

# Leadership and Self-Reliance's Cluster in Strengthening Disaster Emergency Management: An Empirical Study

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## Abstract

Disaster management leaders are pivotal in reducing loss and suffering from complex disasters, however research on leadership in disaster emergency with relation to enable collaboration for optimizing potential is limited. There are no significant findings when attempting to achieve this [14].

Leadership in the context of a disaster is closely related to resilience. UNISDR (2005) defines as the capacity of a system, community or society in dealing with threats. The concept of leadership in disasters is also closely centered to risk management and crisis management. This paper will then deepen the description of initial effort for leadership in implementing the first of sub national cluster by taking lessons from flash flood emergency management in Batu City, East Java Province in the year 2021.

The efficacy of virtues and process of facilitating leadership for cluster collaboration that extent character, shaped either by socially established cooperative human activities and shared lived experiences, or by imperceptible sociocultural influences, mindfulness of cluster arrangement at international practice and national regulation. These elements of virtues and facilitative deliberation are keys to drive leaders in promoting readiness of cluster arrangement during emergency situation, to make focused collaboration of disaster emergency and division of role from various stakeholders for effectiveness through a resolute higher authority, is examined from the perspectives of sub national and national disaster management leaders. Insufficient resources, funding, knowledge and power, risk, poor communication and understanding of impact's loss and suffering, were also contributing limitations factors. The results indicate that acting of "self-interest and other" constrains the need for trust, compassion, practical wisdom as virtue character of leader and culture. Further research is proposed to determine how mindfulness can incentivize policy on set of structures, processes, principles, and commitment to implement the cluster collaboration change in emergency response from complex disasters.

**Keywords:** Leadership, Disaster Management, Collaboration

## 1. Introduction

The history of disasters in Indonesia shows the number of incidents, victims, economic losses of disasters are increasing and complex, so this requires a reliable disaster management and disaster risk

management system. In the World Risk Report in 2016, Indonesia is categorized as a country with a high level of disaster risk. This is due to the high level of exposure and vulnerability to disasters. In fact, almost 75% of industrial infrastructure and basic connectivity in Indonesia, including its supporting facilities, are built in disaster-prone zones. This results in a high probability of damage to infrastructure assets which increases operating expenses as well as additional costs due to the provision of alternative services. All of this has an impact on economic performance as measured by Gross Domestic Product (GDP).

Notwithstanding that accounting for the value of economic loss is important, it is becoming increasingly recognized that not all disasters are reducible to an economic measure. Rather, there is the need to account for a range of social and environmental values that are irreducible to economic terms [36]. For example, losses emerging from these values may include deaths, injuries, environmental degradation, and the loss of cultural heritage.

Generally, losses connected to something of value, it may also be an ethical concern connected to a loss that generates harm (McShane, 2017 and Cuomo, 2011). Such susceptibility, propensity or sensitivity to be harmed or adversely affected without the capacity to cope or adapt (vulnerable) may result in lowering the well-being (positive mental and physical states, desires, preferences, and capabilities) of people and other living beings. The lowering of well-being emerging from the increasing intensity and frequency of complex disasters influenced by both geological tectonic and hydrometeorology also constitutes an increase in disaster affected people are suffering that includes violence, poverty, disease, displacement, disability, and psychological trauma (Anderson, 2017).

Acknowledging loss, damage and the suffering that ensues and then doing something about it in the context of complex disasters are responsibilities that bound directly to disaster management leaders.

If refer to the latest data on disaster events (Indonesian Disaster Data Geoportal BNPB, 2021), floods still are dominating. Until November 2021, there were 854 flood events in Indonesia (BNPB, 16 October 2021). Batu City is one of the areas affected by severe flash floods in November 2021.

The emergency management of flash floods in Batu City, East Java Province is interesting to study and analyze. This is because, Batu City implements a disaster emergency management system which is unique, through the involvement of multi-stakeholders in the disaster emergency management command system. So that Batu City became the main focus of learning in this research, especially from the aspect of the role of regional leaders and policies issued during the disaster emergency.

This study explore the fundamental research questions: How did the sub national government have implemented cluster collaboration in emergency disaster management for flash Flood in Kota Batu? As following causal essential question, what motivate leaders and how leaders manage the implementation of collaboration in disaster emergency management?

## 2. Literature review

### Crisis, Risk and Disaster Management

Crisis management can be interpreted as managing and coordinating response efforts made by an institution to incidents that threaten the institution. Crisis management defines (Hamidovic, 2012) as making major strategic decisions in abnormal, unstable and complex, long and complicated situations. In line with Hamidovic, Bowers et al, 2017 also defines crisis management as the process of identifying potential problems or crises and coordinating the necessary organizational or inter-organizational responses.

