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Earthquake Disaster Mitigation Efforts Through the Implementation of Minimum Service Standards (SPM) for Disaster Management in Indonesia (Case Study 2019-2023)

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Abstract

Indonesia is one of the most disaster-prone countries in the world, with a high risk of earthquakes. Disaster mitigation is an important step that must be taken before a disaster occurs in order to reduce the impact of losses and casualties. This paper discusses earthquake disaster mitigation efforts through the implementation of Minimum Service Standards (SPM) for disaster management, which must be implemented by local governments. This study uses a descriptive qualitative method based on literature review to analyse regulations, implementation achievements, and challenges in implementing SPM at the local level. The findings indicate that the implementation of SPM has provided a systematic disaster mitigation framework, covering disaster-prone information services, preparedness, and rescue and evacuation of victims. However, limited resources, weak institutional capacity, and low community participation remain major obstacles. Therefore, strengthening local capacity, adequate funding, and multi-stakeholder involvement are needed to support the optimal achievement of SPM and realise a disaster-resilient community.

Keywords: Disaster Mitigation, SPM Sub-division for Disaster Management, Local Government

INTRODUCTION

In 2021, based on data from The World Risk Index, Indonesia ranked 38th out of 181 countries most vulnerable to disasters. One of the contributing factors is Indonesia's territory, which consists of 17,000 islands, 38 provinces, 514 regencies, 98 cities, and 7,277 districts (Kemendagri, 2022). According to Rosyida et al., (2019), a threat that cannot be overcome and managed in terms of its potential impact can become a disaster that causes loss of life, economic, social, and cultural losses, damage to infrastructure, damage to housing and settlements, environmental damage, and other development outcomes. According to Setyowati in Anggraini et al., (2023), natural disasters can be categorized into three groups: hydrometeorological disasters, geological disasters, and extraterrestrial disasters. Hydrometeorological disasters include floods, landslides, droughts, forest and land fires, extreme weather and climate, extreme waves/dangerous sea waves, and erosion. In addition to hydrometeorological disaster threats (BMKG, 2023). Maarif, (2023) notes that Indonesia is located at the intersection of major tectonic plates and has 127 active volcanoes within the Ring of Fire. Due to its geographical location, Indonesia is highly vulnerable to geological disasters. Earthquakes are one of the geological disasters with the highest risk level due to Indonesia's many active faults (Aritonang et al., 2021). Earthquakes are events of shaking or cracking on the Earth's surface caused by the sudden release of energy in the Earth's crust (Danré et al., 2021). Earthquakes that occur on land typically damage buildings and infrastructure, and can even disrupt daily activities. Meanwhile, earthquakes that occur underwater can trigger tsunamis. The height of tsunami waves is greatly influenced by ocean depth; generally, the deeper the water, the larger the waves. However, not all underwater earthquakes trigger tsunamis. Typically, tsunamis only occur if the earthquake originates from a steeply angled fault and occurs at a shallow depth, less than 70 kilometers (Santius, 2015).

The aftermath of a disaster always has a negative impact on various sectors. Several disasters that Indonesia has experienced have caused casualties, damage, and significant losses. This has become a lesson and a challenge for all parties, including the government, to take disaster resilience more seriously in a comprehensive manner. One effective measure taken by the government to minimize the negative impact of disasters is mitigation. According to Fadhli in Anggraini et al., (2023), mitigation refers to all efforts undertaken to reduce the risk of disasters occurring, while also preventing losses and casualties. In short, mitigation is a series of anticipatory measures prepared before a disaster strikes, so that its impact can be minimized. Meanwhile, according to Law Number 24 of 2007 on Disaster Management, mitigation is any effort made to reduce the risk and impact of a disaster. These efforts can include building strong and safe facilities, or providing education and outreach to the community. The goal is for people to be more aware and prepared, and to have the skills to deal with disasters if they occur. Disaster mitigation is essentially carried out to address various possible disasters, whether they come from nature or are caused by human negligence (Haeril et al., 2021). Disasters often occur suddenly and unexpectedly, even in areas previously considered safe, making mitigation efforts crucial. As part of community protection efforts, mitigation is not only a form of preparedness but also plays a vital role in reducing the adverse impacts when a disaster occurs. Therefore, disaster management is one of the mandatory sub-services in basic public services that must be fulfilled by local governments.

Disaster management is a mandatory sub-issue of basic services, as mandated by Law No. 23 of 2014 on Regional Government. Furthermore, based on Law No. 24 of 2007 on Disaster Management, the central government and local governments are responsible for implementing disaster management. The implementation of disaster management as a concurrent government responsibility is a shared responsibility divided into three levels: the central government, provincial governments, and district/city governments. Based on these laws, the responsibility for implementing disaster management at the central government level is under the command of the Ministry of Home Affairs and the National Disaster Management Agency (BNPB), with the Ministry of Home Affairs having authority in coordination, supervision, and oversight. Meanwhile, the BNPB has a technical handling function, but this is not separate from the involvement of other ministries/agencies based on their respective duties and functions.

