

Problems of decentralized disaster management in Indonesia: a review of local government failures

Ahmad Fatkul Fikri^{1*}, Rustian¹, Mohammad Afifuddin², Dody Ruswandi¹, Catur Susilo Rahardi¹, and Andi Albright Sumange³

¹National Disaster Management Authority of Republic Indonesia, Pramuka Street Kav. 38 Matraman, Jakarta, Indonesia

²Departement of Sociology, Faculty of Social and Cultural Sciences, University of Trunojoyo Madura, Bangkalan, Indonesia

³Graduate Student in Harris of Public Policy University of Chicago, 5801 S Ellis Ave, Chicago, IL 60637, United States of America

Abstract. The issuance of Law No. 24/2007 on Disaster Management was the starting point for the decentralization of disaster management. The implementation of decentralization can provide significant benefits in disaster management, such as being faster and more precise in handling disasters. This study aims to examine the extent of the implementation of decentralization of disaster management. The research method used is qualitative exploration. data were collected using observational studies, interviews, and documentation with purposive sampling. Meanwhile, the data processing technique uses qualitative analysis techniques. The findings in this study are that the role of LDMA and local governments in the pre-disaster, emergency response and post-disaster phases is still not optimal. The causes are: (1) political will from local leaders related to disaster management is still weak; (2) local government budget allocation for disaster management is still low; (3) the low quality of human resources of LDMA apparatus. As a result, local governments are still dependent on the central government for disaster management. Thus, the implementation of decentralization of disaster management, which aims to increase citizens' disaster awareness, keep people away from disaster risk, and make people able to live side by side with disasters, has not been maximally realized.

1 Introduction

Indonesia is a country famous for its natural beauty, known as the emerald equatorial country. Behind its beauty and abundant natural wealth, Indonesia has the threat of disaster. Indonesia's potential for disaster is caused by Indonesia's geography, which is located in the world's ring of fire and is surrounded by three active world plates [1]. This position results in Indonesia frequently being hit by landslides, floods, droughts, earthquakes and tsunamis, volcanic eruptions, tornadoes and extreme waves as in Fig. 1.

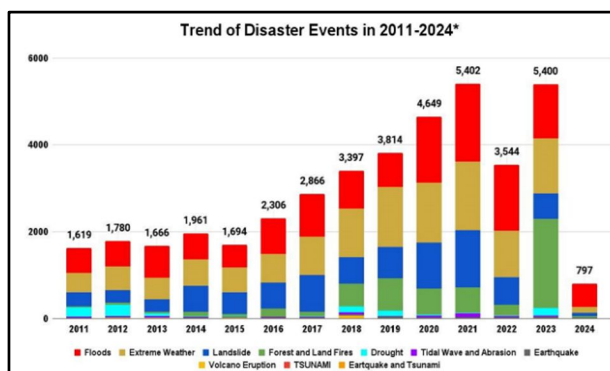


Fig. 1. Trends in Natural Disasters in Indonesia 2011 - 2024

As a country with a high level of disaster risk, Indonesia has experienced several devastating disasters. History records devastating disasters that have occurred in Indonesia, including the eruption of Mount Tambora in 1815 which killed 47,925 people, the eruption of Mount Krakatoa in 1883 which killed 36,000 people, the 1992 Flores earthquake and tsunami which killed 263 people, the 2004 Aceh earthquake and tsunami which killed more than 220,000 people, the 2006 Yogyakarta earthquake which killed 6,234 people, the 2018 Palu and Donggala earthquake, tsunami and liquefaction which killed more than 1,000 people, and the non-natural disaster of the Covid-19 pandemic in 2020 - 2022 which killed more of 156,000 people [2–4].

The 2004 Aceh earthquake and tsunami disaster became a turning point in the awareness (wakeup call) of the community and government regarding the importance of disaster risk management [5]. Since then, the government has been inspired to carry out disaster risk management well. Proof of the government's seriousness in disaster risk management is the issuance of Law Number 24 of 2007 concerning Disaster Management. This regulation is the first and basic step for the central and local governments to make the disaster management process in Indonesia better. Existing regulatory instruments explain that disaster and emergency

* Corresponding author: ahmadfatkulfikri02@gmail.com

management is the responsibility and supervision of the central and local governments.

Normatively, disaster management which is the responsibility of local governments is relevant to the principle of local autonomy. Article 18 paragraph (2) and paragraph 5 of the Constitution of the Republic of Indonesia explains that local governments are given the authority to manage and regulate their government affairs. One important aspect of the relationship between the centre and the regions is equitable, effective, and efficient development in the administration of government [6], including disaster management to achieve national development goals.

Decentralization and local autonomy have a central role in disaster management in Indonesia. Local governments have a comparative advantage regarding many important issues related to pre-disaster preparation, such as urban infrastructure maintenance, building, and land use regulations that are prone to disasters, and emergency planning [7]. In terms of human resource development, decentralization has a role in increasing the capacity and ability of local leaders to deal with critical situations. Socially, decentralization has a role in increasing community involvement in disaster management activities [8]. Furthermore, decentralization will have implications for the speed and accuracy of disaster management because effective disaster risk mitigation and reduction efforts require the use of information, expertise, and local resources [9].