In terms of disaster, some people often equate risk management with crisis management. However, risk and crisis management have different definitions. Risk management (Hamidovic, 2012) is an activity of predicting and assessing potential threats and looking for ways to reduce threat exposure, while crisis management is an activity that takes into account before, during and after a threat occurs. Much of disaster management, from an operational perspective, focuses on developing contingency plans [28]. However, with respect to Aguirre (1994, 2), "despite its clear relevance to preparedness activities, planning for disasters has not received much research attention in the social sciences". Basically, Quarantelli (1986), Drabek (1986), and Faupel (1987) agree that the disaster management process consists of a series of activities that precede, take place during, and follow a disaster.

### **Cluster Gap in Sub National's Disaster Emergency**

The essence of leadership in the event of a disaster is to provide a clear picture of the direction and objectives of disaster management. In addition, a leader should be able to provide clear, precise and accurate management interests. Regarding leadership variables, Steers (1996) described that the main variables in leadership are vision and increased commitment. This variable does not change either in normal situations or in disaster contexts. The vision of a leader in disaster management will be communicated to all stakeholders, and this vision will be communicated to increase the commitment of various parties to make it happen together.

In relation to disaster situations, The Law No. 24 of 2007 outlines the disaster cycle consists of three major stages pre-disaster, emergency response, and post-disaster. The Disaster Management model currently being adapted is the contract-expand model. This interpretation model has been developed since year 2014 (Maarif, 2014), referring to Article 23 paragraph 1 of Government Regulation Number 21 of 2008 regarding Disaster Management in Indonesia that during the period of an emergency, the Government or regional government declares the status of a disaster emergency in accordance with the hierarchy level of disaster. The transition process towards contract expand from previous practice on disaster management cycle model emphasizes how each has to be notified as a continuous process, and not limited to one 'stage' in time.

Specific on emergency response, there are need for coordination in one command and clear arrangement in cluster model approach. Prior regulation, Indonesia as matter of fact have had developed for short 6 months span of cluster approach. The Decree of Head NDMA number 173 year 2014 regarding National Cluster of Disaster Management that apparently expired but regrettably moved away due to dynamic interpretation in other line ministries. In addition, The Post Command Emergency System Regulation Head of NDMA No. 3 of 2016 stipulated cluster only at national level. Thus, in practice there was a gap of unavailable cluster scheme at sub national level for successive years to date. While, several line ministries and CSO, FBO, International community in humanitarian has relied on NDMA direction policies for activities and development have worked together respectively but unintegrated framework and practice.

### **The Importance of Character and Virtue, and Sociocultural Influences**

Leadership includes cooperation based on the ability of the person. According to Tead, Terry, and Hoyt in Kartono (2003), leadership is an activity or art of influencing others to want to work together based on one's ability to guide others in achieving the desired group goals. Meanwhile, Young in Kartono (2003) states that leadership is a form of domination based on personal abilities that can encourage or invite

other people to do something based on acceptance by the group, and have the appropriate skills for certain situations.

Leaders have character and virtues, behavior and personality. The behavior of the leader is distinguishing him from others, while events will always shape the action and type of leadership. According to Sennett (2014), a common view of character is that it refers to ‘the enduring personal characteristics we value in ourselves and for which we want to be valued by others’ and that our character unfolds through our lived experience of time and space. Following an extensive literature review, virtue ethics recognises that the motives of actors involved in actions needs to be virtuous to make actions virtuous. In other words, virtue cannot be defined solely in terms of outcomes or independent of consequences. If a behaviour seen as consistent with a virtue is producing a dysfunctional outcome, it cannot be characterised as virtuous. A virtue is always oriented towards a greater good that is intellectually and morally praiseworthy.

Moral philosophers and virtue ethicists have always focused on character as the central point of virtue. Aristotle is regarded as one of the earliest thinkers to explore character through the expression of *arête* (excellence) as a theory of virtue and its relationship to eudemonia or ‘human flourishing’ as the means for achieving a person's full potential

However, as MacIntyre (2007) observes, while virtues are to some degree tied to the socially local, collective virtues such as “trust and compassion” can be considered both communitarian and cosmopolitan (universal). Communitarianism is the promotion of governance structures that allow negotiation, conflict, and contestation through both participative and representative democracy when determining individual rights and responsibilities between citizens and their governments.

