these reviews should then be systematically used to update SOPs, contingency plans and future collaboration strategies. In this way, collaborative governance does not become static, but rather a system that continues to learn, adapt and evolve to become more effective in the face of changing disaster risk uncertainties. These steps will transform collaboration from a good practice to a resilient system.

4. Conclusion

The collaborative governance process in disaster mitigation management in BPBD Batu City has been dynamic and effective, validating the relevance of the five-dimensional process model in the local context in Indonesia. Facilitative leadership and strong community participation became the main pillars of success, which were able to build trust, commitment, and produce various concrete intermediate achievements. However, this success at the operational and community levels is overshadowed by structural challenges at the bureaucratic level. Strong sectoral egos and a silo mentality among OPDs are major obstacles to achieving a common understanding and program integration, exacerbated by gaps in human resource capacity and a lack of private sector involvement. Thus, it can be concluded that collaborative governance in Batu city has succeeded in building an effective collaboration "engine", but the "fuel" in the form of integrated bureaucratic commitment and broader cross-sector resources still needs to be significantly improved.

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