However, decentralization also raises several problems between central and local relations. The handover of affairs that fall under the authority and affairs of local governments creates disharmony between the central and local governments [10], including in matters of disaster management. This disharmonization was due to legislative regulations being formed before the disaster management Law was issued. Apart from that, the process of making legislative regulations tends to prioritize sectoral egos, overlapping, prone to conflict, multiple interpretations, and inconsistencies in implementing regulations [11, 12]. In addition, local governments have to take on more public services, while their resources are very limited [13].

The results of Kartika's research (2015) show that the central and local institutional arrangements are not good, the resources they have are still lacking, regulations overlap, and there are gaps in coordination [14]. The local government's lack of understanding in determining disaster management plans has led to the relationship between the center and the regions not running well [15]. Apart from that, the spirit of decentralization and local autonomy encourages local governments to become more dominant, giving rise to resistance from the central government [16]. This will certainly cause chaos in the decentralization of disaster management in Indonesia.

The fact of the chaotic relationship between the center and regions in disaster management can be seen from the handling of the non-natural disaster of the Covid-19 pandemic. The massive and rapid rate of spread of Covid-19 has prompted local governments to take their preventive measures. The policy of several regions to carry out local quarantine (lockdown) with unequal areas

has caused a negative response from the central government. As an indicator, President Joko Widodo stated video broadcast by the Cabinet Secretariat on March 16 2020 that local quarantine or lockdown on both a local and national scale is the authority of the central government which cannot be determined by local governments [17].

Based on several of these problems, this research aims to analyze the implementation of decentralized disaster management in Indonesia. The problem raised in this article is, how is disaster management decentralized in Indonesia.

2 Research methods

This research uses an exploratory qualitative research method by utilizing primary data and secondary data. Primary data was collected through direct semi-structured interviews using communication media (WhatsApp, telephone, zoom meetings) and field observations, while secondary data was collected through documentation studies sourced from previous research (journals, dissertations, and theses), legal regulations, and regulations, magazine invitations, books, internet sources, online and print news.

The technique for determining informants uses a purposive sampling technique. Meanwhile, the analysis technique used in this research refers to the model developed by [18]. This analysis technique emphasizes interactive analysis, which means that analysis activities will continue to be carried out until the conclusion is the same. This interactive analysis model has stages of collection, condensation, presentation, and verification or conclusion.

Several research frameworks can be used to analyze decentralized disaster management. In this research, researchers adopted a disaster management framework based on the Disaster Management Law as seen in Fig. 2.

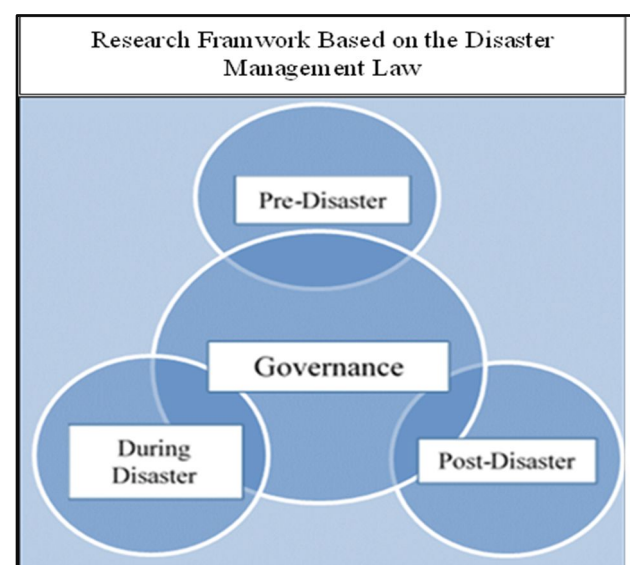


Fig. 2. Research Framework

This research framework was adopted from the Disaster Management Law which was then adopted by

researchers analyzing decentralized disaster management in Indonesia. This theoretical framework is appropriate to use because it emphasizes the role of local government and society. In addition, this framework concerns activities carried out before, during and after a disaster. In this study, researchers limited pre-disaster variables to include public awareness of disaster risks, avoiding disaster risks, and reducing disaster risks. Variables during emergency response include determining emergency status, search and rescue (SAR), rapid assessment, and determining basic needs. Post-disaster variables include rehabilitation and reconstruction activities.

3 Results and discussion

3.1 Decentralized disaster management process in Indonesia: an overview

One factor in the success of reform is the improvement in the quality of relations between the central and local governments. Inappropriate division of affairs will have an impact on ineffective central and local relations, which will ultimately result in the failure of reforms and services to the community [19]. One way to bring public services from the government closer to the community is through local autonomy. The closer the government provides services to the community, the better the services provided [20], including in matters of disaster.

The 1945 Constitution of the Republic of Indonesia does not explicitly explain disaster management in Indonesia. The constitution only explains that the president can declare a state of danger that could threaten the security of the country, but what is meant in this article tends to refer to a state of war. The government first regulated the handling of hazards through Law Number 6 of 1946 concerning Dangerous Conditions, one of which includes dangerous conditions resulting from natural disasters.