Conversely, a leader's socially constituted character can also be influenced in ways that appear to work against normatively virtuous intentions and motivations. Alzola (2008) argues that the main lesson virtue ethicists should take from the criticisms associated with situational contexts and human beings can exhibit moral fragility. These influences can often be unconscious, insensible, imperceptible, and implicit within the culture of institutions. They can also be driven by the need to conform to social information (through social media nowadays) that is institutionally and culturally ubiquitous and enforced in the interests of self-protection such provided by opportunity and added self-benefit.

Bowers et al. (2017) shows transformational leadership as a process of one person's interaction with others that can create solid relationships that result in a high level of trust, which will then have an impact on increasing the intrinsic and extrinsic motivation of followers and leaders. In line with Bowers et al., Judge & Piccolo in Geier (2016) argues that the type of transformational leadership has more advantages and is classified as a high order because it has a high degree of correlation. Although recognizing that this type of leadership will think strategically, Bowers et al. (2017) also stated that this type of leadership may not be the most appropriate type to apply in a crisis.

Leadership style influences the achievement of the desired results. In the context of a disaster, the success of a leader will generally be seen in the emergency and post-disaster phases such as bureaucrat, democratic, coercion is among that have been practiced.

### **Facilitative Leadership and Collaboration**

In the context of decentralized system in Indonesia, there are two suggesting refinement model of leadership emerged from practical emergency management and disaster risk reduction stages as disaster cycle, vertizontal and sapalibatism. In disaster management, it is necessary to develop a model of

mentoring and commanding leadership simultaneously. Decisions are based on an agreement on deliberation and consensus as the essence of Vertizontal leadership (Maarif, 2011, 2012, 2013). Disaster problems often cannot be approached with general management and leadership principles. In this case, a transformative leader is needed as a bureaucrat with a volunteerism spirit. Leadership in the existing bureaucracy is often fixated on a formal format based on an organizational structure system that has a vertical hierarchy system. Due to decentralization in archipelagic Indonesia, local governments are in control for building disaster resilience. The provincial government is committed to allocating and mobilizing resources to districts/cities if needed, while central government functioned as a catalyst and reinforcement for local government. Thus, NDMA horizontally must coordinate with relevant ministries/agencies to allocate and mobilize the required resources. It is important to underline that strengthening and assistance by the central government is not meant to create dependency or take over the role of local government, which will ultimately weaken local resilience.

The involvement of multi helix participation in disaster management is important, but also it required challenges and complexity, including in the provision of aid assistance. A lack of coordination may often prevent humanitarian assistance from reaching people in need during emergency response. For this reason, the Sapalibatism or “Menyapa dan melibatkan” is a humbling proactive approach and involvement participation leadership model was recognized, by giving roles to all stakeholders by not taking over their duties and functions. All disaster management actors are consulted or their needs are listened to and assisted, where the implementation of disaster management actively involves all actors (Maarif, 2011). Sapalibatism is the essence and manifestation of coordination to manage the interdependence of various activities implemented to achieve a goal.

### **Public policy**

The leadership aspect is closely related to policy formulation which is aligned with the situation and conditions when the policy formulation is needed. The United Nations (1975) itself gives the meaning of policy in the form of a declaration regarding a basic guideline for action, a certain direction of action, a program regarding certain activities or a certain plan (Abdul Wahab, 1997). Policy is essentially a guide to action. These guidelines may be very simple or complex, general, or specific, broad, or narrow, vague or clear, loose or detailed, qualitative or quantitative, public or private.

In another sense put forward by Anderson (1975: 23) that the policy is "a series of actions that have a specific purpose that is followed and carried out by an actor or a group of actors to solve a particular problem."

The last opinion expressed by Easton (1965) stated briefly that policy is "a policy consisting of a series of decisions and actions to allocate values." Of the three opinions regarding the formulation of the meaning of the policy, in essence each formulation contains several elements namely: (1) a series of actions; (2) carried out by a person or group of people; (3) problem solving; and (4) the existence of a specific goal. When the four elements are combined, an understanding can be obtained that policy is a series of actions containing decisions that are followed and carried out by a person or group of people to solve a problem to achieve a certain goal.

While many experts define public policy as well as the meaning of the policy itself, Jenkins (1991) stated that state policy, namely "a set of interrelated decisions taken by a political actor or group of actors concerning the selection of goals and the means of achieving them within a specified situation where these decisions should, in principle, be within the power of these actors to achieve."

