

Readiness Level of Collaborative Governance in Post-Earthquake Disaster Management: Case of Western Island of Java

Sri Wahananing Dyah^{1(*)}, Eko Prasajo²

¹Administrative and Public Policy, Universitas Indonesia, Depok, 16424, Republic of Indonesia

²Faculty of Administrative, Universitas Indonesia, Depok, 16424, Republic of Indonesia

*Corresponding author. Email: sriwahananingdyah@gmail.com

ABSTRACT

Indonesia is the only country in the Asian that is surrounded by 40000 km pacific fire ring, which makes Indonesia vulnerable to the threat of an earthquake. Related to this geographical fact, the government should pay more attention to earthquake disaster management in order to minimize the risk of loss if an earthquake occurs. This research discusses the Strategy of Building Collaborative Governance in Post-Earthquake Disaster Management on the Western Island of Java, accredited the Western Island of Java is the region that has the highest risk in Indonesia affected by the earthquake, both the risk of loss of life, physical loss and economic loss. This research uses a Post Positivist Approach with Qualitative Data Collection Methods. Using a collaborative governance analysis by Emerson, Nabatchi and Balogh which has several elements of system contexts such as: resource conditions, policy legal frameworks, prior failure to address issues, political dynamics, network connectedness, level of conflict or trust, and Readiness Level of Collaborative Governance by John Wanna, who has several levels, First: the highest level, The Second: middle to high level, The Third: middle level, The Fourth: middle to low level, and Fifth: lowest level. This article found that collaborative governance in post-disaster management on the Western Island of Java turned out to be still not going well because it was still full of sectoral egos and non-governmental organizations participating in the post-earthquake response still lacked understanding of the rules and procedures so that the assistance provided was less distributed as should.

Keywords: Readiness level, collaborative governance, post-earthquake

1. INTRODUCTION

Indonesia is the only country in the Asian region that is covered by a 40000 km Pacific Ring of Fire. Besides that geographically the territory of Indonesia has great potential for earthquake disasters because of Indonesia's position at the confluence of three world plates namely Eurasia, Indo-Australia and the Pacific. Based on these geographical facts, the Indonesian government should pay more attention to disaster management, especially earthquakes.

In this study, the western part of the island of Java is a specific locus related to post-earthquake disaster management, which consists of three Provinces including Banten, West Java and DKI Jakarta. The Association of Indonesian Geologists (IAGI) states that there are three possible sources of large earthquakes in the Western Island of Java. First, Megathrust on the South Coast of Java. Second, the Indo-Australian Pacific Plate Intraslab Structure. Third, faults which are located along the mainland of West Java, including the Baribis Fault and the Cimandiri Fault (Sukmandaru

Prihatmoko, 2018), other sources explain that the Western Region of Java is a low zone and Northwestern Fault Line filled with sea sediments (Sudana D and Santosa S, 1992), in addition, in the Western Island of Java also has an active volcano Anak Krakatau, so this is also the cause of the Western Island of Java is vulnerable to earthquake.

UNDRO (United Nation Disaster Relief Organization) (1980) revealed that disaster area a harsh reality of human life in terms of the number of people killed or affected and material damage. Disasters can seriously disrupt development initiatives in a number of ways, including (a) loss of resources, (b) disruption of programs, (c) influence on the investment climate, (d) influence on the informal sector, and (e) unstable politics.

Tabel 1. Risk of Earthquake Disaster

Province	Social	Physical/ Infrastructure (Rp. Million)	Economic (Rp. Million)
DKI Jakarta	852.831	2.320.653	31
West Java	15.347.975	53.502.015	9.445.160
Banten	5.479.039	15.982.134	4.273.501
Total	21.679.845	71.804.802	13.718.692

Source: National Disaster Management Agency, 2015

Based on UNDRO's opinion, disaster management is very important, looking at many aspects that have the potential to have an impact.