The forerunner to the formation of an institution that deals with disaster management is the Indonesian Government formed the Agency for Helping Families of War Victims. This agency, which was founded on August 20, 1945, focuses on war conditions after Indonesian independence. This agency is tasked with helping war victims and families of victims during the War of Independence. Indonesian Government formed the Agency for Helping Families of War Victims is the parent organization aimed at maintaining public safety, serving as public security guards in areas under the coordination of the Regional Indonesian National Committee (KNI).

In 1967, through Presidential Decree Number 256 of 1966, the Government established the Central Natural Disaster Management Advisory Authority (BP2BAP). This institution is led by the Minister of Social Affairs who is responsible to the president. Central Natural Disaster Management Advisory Authority has the task of managing disaster emergency response and assisting disaster victims. The formation of this agency is the starting point for an institution that specifically handles

natural disasters, not just disasters caused by humans or war (man-made disasters).

After the 1998 reform, Indonesia experienced a multidimensional crisis. During this period, Indonesia experienced social unrest in several regions. This inspired the formation of the National Coordinating Agency for Disaster Management and Refugees (Bakornas PBP), which previously was only the National Coordinating Agency for Disaster Management (Bakornas PB). This agency is ad hoc, led by the vice president, and directly responsible to the president. The formation of Bakornas PB was followed by the formation of a Disaster Management Implementation Coordination Unit (Satkorlak PB) at the provincial level led by the governor and a Disaster Management Implementation Unit (Satlak PB) at the district/city level led by the regent/mayor.

Until the 59th anniversary of the independence of the Republic of Indonesia (2004), the Indonesian Government did not yet have specific regulations regarding disaster management. The earthquake and tsunami that hit the Indian Ocean inspired people and governments around the world, especially Indonesia, to reorganize disaster management in Indonesia. A concrete manifestation of the government's seriousness in organizing disaster management in Indonesia is by issuing Law Number 24 of 2007 concerning Disaster Management. This regulation encourages comprehensive and comprehensive disaster management. Unlike before the disaster management Law, disaster management was responsive. Apart from that, the regulation mandates the formation of a permanent, not ad hoc, National Management Agency. The following are institutional differences before and after the Disaster Management Law was passed, as shown in Table 1.

Table 1. Differences in disaster management institutions before and after the disaster management law

Content	After Disaster Management Law	Before Disaster Management Law
Intitutions	Bakornas PB (national) Satkorlak PB (province) Satlak PB (district/city)	NDMA (national) LDMA (province) LDMA (district/city)
Leader	Vice President (national) Governor (provinsi) Regent/Mayor (district/city)	Head NDMA (National)
Institutional Status	<i>Ad hoc</i>	Permanent
Function	Coordination	Coordination, Command, Implementation
Management	Pada saat tanggap darurat	Pre-disaster, during a disaster, and post-disaster

It can be concluded that the Disaster Management Law is the starting point for the decentralized process of disaster management in Indonesia. In Article 5 of the

Disaster Management Law, there is a clause, "The government and local governments are responsible for implementing disaster management." Apart from being a milestone in starting decentralization of disaster management in Indonesia, the Disaster Management Law also presents a new paradigm for disaster management in Indonesia. Shifting the paradigm for implementing disaster management from responsive to preventive. Of course, these paradigm changes must be accompanied by cooperation and collaboration between the central and local governments to strengthen prevention, mitigation, and early warning. The Disaster Management Law requires that the central and local governments are responsible for implementing disaster risk management in Indonesia. This has the consequence that the central government hands over some of its authority regarding disaster management to local governments.

Law Number 23 of 2014 concerning Local Government does not explicitly explain the authority of local governments in handling disasters. In this regulation, the outline of disaster management lies in concurrent authority which is divided into mandatory and optional matters. Disaster management is a mandatory government matter, namely related to security and public order, but in turn, there are several regions that do not have local institutions or apparatus that specifically deal with local disaster management.

Central and local governments have responsibilities before a disaster occurs. A concrete manifestation of government responsibility by establishing a National Disaster Management Authority of Indonesia (NDMA) at the central level and a Local Disaster Management Authority (LDMA) at the local level. Both have their respective authorities in accordance with the planning documents. In this case, at the central level, the National Disaster Management Plan and local Disaster Management Plan documents at the local level are used. Figure 3 explains how the central and local relations relate to disaster management in Indonesia.