Policy is an instrument of government, not only in the sense of government, in the sense that it only concerns the state apparatus, but also governance that touches various forms of institutions, both private, business, and civil society (civil society). Policies are essentially decisions or choices of action that directly regulate the management and distribution of natural, financial, and human resources in the public interest, namely the people, residents, communities, or citizens. Policy is the result of synergy, compromise or even competition between various ideas, theories, ideologies, and interests that represent a country's political system.

Sometimes public policy refers to terms or concepts to explain certain choices of action that are very specific or specific, such as for certain fields in the sectors of public facilities, transportation, education, health, housing or welfare. Matters relating to electricity, water, roads, schools, hospitals, public housing, social rehabilitation institutions are some examples that fall under the field of public policy. For example, social policy can be briefly interpreted as a form of public policy that regulates welfare affairs. Social policy in particular is actually a welfare policy. Including in the context of a crisis or disaster emergency.

The term policy is often used interchangeably with other terms such as goals, programs, decisions, laws, provisions, proposals, and grand designs. (Abdul Wahab, 1999). United Nations or the United Nations (UN in Abdul Wahab (1999) defines policy as a guideline for action. These guidelines may be very simple or complex, general, or specific, broad or narrow, vague or clear, loose or detailed, qualitative or quantitative, public or private, a policy in this sense may be in the form of a declaration regarding a basic guideline for action, a certain direction of action, a program regarding certain activities or a plan.

Anderson's policy expert (1979) in Islamy (1998), formulates that policy is: "a series of actions that have a specific purpose that is followed and carried out and carried out by a person or group of actors to solve a particular problem." Islamy cites the opinion of Frederick (1963) in Abdul Wahab (1997) which defines "Policy as a series of actions proposed by a person, group or government in a certain environment by showing the difficulties and possibilities of the proposed policy in order to achieve certain goals."

In connection with the definition of public policy that has been stated above, Anderson in Islamy (1998) argues that "public policies are those policies developed by government bodies and officials." Based on Anderson's understanding, of course the notion of policy can be described as defined by Anderson in the previous description. So according to Anderson every policy developed by government agencies or officials can be referred to as public policy. Public policies are thus not only made by the highest/highest state institutions/bodies, such as in our country the MPR and the President, but also by bodies/officials at all levels of government down to the village government level.

Derbyshire in Wibawa (1994) provides a limitation that public policy is a set of activity plans for social and economic conditions. Whereas Hofferbert in Wibawa (1994) limits public policy as the results of decisions taken by certain actors for public purposes.

Based on these limitations, the first limitation does not mention who the actors or public policy makers are. However, in another part of Derbyshire it is stated that public policy is the final product of every government, in the sense that it is the final product between the executive and the people's representatives (legislature). While the second definition, which mentions the existence of actors in a policy-making process, does not clearly state who/institutions are considered as actors/actors. To answer that question, Hofferbert in Wibawa (1994) then said that public policy is every relationship between government agencies and their environment.

Therefore, Hofferbert in Wibawa (1994) offers two ways to understand a public policy. First, approaching a policy through its substance (namely the editorial formulations of a policy that contains what goals are to be achieved), and second, explaining the results and impacts of the policy, both temporary and final results. Based on the opinions above, what is called public policy is a series of choices for government action (including choices for action) to respond to challenges concerning people's lives.

If we examine carefully the various definitions that appear in various literature, then at least we will get two kinds of views. The first view is the opinion of experts who identify public policy with the actions taken by the government. Experts who think so tend to assume that all actions taken by the government can basically be called public policy. In connection with this problem, an expert in policy analysis, Parker (1975) has attempted to present a fairly complete list of the various definitions of public policy. One of these definitions states that public policy is a certain goal, or a certain set of principles, or actions carried out by the government at a certain time in relation to a subject or as a response to a crisis (Parker, 1975).

Another definition explains that public policy is "a certain area or field and the actions of the government as the subject of comparative and critical study, which includes, among other things, different actions and principles and carefully analyzes possible cause and effect relationships in the context of a particular discipline of thought such as economics, science or politics". On the other hand, Thomas R. Dye (1978) formulates public policy as all choices or actions made by the government. Therefore, from Dye's point of view, public policy concerns whatever choices the government makes, whether to do or not to do something.

The second view is the opinion of experts who focus on policy implementation. We can divide experts who fall into this category into two poles, those who see public policy as government decisions that have specific goals or objectives and those who think that public policy has predictable consequences or impacts or can be anticipated beforehand. Experts representing the first pole, for example Nakamura and Small Wood, view public policy in three aspects which are policy formulation, policy implementation, and policy evaluation.