In view of the above situation, mass education, well trained technical manpower, advanced technology and sufficient means and resources are needed to reduce the incidence and effect natural disasters. Moreover, disaster management courses must be included in the school and university curricula, and various types of programmes launched to raise public awareness. Early-warning systems need to be developed, as this sector is still at a primitive stage in Nepal. Similarly, systems of hazard mapping, vulnerability assessment and risk analysis also have to be developed. For all this, there is a necessity for strong political determination, and for effective policy formulation and implementation. Apart from the above, the formulation of Natural Disaster Management Regulations and amendments to the existing Act are needed to clarify and specify the jobs and responsibilities of the agencies related to disaster management.(Chhetri, 2001). In terms of the impact of potential disaster scenarios across national and regional boundaries, the 'millennium bug' is a good example of a hazard that has global as well as local implications. Described as 'possibly the biggest emergency to face Emergency Planning to date',³ there are potential implications for infrastructural power supplies, manufacturing and transportation processes, telecommunications, heating and ventilation systems, fire and intruder alarms, vehicles with computerised management systems, not to mention domestic appliances. (A. Eyre, 1999).

2. THEORETICAL FRAMEWORK

Disaster management matters are basically contained in the 2015-2019 National Medium Term Development Plan (RPJMN), which was derived through Nawacita "Realizing Economic Independence By Developing the Domestic Economy Strategic". In order to realize economic independence and drive strategic sectors of the domestic economy, seven priority sub-agendas have been prepared including: (i) increasing food sovereignty, (ii) increasing water security, (iii) increasing energy security, (iv) conserving natural resources, environment and disaster

management, (v) maritime and marine economic development, (vi) strengthening of the financial sector, (vii) strengthening of fiscal capacity, which are interrelated in order to realize economic independence.

In disaster management and disaster risk reduction policies contained in the 2015-2019 RPJMN has three strategies in order to make it happen: (a). internalization of disaster risk reduction within the framework of sustainable development at the center and in the regions, (b). Reducing the level of vulnerability to disasters, (c). capacity building of government, regional government and community in disaster management (RPJMN 2015-2019, Book I).

Disaster management according to Act Number 24 Year 2007 consists of three stages: (1) Pre-Disaster, (2) Disaster Response, and (3) Post-Disaster. While the focus of this research is the post-disaster response, especially earthquake. Article 59 Paragraph 1 of Act Number 24 Year 2007 states that reconstruction (post-disaster stage) can be carried out through activities: (a) rebuilding infrastructure and facilities, (b) rebuilding community social facilities, (c) rebuilding social life community culture, (d) application of appropriate design and use of better and disaster resistant equipment, (e) participation and participation of institutions, organizations and society, business and community (f) improvement of social, economic and cultural conditions, (g) improvement of the function of public services, (h) improvement of main services in the community. While the recovery phase (rehabilitation) can be carried out through activities: improvement of the environment of the disaster area, improvement of public infrastructure and facilities, provision of assistance to repair community houses, psychological social recovery, health services, reconciliation and conflict resolution, social, economic, and cultural recovery, restoration of security and order, restoration of government functions, and restoration of public service functions.

The collaborative character itself refers to the Latin terminology which means to work together or work together "co-labor or work together". It is clearly illustrated by Barbara Gray (1985) that collaborative action is an arrangement in the process of gathering and utilizing resources to solve public problems that cannot be handled unilaterally. From this meaning, there are characteristics and symptoms to collaborate in which the characteristics of public problems have complexity that requires behavior, attitudes, various resources, interrelated and cooperate (Emerson & Nabatchi, 2015, p. 16). In its development, Emerson and Nabatchi (2015) mentioned that there are two determinant factors underlying the demands of collaborative governance. First, the complexity of social problems or "wicked problems" which become common challenges such as poverty, education and health accessibility, infrastructure, empowerment of natural resources and

energy, unemployment, human trafficking and illegal weapons. Second, the development of the governance context or governance that was pushed up because of the times. The existence of adage in the era of new public management popularized by David Osborn and Plastrik (1992) is a typical demand of people who want "less government and more governance" in dealing with public problems. The government is required to play a role only as a system that regulates public issues and prioritizes the spread of power in a consensus, collegial and deliberative manner.

Furthermore, Donahue & Zeckhauser (2011) also see a unified scope of collaborative governance. According to him, the dynamics of social problems and challenges are increasingly complex as time goes by. Moreover, as the 21st century is full of social complexity where the global economy is fragile

(economic crisis), housing prices continue to rise, high unemployment rates, inefficiency of pension funds, accessibility to health and education, and management of increasingly expensive infrastructure. Therefore, a collaborative approach is an alternative solution to solve the complexity of the above social problems for future public welfare.