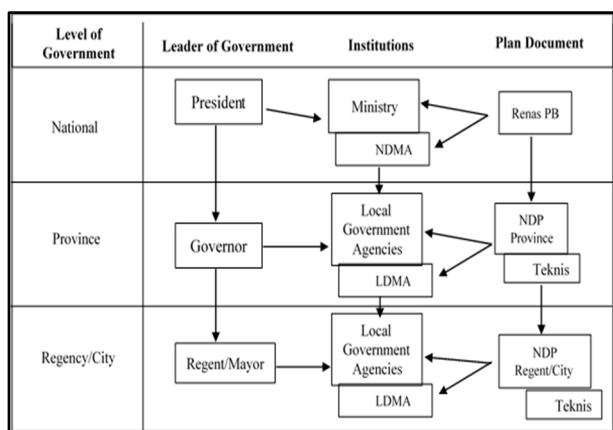


Fig. 3. Structure of central and local institutions for disaster management in Indonesia

NDMA of Indonesia consists of a steering element tasked with formulating policy concepts and evaluating disaster management and an implementing element tasked with the integration of pre-disaster, emergency response, and post-disaster. NDMA of Indonesia has the task of

coordinating across sectors in disaster management in Indonesia. However, the consequences of decentralization and local autonomy limit the influence of ministries at the local level. The central government (ministries/institutions) only acts as a facilitator and must negotiate with local governments to carry out programs that fall under the authority of local governments [21].

On the other hand, LDMA has the same elements and tasks as NDMA of Indonesia, only at the provincial and district levels. LDMA is tasked with coordinating with Local Government Agencies (LGA). LDMA's position is separate from NDMA of Indonesia whose entire budget comes from the Local Government Budget, although much of it depends on central government allocations. Apart from that, LDMA coordination must also be divided into two, namely, NDMA of Indonesia and the Ministry of Home Affairs through the Directorate General of Regional Administration Development. This can lead to overlapping authority and miscoordination.

3.2 Pre-disaster: limited decentralization

The most appropriate way to reduce risks due to the threat of disaster is at the pre-disaster stage. This stage explains how to eliminate or reduce risks that can occur due to disasters. As in the framework in Fig. 1, the pre-disaster study focuses on awareness of risk, preventing society from risk, and living side by side with threats.

First, decentralization must be able to increase public awareness of disaster risks. One effort to increase public awareness of disaster risks is through disaster education. The Disaster Management Law emphasizes that disaster education is the right of every community. In particular, education and training are stated as part of disaster management in situations before a disaster occurs and as part of disaster mitigation efforts. However, the law itself does not clearly define what is meant by disaster education but provides space for other government policies/regulations to create a working definition.

Until now, there are no regulations that specifically regulate disaster education. The Indonesian government claims to have integrated disaster risk reduction in the education sector, namely in the school curriculum, teacher training on disaster risk reduction education, and school preparedness. In reality, the disaster education curriculum has not yet reached common ground and is still in the process of being reviewed. This is because disaster education is not only the domain of disaster management policy, but is a matter of contention for other government affairs, such as the Ministry of Education, Culture, Research and Technology (Kemendikbudristek) to the Ministry of Public Works and Public Housing (Kemen-PU-PR).

The chaos in disaster education does not only occur in the central government but also extends to local governments. Most local governments have not implemented a disaster curriculum, so the integration of an anti-disaster curriculum into formal education is still just a matter of discourse. At the local government level, the non-obligation of a disaster education curriculum is the reason there is no disaster education in several regions.

Apart from that, all subjects in general education are determined by the central government. However, the central government does not close meetings on determining the education curriculum to local governments.

Decentralization should provide space for provincial governments (SMA/SMK) and district/city governments (SMP and SD) to provide disaster education curricula with local content. However, the development of the disaster education curriculum has not been decentralized to the lower levels. One possible cause is the complexity of polycentric governance in Indonesian disaster management [22]. Only a few local governments implement a disaster education curriculum. An example of a local government that implements a disaster curriculum is Aceh Province. In fact, disaster education is important to increase public awareness of disaster risks.

The disaster curriculum program aims to create a society that is aware of potential disasters and has knowledge and disaster management skills, which in the end can provide community resilience [23, 24]. Disaster education is able to provide better knowledge, skills, and awareness in disaster mitigation activities [25]. In addition, the inclusion of disaster education curricula in 30 countries can contribute to reducing disaster risk [26]. This shows the best practice of disaster education curriculum in the world.

The second thing in increasing public awareness is risk assessment. As a key tool for communication and collaboration on disaster risk, risk assessment is essential in building disaster risk awareness [21]. Risk assessment is carried out through the creation of Disaster Management Plan (DMP) documents at the Provincial, Regency, and City levels. So far disaster risk studies have been carried out by 34 provinces, while 4 new autonomous regions are still in the process of conducting studies. However, the NDMA of Indonesia's role is still very dominant in the preparation of disaster risk assessments due to uneven decentralization of resources. The need for vertical collaboration is absolutely necessary, as the United States (US), which has a federal government system that has long supported local autonomy, still has to involve the central government [27].

The next problem is that several districts/cities have not yet carried out disaster risk studies. District/city governments consider that disaster management is not a development priority. So the budget priority is not allocated to expenditure related to disaster management. In addition, the attitude of local leaders shows very low motivation to prioritize disaster management policies, because they do not help much in the campaign for the next election [13]. Some district/city governments consider LDMA to be a "dump" place for employees who have been punished. The result is that local governments often lack staff who have the competence to actively develop disaster management strategies.