### 3. Methodology

The approach used in this research is qualitative research with descriptive research type as describes more of an observed phenomenon. The gathering of the primary and secondary data collection are using; 1) Focused Group of Discussion 2) Structured interviews, 3) Observation, and documentation. The location of this research were conducted in Batu City, East Java Province.

The collection of data and information was conducted through the FGD mechanism on November 3<sup>rd</sup>, 2022 by involving elements of the local government (NDM/BPBD East Java Province, NDM City of Batu, NDM Malang Regency, Local Gov't Audit (BPKP) and the Public Works and Housing Office of Batu City and the community (academicians, NGOs, and organizations disaster).

In relation to answer the causal analysis for in-depth leadership's insights, the research's specific questions were developed and conducted, with total of 5 leaders were interviewed from NDMA, City Batu Local Government, Sub National City of Batu NDM, Private sector association (PHRI). These interview with local leaders were conducted on February 9<sup>th</sup>, 2023 in City of Batu. Successively, February 25<sup>th</sup> 2023 in Jakarta with Central Government Leaders. They are within executive operational, and administrative functional areas at the high rank institutional and key informant, levels of mostly

government organisations and association of private company has been conducted. These leaders were identified from direct on duty officials who implemented the emergency management. These leaders are responsible for providing varying levels of policy advice, administering programs, and making critical decisions in the interests of others to reduce vulnerability and the potential for loss and suffering from Flash Floods. According to Creswell, qualitative research is a type of research in which the researcher is very dependent on information from the object/participants on: broad scope, general questions, data collection which consists mostly of words/text from participants, explaining and analyzing words and conducting research subjectively (Creswell, 2008). The reason for using this method relates to the object to be studied, namely human society (social) that must use a qualitative approach.

**Table 1: Leadership Matrix Interview**

<b>n=5</b>	<b>Key Informant 2 (BNPB)</b>	<b>Key Informant 3 Local Govt</b>	<b>Key Informant 1 BNPD</b>	<b>Key Informant 4 Private Sect.</b>
<b>Operational Leader</b>	2	1	1	
<b>Administrative Leader</b>				1
<b>Total</b>	2	1	1	1

Key informant (recognised leader of deep experience and influence) policy development in emergency preparation, response and recovery.

**4. Research result**

Reviews have been provided to explore and compare explanations of leadership types, leadership styles, disaster cycles, and general conditions in relation with each phase of the disaster cycle. Each stage of the disaster cycle has different situations and needs.

Leaders must be able to adapt quickly when faced with different situations. Bruning (1964) and Leonard & Howitt (2007) suggest that what constitutes effective leadership will vary during the preparation, response and recovery stages of an extreme event. Hana et al. (2009) further suggest that leaders may also need to effectively manage transitions from stable to extreme and back to relatively stable, while continuously rebalancing the unit or organization with respect to emotional, cognitive and physical perspectives.

In addition, a detailed explanation is also given regarding the meaning of policy and public policy which of course is very closely related to aspects of leadership. Focusing on the flash flood disaster emergency in Batu City, East Java Province in 2021 and based on research conducted using the Focus Group Discussion (FGD) and structured interview method.

**Table 2: Relationship with Interview Leaders**

<b>Research Question</b>	<b>Component</b>	<b>Interview Question to Leader</b>	<b>Description</b>
Question 1	Loss and Suffering	How well do leaders understand the empathy or loss and suffering from the people affected by the disaster? What do leaders do to respond and improve that loss and suffering? Is this sufficient /Could they do more? How do you navigate this dilemma, personally and professionally?	Understood well/Getting better Not understood well/at all Can do more Cannot do any more  Leaders can have compassion for many people Leaders can have compassion for some people Leaders can have minimal compassion for people Organisations can have compassion for many people Organisations can have compassion for some people Organisations can have minimal compassion for people
2	Compassion	As leaders we are expected to comply with rules, processes, and procedures: What else drives leaders to respond based on cluster collaboration to plan and organize for the needs of others? As a leader, can you have compassion for many people?	Leaders can have compassion for many people Leaders can have compassion for some people Leaders can have minimal compassion for people Organisations can have compassion for many people Organisations can have compassion for some people Organisations can have minimal compassion for people
3	Trust	Do you think that levels of trust between individuals and government organizations, and other organization during implementation cluster collaboration in emergency are increasing, decreasing, or have stayed more or less the same, in general, and regarding your organization?	Increasing for government Decreasing for government Staying the same for government Increasing for the organisation Decreasing for the organisation Staying the same for the organisation
4	Trust, mindfulness and practical wisdom	What do you think are the limitations of your organization? (situational and optional)	

**Table 2: Shows the Relationship Between the Relevant Research Question, the Interview Questions Used for the Analysis.**

**Data and Analytics**

The Sub National Government Implementation on Cluster Collaboration Emergency Disaster Management

The FGD’s discussions that took place in 3 sessions were using a facilitation mechanism have resulted in the following findings:



**Figure 1: Results of the FGD in Batu City, East Java Province, 3 November 2021**

**a. Collaboration and Commitment**

The discussion of collaboration is closely related to commitment. Commitment narrows to the leadership and political aspects. Based on the results of the discussion it was found that the commitment of a regional leader (at each level) greatly determines the success of disaster management.