Nabatchi & Emerson (2012) writes the notion of collaborative governance that collaborative governance as the processes and structures of public policy decisions making and management that engage people across the boundaries of public agencies, levels of government, and / or the public, private, and civic spheres to carry out a public purpose that could not otherwise be accomplished.

A Diagnostic or Logic Model Approach to Collaborative Governance

Dimension and Components	System Context	Drivers	The Collaborative Governance Regime				Collaborative Outcomes	
			Collaborative Dynamics			Outputs Collaborative Actions	Impacts	Adaptation
			Principled Engagement	Shared Motivation	Capacity for Joint Action			
Elements within Component	- Resource Conditions - Policy Legal Frameworks - Prior Failure to Address Issues - Political Dynamics/ Power Relations - Network Connectedness - Levels of Conflict/Trust - Socio-economic/ Cultural Health & Diversity	- Leadership - Consequential Incentives - Interdependence - Uncertainty	- Discovery - Definition - Deliberation - Determination	- Mutual Trust - Mutual Understanding - Internal Legitimacy - Shared Commitment	- Procedural/ Institutional Arrangements - Leadership - Knowledge - Resources	Will depend on context and charge, but might include: - Securing Endorsements - Enacting Policy, Law, or Rule - Marshalling Resources - Deploying Staff - Siting/ Permitting - Building/ Cleaning Up - Enacting New Management Practice - Monitoring Implementation - Enforcing Compliance	Will depend on context and charge, but aim is to alter pre-existing or projected conditions in System Context	- Change in System Context - Change in the CGR - Change in Collaboration Dynamics

Fig. 1. Logic Model Approach to Collaborative Governance According to Emerson and Nabatchi (2012)

Emerson and Nabatchi tried to connect all approaches and collaborative dimensions into one integrative framework. The integrative framework developed was not intended to be a "correspondence" for various cases that have collaborative characters or symptoms. However, the framework that Emerson built can at least help identify dimensions, both of a general nature and unique things in the case of collaborative governance. In addition, the framework can also help in testing and mapping how successful and successful collaborative governance cases are carried out and measuring unsuccessful and successful cases in the collaborative governance approach. Furthermore, even though the integrative framework presents dimensions and components of collaborative governance, it is not simultaneously able to match and be applicable to all cases and issues (a one size fit for all). This integrative framework is intended to help in identifying behavior,

causality, and structural elements in the collaboration process.

Emerson and Nabatci formulate an integrative framework of collaborative governance in three stratified dimensions, namely the context system, collaborative governance regime, and collaborative dynamics.

Knowing the implementation of collaborative governance in certain cases, it seems unwise to simply stop and be content with the question of whether the collaborative governance process has gone well or what obstacles are hampering the process of collaborative governance, without further analysis of the strategy of building collaborative governance, because by knowing the strategy of building collaborative governance, the implementation of collaborative governance will be able to run even better. With the hope that from what has gone well, it will be better or even if it has not been going well, through collaborative building strategies, it

can be improved so that the implementation of collaborative governance becomes better.

According to John Wanna (2009) there are several scales in building collaborative governance, namely: (1) The Highest Level: A network of interactions between transformative actors, substantive involvement and empowerment, consensus and cooperation between stakeholders, a strong coalition between government and non-government. (2) Intermediate - High Level: The strong involvement of stakeholders in the policy process as well as its implementation, diverts decision-making capacity for clients, more complex innovations in the policy process. (3) Intermediate Level: Commitment to formal collaboration for consultations between institutions, actors joining the government, formal involvement and joint funding initiatives. (4) Intermediate - Low Level: Forming co-production, technical improvements in collaboration, assistance to comply with obligations, direct consultation with clients, systematic processes, use of evaluation data, reporting to the public, and (5) Lowest Level: Adjusting collaborations, using consultative processes, client discussions and feedback mechanisms, getting information about other people's needs or expectations.