Second, decentralization must be able to prevent society from the risk of disaster. Basically, preventing people from disaster risk occurs in three stages of disaster management, before, during, and after a disaster. In the pre-disaster stage, to avoid disasters, people choose to

strengthen their residences [28, 29] and avoid residences from disaster-prone areas. When a disaster occurs, people choose to evacuate and avoid the disaster location [30, 31]. In the post-disaster period, people choose to move from their old residence [32]. Several ways that can be done to prevent people from disasters are through good spatial planning [21].

The central government requires all provincial, district, and city regions to have Regional Spatial Planning documents through Law Number 26 of 2007 concerning Spatial Planning. All provinces, districts, and cities actually have Regional Regulations regarding RTRW, however, there is a very significant delay in implementing spatial planning regulations which hamper the functionality of spatial planning as a means of preventing communities from disaster risks. The Detailed Spatial Planning Plan, which guides regional planning plans, is not yet owned by most local governments. In addition, disaster risk hazard maps are not used optimally in spatial planning by local governments, although there are several cases where risk planning has been used in local-level planning.

Spatial planning has an important role in avoiding new development around high disaster risk areas [21]. Poor spatial planning increases community vulnerability to disaster risks. In 2014, the growth of hotels in Yogyakarta resulted in a drought, in Bandung the growth of hotels resulted in flooding, in Cirebon the growth of hotels and restaurants that were not well organized resulted in a clean water crisis, and land conversion in River Watersheds (DAS) resulted in sedimentation [33] which can result in flooding.

Third, decentralization must be able to provide strength to the community to be able to live side by side with disasters. If the community is able to adapt and live side by side with disasters, the community will reduce vulnerability and reduce losses, and be able to restore lives affected by the disaster. When communities are able to live side by side with disaster risks, regional resilience will be created. Living in harmony with disaster risk usually involves natural, early warning systems, and structural and physical management steps. These steps can be mainstreamed in the implementation of development planning.

Good and sustainable nature management can reduce the impact on disaster risk vulnerability, especially natural disasters. Local governments often have uncontrolled management of natural resources. As an excuse to increase Regional Original Income (PAD), the exploitation of natural resources often ignores the environment, resulting in an increase in the risk of disasters. As the results of a study from Suharyo (2017) explained the local government seemed to be allowing illegal gold mining which had an impact on food security in Maluku [33]. Problems with natural management also give rise to conflicts that occur on Mount Kendeng, Central Java. The local government was unable to resolve this problem and required the central government to take over the conflict.

3.3 Emergency response: local government incompetence

Emergency response is the most crucial moment in the disaster management process. At that time, people were panicked, anxious, and confused (chaos) about what to do. Therefore, there needs to be action to overcome this, so that the uncertain situation becomes normal, saves as many victims as possible, and minimizes the losses suffered. Central and local government efforts during emergency response can be carried out by rapid assessment, determining the status of a disaster emergency, search and rescue (SAR), determining basic needs, and restoring vital facilities.

First, a rapid assessment. When a disaster occurs, the steps that must be taken immediately are a quick and precise assessment of the disaster location. This activity is the first step that must be carried out and must be completed immediately. This step was carried out in order to assess the needs of communities affected by the disaster, to then implement priority action plans. Without such action, policy inaccuracies, gaps, or overlapping assistance delivery may occur, which not only negates valuable resources at critical times but can increase the burden on affected communities.

A rapid needs assessment aims to get an idea of the needs and problems of those affected by a disaster within one to two weeks [34]. In addition, this assessment is also separate from search and rescue activities. At this stage, the assessor must collect as much information as possible from various sources, and go directly to the field (not relying on information from other parties), so that there is no bias. For example, aid often only reaches areas that are easily accessible [35, 36], this will certainly worsen the impact of disasters.

The accuracy and speed of rapid assessment require good skills for regional disaster personnel. It's just that local governments often don't know what to do when a disaster occurs. For example, in the 2016 earthquake disaster in Pidie Jaya Regency, the Pidie Jaya Regency Government experienced that they did not know or "stuttered" what to do. This required one of the universities in Aceh to carry out a rapid assessment of the Pidie Jaya earthquake disaster. The same thing also happened during the flash flood disaster in Masamba, North Luwu Regency. The lack of human resources who know about disasters is the main reason for this failure.

Second, determining the status of a disaster emergency. The 2008 Government Regulation concerning the Implementation of Disaster Management states that the status of a disaster emergency goes through three stages, namely, emergency alert status, meaning that the potential for a disaster has led to a disaster. Emergency response status means when a threat has actually occurred and disrupted people's lives and livelihoods. Emergency to recovery transition status means when the threat of disaster begins to decrease in escalation, while life and livelihoods have not yet resumed as before.

Emergency response status is divided into two levels, namely national disasters and regional disasters consisting of provincial disasters and/or district/city disasters. Determination of disaster emergency response status is

carried out by the president for national disasters, the governor for provincial disasters, and the regent/mayor for district/city disasters. This determination is based on the minimum number of victims, damage to facilities and infrastructure, material losses, the area affected by the disaster, and the socio-economic impact.