Regional leaders who implemented a strong disaster vision and mission, through accompanying political support, will be able to encourage all existing sectors to mobilize their resources in each phase of disaster management.

The discussion which involved interactively, speaker Prof. Syamsul Maarif (Head of BNPB for the period 2008 – 2015) stated explicitly that without the commitment of regional leaders, it is impossible for coordination and collaboration in disaster management to work properly. Including one of them is the management of flash floods in Batu City. This was also agreed upon by the Head of Local Disaster Management City Batu (BPBD) who was participated during the FGD. It reflected the organizational structure of disaster emergency management, the Decree of the Mayor of City Batu Number: 188.45/342/Kep/422.012/2021 regarding the Establishment of Implementing Team for the Disaster Management Command System Flash Floods in the District of Bumiaji.

The history of the beginning of the "Section-Division ” cooperation was started by a joint commitment from the 2014 experience in the eruption of Mount Kelud for Simulation prepared for the community related in the Greater Malang area, followed by the experience of emergency response in several areas such as the Berantas River, Dusun Brawi which were affected by landslides.

**b. Collaboration Context**

In Disaster Emergency Management it is important to have multi-stakeholder collaboration with various special functions that are needed.

In order to manage the "collaboration" itself, there are need an "accurate" strategy so that the implementation of Disaster Management Emergency can run effectively and efficiently.

Even though the results of the FGD found that there was no exact policy that undermined the management of the collaboration in question, the Batu City Government through the Batu City Regional Disaster Management Agency (BPBD) established a group or section that has catered several special functions in the Disaster Emergency Management for Flash Flood. There is a group tasked with searching for search for victims, managing health, logistics and equipment as well as several other special groups consisting of a combination of several institutions in Batu City. This group is then called the Cluster.

The resources deployed are spontaneous and independent respectively. Of course, it is supported by multi-stakeholders based on the direction from the regional leadership.

### **c. Concept of Clusters in Disaster Emergency Management.**

The concept of collaboration is derived from (Sapalibatism). Namely greeting and involving those who have social concern in disaster activities and often even arrived at first in the location's events before the others even 'move on'.

Differences in nomenclature should not be a problem as long as substantial activities is achieved. The collaboration built by the Regional Government (Batu City) is already good, while the cluster concept is like something new. Nonetheless, the cluster concept exists and is implemented naturally in the coordination and in the field indirectly.

### **d. Disaster Emergency Management Implementation Effectiveness**

Effectiveness is closely related to the function and accountability for the implementation of the Flash Flood Disaster Management (PDB) in Batu City, East Java Province in 2021. Disaster events require a quick response and are generally responded with "policy easing" to accelerate emergency handling. However, it must be still implemented in an orderly manner, with transparency and accountability. Accountability risks and fraud risks can be increased by exploiting emergency loopholes. Therefore, governance and accountability are very important in disaster management.

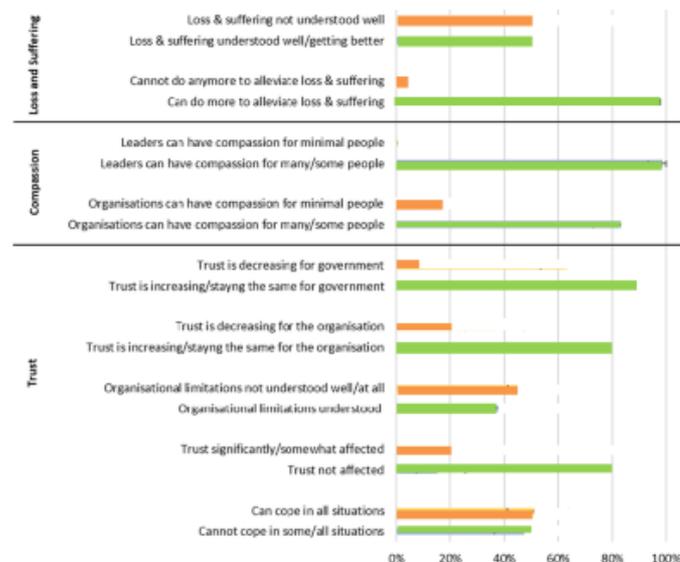
Observing the results of the discussion, it was found that the role of the leaders during the emergency period in question (Commander of the Command Post and Mayor of Batu) became very important. Implemented policies such as the ease access with which the public can access health services (such as BPJS services) helped the community prevent disasters after a disaster. In addition, the ease of access for managing lost/damaged documents due to the flood which was decided by the Mayor of Batu also greatly relieved the community. This kind of thing is certainly not a trivial matter which is actually quite easy to do with good coordination and collaboration between elements of the government, the business world and the community.