3. METHOD

This research uses a Post Positivist Approach with Qualitative Data Collection Methods. The basis for the legitimacy of the selection of this research approach refers to the definition of Creswell (2009) that the post positivist approach starts from theory by collecting data to either support or refute the theory. Post positivists do not separate theories from social phenomena, but interpret theories with empirical facts through field observation and proof. The same thing was explained by Caldwell (1994) that in this approach, the theory is not questioned whether it is right or wrong, but is used as an instrument of prediction while still looking for facts of objective reality. This research is objective because the most important aspect in the post-positivistic research paradigm is the objective attitude of the researcher who has to reexamine methods and conclusions that are biased (Creswell, 2010, p. 10).

4. RESULTS AND DISCUSSION

Results

In Indonesia, problems related to disasters within the authority of the National Disaster Management Agency (BNPB) at the central level. Whereas in the local government, technically it is the authority of the Regional Disaster Management Agency (BPBD), even though in the post-earthquake disaster management in the western part of Java, there are several interest groups. The parties included in the stakeholders are stakeholders who have direct authority in disaster management, and stakeholders who are not directly

involved in disaster management but are related to the interests of disaster management. The stakeholders consist of elements from the central government, regional governments, the community, universities and the private sector. This interest group is the informant in this study

In this study which focused on the locus of research in the Western Island of Java, there were several informants we interviewed (Table 2).

Table 2: Informants

	Institution	Position	Code
Central Government	National Disaster Management Agency (BNPB)	Head of Sub Directorate for Damage Inventory	I ₁
		Head of Disaster Risk Management Section	I ₂
	Ministry of Finance	Deputy of Budget	I ₃
	Ministry of Public Works and Human Settlements	Deputy of Copyright Works	I ₄
	Regional Disaster Management Agency/ BPBD (Banten Province)	Head of Post-Disaster Reconstruction Section	I ₅
Local Government	Regional Disaster Management Agency/ BPBD (Lebak District)	Head of Prevention Section	I ₆
	Regional Disaster Management Agency/ BPBD (Pandeglang District)	Manager of Operation Control Center for Disaster Management (PUSDALOPS)	I ₇
	Social Services Agency (Banten Province)	Head of Social Protection and Disaster Victims Section	I ₈
		Local	I ₉ ,
	Citizen		I ₁₀ ,
Community			I ₁₁
	Islamic Defence Front		I ₁₂

University	Menwa Sultan Ageng Tirtayasa University	Head of Menwa Sultan Ageng Tirtayasa University	I ₁₃
State / Regional-Owned Enterprises (BUMN/ BUMD)	BRI	-	I ₁₄
	Banten Bank	-	I ₁₅

Based on interviews conducted by us using instruments from Emerson, Nabatchi and Balogh (2012), it is known that the command in disaster control is under BPBD in the district, this is as said by I1, I5, I6, I7 and I8. Even though earthquake handling is multistakeholder, but usually the government apparatus already understands that the command is in the BPBD, in accordance with the BNPB Action Plan.

The problem that often arises at the rehabilitation stage is the large amount of assistance coming from outside the government, such as CSR, community forums or individuals who provide assistance without first reporting to BPBD, so that the distribution of aid is often not well targeted. Many areas received a lot of assistance on one side, while other areas lacked assistance, but at the same time, affected victims always complained about the lack of aid, as has been said by I5 and I6. In fact many community and government organizations have been built to focus on disaster management, but unfortunately, each of these organizations is still operating on its own, in the sense that there is not one chairman as a common thread that links the chain of movement of the organizations.

Based on the results of an interview with I5, it is also known that in fact the funds for reconstruction of Houses in the category of Heavy Damages are still at BNPB, even though the earthquake in Pandeglang is almost 1 year past. While for the category of Mild to Medium Damaged Houses, using Unplanned Social Assistance Grants (Hibah). This shows that it turns out that it takes a long process and a long time for aid to come down to earthquake affected people with the category of Heavy Damaged Houses. Starting from verification and submission of funds from BPBD to BNPB, then BNPB submits to the Ministry of Finance, but then the question is what is the fate of the victims affected by the earthquake in the category of Heavily Damaged, if the process of rebuilding houses, after 1 year has still not been built?