Basically, legislation has given local governments the authority to determine the status of a disaster emergency, but knowledge and leadership skills in times of crisis mean that these decisions are often inappropriate. Data in the field also shows that often during times of crisis, the emergency commander is given to the Military District Commander (Dandim). This shows the inability of local governments to lead during times of crisis. Leadership character has an important contribution in times of crisis. A leader who has strong character can determine the duration, level of exposure, and when to end the crisis by making the right decisions [37]. As producers of regional and national leadership cadres, political parties have failed to create leaders who are capable of leading in times of crisis.

Third, search and rescue of victims. Rescue and search or search and rescue (SAR) of victims in large-scale disasters is very important in disaster management. Search and rescue (SAR) operations are used to track victims after a disaster occurs in order to reduce casualties. Data from previous disaster events shows that more than 50% of deaths occurred within a few hours after the disaster event. Therefore, disaster management and search and rescue operations must be carried out immediately after a disaster occurs to increase the chances of saving victims while they are still alive [38].

Indonesia has several institutions in the process of searching for and rescuing victims, namely, NDMA of Indonesia, LDMA, National SAR Agency (Basarnas), and Regional Basarnas. In the event of a disaster, LDMA has a Rapid Response Team (TRC) to collaborate with the Regional Basarnas, Indonesian National Army (TNI), and Indonesian Republic Police (Polri) to search and rescue victims. However, most of the TRCs owned by local governments have minimal search and rescue capabilities compared to Basarnas, TNI, and Polri. This is because TRC members are not provided with regular and continuous education and training. In addition, local governments have limited means of searching and rescuing victims who have to borrow from other institutions. This is contrary to the requirements for achieving effective response actions, namely the availability of information and resources [39].

Search and rescue operations for victims must be carried out immediately after a disaster occurs. The success of emergency response operations depends on the time needed to rescue victims. Based on NDMA of Indonesia standards, 72 hours after a disaster is the golden time for rescuing victims. If the victim is not rescued within 72 hours after the disaster occurs, it is very likely that the victim will lose their life [40]. So fast and appropriate actions and decisions are needed for regional heads to search and rescue victims.

Fourth, determine basic needs. The head of NDMA of Indonesia Regulation Number 7 of 2008 explains that fulfilling basic needs must comply with predetermined

minimum standards. The basic needs in question are clothing, food, shelter or shelter, sanitation and clean water, health services, and psychosocial services. Central and local governments are responsible for meeting these needs. All communities affected by disasters have the right to have their basic needs met. Determining basic needs is an important action that must be done well. In most cases, disaster survivors experience increasingly severe suffering due to basic needs not being met properly.

Disaster management during the emergency response period can be said to be optimal and good if the basic needs of disaster survivors can be fulfilled properly. Often meeting basic needs is a problem faced by local governments. Weak governance, harmonization, and coordination are still a source of powerlessness for local governments, especially in logistics distribution. The results of research from Ramdani (2015) confirm that local governments are unable to meet the basic needs of flood victims [41]. A similar thing also happened in Palu, Central Sulawesi Province, when facing earthquake, tsunami, and liquefaction disasters, the local government's helplessness in meeting basic needs encouraged people to loot [42].

3.4 Post-disaster: dependence on central government

Disasters have resulted in material losses and casualties. In order to reduce the burden on society, recovery is necessary. In the disaster management cycle, the recovery phase is the final stage of the disaster management process which consists of rehabilitation and reconstruction. The rehabilitation and reconstruction phase essentially repairs and rebuilds physical and non-physical infrastructure and facilities (livelihoods, social, economic, cultural, environmental) so that they can recover properly before a disaster occurs and have resilience against disasters if they occur in the future.

Legislation has stipulated that the central and local governments have responsibilities in the aftermath of a disaster, including the rehabilitation and reconstruction of various losses caused. The mandate of this regulation explains that the central and local governments work together to carry out post-disaster recovery, and must involve the community. In practice, the role of the central government in recovery is greater than that of local governments. Most local governments are not financially capable of carrying out recovery due to the impact of disasters.

Since rehabilitation and reconstruction grant funds have been allocated by the central government since 2015, until 2021 the allocation will reach IDR 9.992 trillion. The grant allocation was distributed to 387 local governments. The large budget allocation is intended to help local governments [43]. This is because no region has allocated APBD for post-disaster management. Disaster events cannot predict the exact time, so local governments tend to be small in budget allocations for disasters, especially Unexpected Expenditures (BTT). Apart from that, the APBD capacity is not able to rebuild after a disaster.

As per the results of interviews with the Pidie Jaya Regency Government, the budget allocation from the APBN for the 2016 earthquake disaster recovery was greater than the allocation from the APBD. A similar incident also occurred in Nias Regency. The use of the APBN still dominates in the post-disaster stage [44]. Recovery after the 2018 earthquake disaster in North Lombok requires the central government to allocate a budget of 51.05 percent of the entire budget plan. The remainder is 3.44 percent from the district APBD, 0.35 percent from the provincial APBD, and 21.11 percent from the public and private sectors [45]. Research by Rivani (2017) found that the budget allocation for disaster management in the regions is very small, on average only 0.02-0.07 percent of the total Local Government Budget. This shows that the government is still very dependent on the central government. In fact, as a country that adheres to a decentralized system, local governments should have a big responsibility in disaster management.