With clear and precise policies, of course, measurement of the effectiveness and accountability of managing disaster emergencies can be implemented The connection with the self-reliance or "bloody cluster" which was put forward by the Head of BPBD Kota Batu, was aimed at applying the cluster concept at the time of Disaster Emergency Management which was independent or self-reliance (or standing on its own feet). This means that there is no local government policy so far that accommodated the functioning of the cluster. So with limited resources and indirectly, the cluster concept was activated. Then, will the emergency management of the 2021 Batu City flash floods be effective? The results of the FGD stated that from the point of view of community service, "yes, it is implemented effectively" because Disaster Emergency Management is conducted on a community basis. Most of the people, of

course, have been trained, able to save other nearby residents and reach the nearest evacuation area. Nevertheless, There is certainly needs to be evaluated in more depth from various perspectives on the utilization of funds at Disaster Emergency Management.

What Motivate Leaders and How Leaders Manage the First Implementation of Cluster Collaboration in Disaster Emergency Management?

**Table 3. How well do disaster management leaders perceive loss, suffering, compassion, and trust**



- The qualitative results provided in Table 3 has useful insight into the perspectives of 5 disaster management leaders in response to the four research questions. These insights give support which may be summarized by the following points:
- Disaster management leaders of City Batu want to be compassionate, since aware of constellation and direction of regulation regarding cluster collaboration and backed by local commitment and political support. Yet leaders less understand impact of loss and suffering well of the people, and leaders admit that they could do more to minimize loss and suffering through Emergency Management and Disaster Risk Reduction.
- Disaster management leaders of City Batu want to be trusted, yet leaders do not understand their organizational limitations, in this case were the lack of regulation and capability funding that support the structure organization. Despite leaders knowing that these limitations affect trust, leaders still think their organizations can cope in all situations. Nevertheless, in the field during resources mobilization were all deployed by various stakeholders such as Neighbors Municipals, Private Sectors, NGOs, University were able to be implemented self-reliantly and spontaneously.
- Disaster management leaders of City Batu consider that trust, integrity and traditional values of gotong royong, compassion, truthfulness, humility, and courage are the most important characteristics in their facilitating leadership. Leaders commented how influential parents, friends, family, and community were in shaping their character, morality, leadership style
- Disaster management leaders in City Batu feel supported when exercising these characteristics and view them as very important to facilitating leadership’s effectiveness, especially sociocultural bond

aspects from neighborhood of Greater Malang Area (Malang Raya) such as Municipal Malang, City of Malang, Municipal of Pasuruan, Private Sectors, NGOs, University. However local leaders feel constrained by numerous factors beyond their control.

- Disaster management leaders of City Batu believe that their life experiences have played a significant role in influencing their ability to lead and manage the disaster management. These are efforts such as minimizing bureaucratic rows in executive role by appointing the Head of Sector Office who has higher rank (echelon 2) become Coordinator of Cluster, while Head of Local NDM is echelon 3 to facilitate the cluster.

The analysis of insights provided by experienced disaster management leaders demonstrates that these leaders operate along a continuum.

At one end of the continuum there is the desire and the ability for leaders to act more in the interest of self-and-other when seeking to protect others and reduce suffering. At the other end of the continuum there is the risk and the ability for leaders to act more in the interest-of-self.

In order to achieve the interest-of-self-and-other, two practices are proposed: mindfulness and practical wisdom for sustainable collaboration especially in disaster risk reduction. Bringing together mindfulness and practical wisdom affords disaster management leaders the opportunity to deepen their understanding and awareness of the nature and causes of suffering and the many ways that these are enacted through sociocultural influences within institutions. They also provide leaders with greater confidence and competence, derived from the practical wisdom of their lived experiences in minimising suffering.