Even more worrying is that not all regions have a disaster management regulation, as stated by I7 in the Pandeglang is currently still in the formulation of a local regulation that is still in formulation since 1 year ago has not been completed, so far if a disaster occurs

only based on the Regent's order, this then becomes a problem, that when panic occurs in the field, with multistakeholders, the chain of command becomes unclear, duties and authority overlap, this should be an urgency considering that Pandeglang is in a quake-resistant liquefaction.

Based on the explanation above, in our opinion post-earthquake disaster management in Western Island of Java, refers to readiness level of collaborative governance by John Wanna (2009) is still in the Forth Level: Middle to Low Level, because improvements are still needed in collaboration, not just limited to carrying out their duties and obligations, so that from Fourth Level can go up one to Third Level, which is illustrated by the role of non-governmental actors who have one command and collaborate with each other. this certainly can happen, one of which is if all BPBDs at the district / city level already have a disaster management regulation.

Table 3: Disaster Management Problems

	(√)	(X)
Regional Regulations Related to Regional Disaster Management	Banten Province, Tangerang, West Java Province, Lebak	Pandeglang
Volunteer as an Extension of the Local Government (1 village 1 volunteer)	Pandeglang	Banten Province, Tangerang, West Java Province, Lebak

Source: Researchers Processed Data

Table 4: Readiness Level of Collaborative Governance

Level	Characteristics
First: the highest level	A network of interactions between transformative actors, substantive involvement and empowerment, consensus and cooperation between stakeholders, a strong coalition between government and non-government.
Second: middle to high level	The strong involvement of stakeholders in the policy process as well as its implementation, diverts decision-making capacity for clients, more complex innovations in the policy process.
Third: middle level	Commitment to formal collaboration for consultations between institutions, actors joining the government, formal involvement and joint funding initiatives.
Fourth:	Forming co-production, technical

middle to low level	improvements in collaboration, assistance to comply with obligations, direct consultation with clients, processes, systematic, use of evaluation data, reporting to the public.
Fifth: lowest level	Adjusting collaboration, using consultative processes, client discussions and feedback mechanisms, getting information about the needs or expectations of others.

Source: John Wanna (2009)

5. CONCLUSIONS

Based on the explanation above, it is known that collaborative governance of post-earthquake disaster management in Western Island of Java has not been going well, marked by not all districts / cities have disaster management regulations. Another thing, it turns out that the disaster response community forum is also not yet running, the western Java regional government, still lacks community involvement in disaster management. even if the forum already exists, but each forum is still running according to what they think is right.

Besides that the process of providing aid is very hierarchical, causing victims affected by the earthquake to take a long time until their assistance is received, this will certainly make them more miserable.

Earthquake prevention efforts are multi-stakeholder in nature, so cooperation and collaboration are needed by all parties, both the central government, regional governments, NGOs and the general public. For this reason, regulations related to disaster management should be regulated and regulated appropriately, so that the Action Plan in the field can run better, not just waiting for orders from superiors, which of course is feared to occur if regulations are not yet regulated.

REFERENCES

- A. Eyre. *Disaster Management in South-East Asia: Emergency Response and Planning in the Coming Millennium*, Vol. 1 No. 2 (Palgrave Macmillan Journals, 1999), pp 67-70
- BNPB, *Indonesia Disaster Risk* (2015) D. Osborne, P. Plastrik, *Banishing Bureaucracy The Five StrategiesFor Reinventing Government*, 2nd ed. (2005).
- Emerson, Kirk, T. Nabatchi, and S. Balogh, *An Integrative Framework for Collaborative Governance* (Journal of Public Administration Research and Theory, 2012), pp 21-29.
- J. Wanna, Creswell, Vicki, P. Clarck, *Designing and Conducting Mixed Methods Research*, 2nd ed. (2010).
- M. B. P. Chhetri, *A Practitioner's View of Disaster Management in Nepal: Organisation, System, Problems and Prospects*. (2001)
- M. E. Allen, Z. Sibahi, E. D. Sohm, *Evaluation of The Office of The United Nation Disaster Relief Coordinator* (UNDRO, 1980). *National Midterm Development Plan 2015-2019*, Book 1.
- S. D. Santosa, *Geological Map of The Cikarang Quadrangle Jawa* (Bandung, 1992).
- S. Prihatmoko, *Press Conference Indonesian Geologist Association* (Jakarta, 2018).