4 Conclusion

Decentralization of disaster risk management in Indonesia is a mandatory concurrent matter related to security and public order. The logical consequence of decentralizing disaster management in Indonesia is the formation of a Local Disaster Management Agency (LDMA). Similar to NDMA of Indonesia, LDMA also has directing and implementing elements, only at the provincial level. At the pre-disaster stage, decentralization can be carried out by increasing public awareness of disaster risks. Most local governments have not implemented a curriculum at formal or informal education levels. Opportunities to implement the disaster curriculum are basically provided by the central government through local content programs. Second, protect the community from disaster risks, namely by spatial planning. Most local governments do not use disaster risk hazard maps optimally in spatial planning. In fact, spatial planning has an important role in preventing new development around high-disaster-risk areas. Third, living side by side with disaster risk. Local governments often have uncontrolled management of natural resources. As an excuse to increase Regional Original Income (PAD), the exploitation of natural resources often ignores the environment, resulting in an increase in disaster risk.

During emergency response, local governments have limited human resources to carry out assessments. Local governments tend to use human resources outside the local government, such as academics. Second, determining the emergency status of a disaster. Data in the field also shows that often during times of crisis, the emergency commander is given to the Military District Commander (Dandim). This shows the inability of local governments to lead during times of crisis. Third, search and rescue of victims. Limited resources owned by local governments require equipment to be borrowed from other institutions. Apart from that, the TRC PB owned by the local government has limited capabilities. Fourth, fulfilling basic needs. Often meeting basic needs is a problem faced by local governments. Weak governance,

harmonization, and coordination are still a source of powerlessness for local governments, especially in logistics distribution. During the recovery period, local governments have a high dependence on the central government.

References

1. R. Rustian. Transformation of disaster equipment governance in the perspective of smart governance (study on the regional disaster management agency of Central Java Province) (Brawijaya University Brawijaya, 2021)
2. S. Alfari, 9 The worst natural disaster ever occurred in Indonesia (2018). Accessed on 5 October 2024 <https://www.ruangguru.com/blog/9-bencana-alam-terdahsyat-yang-pernah-terjadi-di-indonesia>
3. R. N. Alghifari, The biggest natural disaster that has ever happened in Indonesia, one of them being the most powerful volcanic eruption (2021). <https://jurnalsoreang.pikiran-rakyat.com/>
4. S. Sabrina, The story of 1883 in the eyes of poets (2020). <https://sejarah.dibi.bnppb.go.id/>
5. S. P. Maarif, Thoughts and ideas of disaster management in Indonesia. (Bintek Manajemen Penyusunan Peta Rawan Bencana, 2012).
6. R. D. Thomas, National-local relations and the city's dilemma. *Hisp. J. Behav. Sci.*, **509** (1990)
7. M. Skidmore, and H. Toya, Natural disaster impacts and fiscal decentralization. *Land Econ.*, **89** (2013)
8. A. Z. Rahmayanti, The role of fiscal decentralization in disaster management in Indonesia. *J. Ekon. dan Pembang.*, **22** (2014)
9. D. I. Putra, and M. Matsuyuki, Disaster management following decentralization in Indonesia: Regulation, institutional establishment, planning, and budgeting. *J. Disaster Res.*, **14** (2019)
10. Adryan. Harmonization of government with regions as the effectiveness of the government system. *J. Leg. Indones.*, **16** (2019)
11. B. D. Anggono, Harmonization of laws and regulations in the field of disaster management. *Mimb. Huk.*, **22** (2010)
12. M. A. Hapsari, Suswoto and N. Ariyani, Politics and law of central and regional relations in disaster management. *J. Law Policy Transform.*, **6** (2021)
13. Y. Bae, Y. M. Joo, and S. Y. Won, Decentralization and collaborative disaster governance: Evidence from South Korea. *Habitat Int.*, **52** (2016)
14. S. D. Kartika, Politics of disaster management law. Pus. Pengkaj. Pengolah. Data dan Informasi/P3DI Sekr. Jenderal DPR RI, **20** (2015)
15. H. J. Triyana, and R. A. Wibowo, Implementation of community participation regulations in Merapi volcano disaster management. *Mimb. Huk.*, (2011).
16. A. Sadat, Intergovernmental in handling natural disasters in local governments. *Kybernan J. Stud. Kepemerintahan*, **4** (2019)
17. S. Chadijah, A. Suyadi, and T. Tohadi, Pulling the authority of the central government and regional governments in handling the covid-19 pandemic. *Rechtsregel J. Ilmu Huk.*, **3** (2020)
18. M. B. Miles, A. M. Huberman, and J. Saldana, *Qualitative data analysis a methods sourcebook*. (Sage Publications Inc, Washington D.C, 2014)
19. D. Djohan, S. Arinanto, S. R. Zuhro, J. Kristiadi, and I. R. Maksum, Examining the complicated side of decentralization and election practices (Yayasan Bhakti Otonomi Daerah, Jakarta, 2016)
20. K. D. Maani, Efforts to improve the quality of public services in the era of regional autonomy. *J. Demokr.* **4** (2005)
21. A. Grady, B. Gersonius, and A. Makarigakis, Taking stock of decentralized disaster risk reduction in Indonesia. *Nat. Hazards Earth Syst. Sci.*, **16** (2016)
22. Djalante, R. *et al.* Progress in disaster science review and analysis of current responses to COVID-19 in Indonesia : Period of January to March 2020. *Prog. Disaster Sci.*, **6**, 100091 (2020)
23. A. Sair, Disasters and disaster curriculum "projects" in schools. *J. Urban Sociol.*, **1** (2018)
24. Z. Septikasari, and A. Ayriza, Disaster education integration strategy in optimizing community resilience in facing the Mount Merapi eruption disaster. *J. Ketahanan Nas.*, **24** (2018)
25. G. Musacchio, *et al.* Education: Can a bottom-up strategy help for earthquake disaster prevention? *Bull. Earthq. Eng.*, **14** (2016)
26. D. Selby, F. Kagawa, Disaster risk reduction in school curricula: Case studies from thirty countries. disaster risk reduction in school curricula: case studies from thirty countries (UNICEF, Geneva, 2012)
27. K. Iqbal, and M. Ahmed, Are decentralised governments more effective in mitigating disaster risks? *Bangladesh Dev. Stud.*, **38** (2015)
28. L. Peng, J. Tan, L. Lin, and D. Xu, Understanding sustainable disaster mitigation of stakeholder engagement: Risk perception, trust in public institutions, and disaster insurance. *Sustain. Dev.*, **27** (2019)
29. L. Peng, D. Xu, and X. Wang, Vulnerability of rural household livelihood to climate variability and adaptive strategies in landslide-threatened western mountainous regions of the Three Gorges Reservoir Area, China. *Clim. Dev.*, **11** (2019)
30. F. O. Adeola, Behavior among survivors. **41** (2009)
31. S. W. Durage, L. Kattan, S. C. Wirasinghe, and J. Y. Ruwanpura, Evacuation behaviour of households and drivers during a tornado: Analysis based on a stated preference survey in Calgary, Canada. *Nat. Hazards*, **71** (2014)
32. D. Xu, *et al.* Influences of sense of place on farming households' relocation willingness in areas