During the implementation of the emergency management, we acknowledged the local regulation on organizational structure for cluster has undergone 3 times of improvement changes which was twice in month of November 2021 and a year after in November 2022. The changes scheme reflected commitment, inclusiveness and leadership from the City Mayor of Batu, local NDM and ranks officials regarding inter-organizational and networking, resource utilization and knowledge are key to effective implementation-based cluster.

Further on implementation perspective, as mandated sequence by the latest 14 days after disaster occurrence, the Head of City Batu declared the regional state of emergency status and immediately set up the post command emergency, and flow of the rapid team assessment conducted, recommend and preparing the operation emergency (ops) plan.

We also perceived that the relationship of organizing between related institutions such as the Armed Force, Police, NDMA support, sub national NDM, Babinsa (Territorial Army supervisor at village scale), Babinsakamtibmas (Territorial Police), community leaders and the community is very harmonious and respectful of each role and function based on ops plan. Similar support such as Pentahelix, from academician, mass media and other agencies in the government and the regions. Apart from that, grouping based on cluster per cluster is very clear as a supporting structure,

NGOs and the private sector began to emerge as an increasingly important force in the supply of equipment and the provision of services. For instance, the utilization of local state budget itself (APBD/BTT) by the coordinating infrastructure for repairing, Public Works and Housing is due to the use of heavy equipment so, available resources of the ranks of the Armed Forces, the National Police who use heavy equipment coordinate those with Public Works and Housing. Meanwhile, the private sector such as Association of Indonesian Hotels and Restaurants (PHRI) was encouraged to participate in emergency relief, which was incorporated into local emergency plans-

## 5. Conclusions and Recommendations

This paper demonstrates that disaster management leaders have facilitated in the interest-of-self-and-other to deliver through implementing self-reliant cluster collaboration on the social goods of improving wellbeing, providing protection, and minimising suffering when faced with the effects of the disaster. These transformational leader and policy deliberation on cluster collaboration are achieved with both supporting and limitation factors

Qualitative research to find gaps in the Flash Flood Disaster Management in Batu City is an interesting and challenging process. The various perspectives of disaster management actors are taken into consideration along with various possibilities through the theories put forward by quoted experts and empirical result.

Interesting findings precisely focus on issues of the importance of virtues and character that elicited facilitating leadership and intern political willingness for further transformed local policy. The disaster that impacted Batu City is certainly within the authority of the Batu City government responsibility. As pre-requisites, leaders have done so by acting through the (virtuous) leadership characteristics of trust, integrity, truthfulness, and traditional values of gotong royong compassion, humility, and courage that have been developed over time through shared lived experiences.

In addition, from lessons of empirical model and regulation point of view, our findings offer new insights into how system of cluster collaboration can be developed by merging contract expand model with collaboration theory and current regulation Head of NDMA No. 3 of 2016 on Post Command Emergency System was capable to be conducted by sub-national Government City of Batu.

The fascinating conclusion that was obtained was “no matter how well the policies that had been formulated in the Government and Regional Government arrangements regarding Disaster Management, without the active role, understanding and commitment of the regional leaders who were 'influential' at that time with political attributes attached to them, these policies were only 'at first glance’ look and apparently will not be further interested and ineffective.

For that some recommendations that can be suggested are as follows:

1. The mainstreaming of disaster risk reduction needs to be resonated in every phase of disaster;
2. The concept of multi stakeholder collaboration through a disaster management cluster system needs to be established since the pre-disaster phase. So that when a disaster occurs, all sectors are ready to mobilize their resources;
3. Strengthened Regulations at the national level within the scope of Presidential Regulations (Perpres) that can encourage and harmonize roles and responsibilities at the National Level for Ministries/Institutions and elements of the multiple helix. The proposed construction is meant to be an integral part of the regular development plan, so it is integrated into the Middle Plan Development document from the national, provincial, regional to village levels.
4. Discussions related to sectoral egos are no longer important to be developed as an issue in disaster management but must be protected by a policy that is able to accommodate these 'sectoral egos' so that each of them can implement their duties and functions properly.

Disasters are a joint business and disasters occur in regions which are of course the responsibility of the Government and Regional Governments. For this reason, leaders who have a strong vision and mission related to disaster are needed. So that the actions of disaster institutions and practitioners can be protected both from the aspects of policy, planning, budgeting and accountability.

The application of a cluster system in disaster management (learning from the disaster emergency management of flash flood in Batu City) is one of the solutions to fill the gap between institutions and disaster practitioners both at the central and regional levels. Joining various entities in a group with similar specific tasks can increase solidarity and foster higher empathy in minimizing casualties.

## 6. Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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