- threatened by geological disasters: Evidence from China. *Int. J. Disaster Risk Sci.*, **8** (2017)
33. S. Suharyo, Problematika penegakan hukum penataan ruang dalam pelaksanaan otonomi daerah. *J. Rechts Vinding Media Pemb. Huk. Nas.*, **6** (2017)
34. M. W. G. Bosmans, C. Baliatsas, C. J. Yzermans, and M. L. A. Dückers, A systematic review of rapid needs assessments and their usefulness for disaster decision making: methods, strengths and weaknesses and value for disaster relief policy. *Int. J. Disaster Risk Reduct.*, **71** (2022)
35. M. R. Benigno, *et al.* Responding to the health and rehabilitation needs of people with disabilities post-haiyan. *West. Pacific Surveill. response J. WPSAR*, **6** (2015)
36. J. Malilay, W. D. Flanders, and D. Brogan, A modified cluster-sampling method for post-disaster rapid assessment of needs. *Rev. Panam. Salud Publica/Pan Am. J. Public Heal.*, **2** (1997)
37. D. W. F. Utomo, and M. Hanita, Crisis leadership strategies in overcoming the Covid-19 Pandemic to ensure national resilience. *J. Kaji. Lemhannas RI*, **43** (2020)
38. R. G. L. Narayanan, and O. C. Ibe, A joint network for disaster recovery and search and rescue operations. *Comput. Networks*, **56** (2012)
39. M. A. Berawi, *et al.* Optimizing search and rescue personnel allocation in disaster emergency response using fuzzy logic. *Int. J. Technol.*, **10** (2019)
40. H. Aghamohammadi, S. M. Mesgari, A. Mansourian, and D. Molaei, Seismic human loss estimation for an earthquake disaster using neural network. *Int. J. Environ. Sci. Technol.*, **10** (2013)
41. E. M. Ramdani, Coordination by BPBD in flood disaster management. *J. Ilmu Adm. Media Pengemb. Ilmu dan Prakt. Adm.*, **12** (2015)
42. E. Yulianto, D. A. Yusanta, P. Utari, and I. A. Satyawan, Community adaptation and action during the emergency response phase: Case study of natural disasters in Palu, Indonesia. *Int. J. Disaster Risk Reduct.*, **65**, 102557 (2021)
43. C. Purwowidhu, Developing a resilient framework for disaster management. Kementerian Keuangan 2003–2005 <https://mediakeuangan.kemenkeu.go.id/article/show/rangka-tangguh-penanggulangan-bencana> (2022).
44. D. Lase, Analysis of government coordination with local governments and community participation in the health sector in natural disasters in Nias Regency. *Prointegrita*, **6** (2022)
45. H. K. Bakti, and A. P. Nurmandi, Recovery after the earthquake disaster in North Lombok in 2018. *J. Geogr.*, **12** (2020)