The 1945 Constitution of the Republic of Indonesia, Article 28C, states that every citizen has the right to develop themselves through the fulfillment of their basic needs, has the right to education, and can benefit from science and technology, arts and culture, in order to improve their quality of life and the prosperity of society at large. Furthermore, according to Law No. 23 of 2014 on Regional Government, Article 18(1) states that the Regional Government is obligated to provide minimal services to all segments of society by ensuring the implementation of the Minimum Service Standards (SPM) and prioritizing their implementation in regional budgets (Defriana et al., 2024). SPM is a regulation related to the Types and Quality of Basic Services that are Mandatory Government Affairs that every citizen is entitled to receive at a minimum. Government Regulation No. 2 of 2018 on Minimum Service Standards requires the fulfillment of SPM to be carried out by the regional head, including SPM for Disaster Sub-Affairs. Based on Ministry of Home Affairs Regulation No. 101 of 2018 on Technical Standards for Basic Services in the Minimum Service Standards for Sub-Disaster Management at the District/Municipal Level, local governments implement SPM for Sub-Disaster Management by protecting communities in disaster-prone areas and those affected by disasters (Adwil, 2023). As a minimum service standard, SPM mandates local governments to provide community protection in disaster-prone areas. Accordingly, its planning and implementation should extend beyond mere regulatory compliance, incorporating vulnerability mapping, local capacity assessments, and scientifically validated disaster hazard trends (Mohadib, 2024).

This paper discusses the efforts that have been made by the central and local governments to minimize the impact of disasters, one of which is through the implementation of SPM Sub-Division for Disaster Management. Disaster mitigation itself consists of two types, namely structural mitigation and non-structural mitigation. This theory is then integrated into the SPM Sub-Division for Disaster Management policy framework, the implementation of which is mandatory for local governments.

RESEARCH METHODS

This research was conducted using a descriptive qualitative method with a literature study. This approach focuses more on analyzing narrative data and does not rely on numbers or statistical tools. According to Basuki (2010), the descriptive approach is intended to provide a comprehensive and accurate description of an event or process, including human aspects conveyed through detailed verbal descriptions. The data in this study were obtained from various regulations, policies, books in digital format, and various scientific articles published in national and international journals.

The data sources in this study are entirely secondary, obtained from various literature that is available and published openly. The sources include national and international scientific journal articles, academic books, reports from government agencies such as the Ministry of Home Affairs, BNPB, the Meteorology, Climatology and Geophysics Agency (BMKG), the Regional Disaster Management Agency (BPBD), national and regional policy documents, laws and regulations, as well as previous research results such as theses and dissertations. The selection of sources was done selectively, considering the extent to which the literature was relevant to the research focus, particularly research in the field of disaster mitigation and the application of SPM Sub-Disaster Management.

The data collection process was carried out through searches of various scientific databases and digital repositories, such as Google Scholar, Garuda, ScienceDirect, Scopus, as well as the official websites of government agencies and international organizations involved in disaster management. This search process was carried out systematically to ensure that the literature collected was not only relevant but also credible and up-to-date. Through a descriptive approach, this study sought to explore the extent to which the implementation of SPM Sub-urusan Bencana is carried out through disaster mitigation.

RESULT AND DISCUSSION

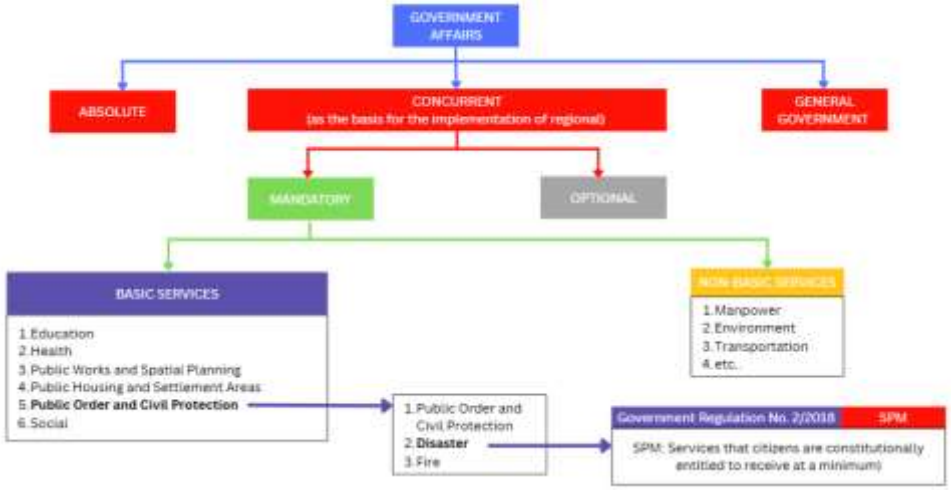
Minimum Service Standards (SPM) Sub-division for Disaster Management

Based on the definition of disaster as outlined in Law No. 24 of 2007 on Disaster Management, it can be concluded that the primary objectives of disaster management are to minimize the potential impact on human lives, reduce the potential for loss of property, and mitigate the potential for environmental damage. Therefore, various efforts must be undertaken within the scope of mitigation, prevention, and preparedness, and these risk reduction efforts must be integrated or prioritized into various aspects of local government administration, such as regional development, regional finance, regional cooperation, institutional and personnel matters, regional policies, and public services.

Local governments are required to enhance public awareness and alertness to disaster threats with distinct characteristics in each region (Bollin & et al., 2015). The government is obliged to provide public services that are the basic rights of citizens as mandated in the

Constitution. Within the framework of the division of authority between the central government and local governments, disasters are a concurrent matter where authority is divided between the central government, provincial governments, and regency/city governments affected by disasters. In addition, in the dimension of government affairs, disasters fall under the category of mandatory basic services, where local governments are at the forefront of providing basic services to their citizens living in disaster-prone areas as well as basic services to their citizens who are victims of disasters. Meanwhile, mandatory government affairs related to basic services are determined by the SPM to guarantee the constitutional rights of the community to receive services.

Based on Law Number 23 of 2014 concerning Regional Government, which stipulate disasters as one of the mandatory affairs related to basic services, the consequence is that they must be prioritized in the implementation of affairs, accommodated in independent regional institutions, given budget priority, and implemented in accordance with Minimum Service Standards..



Picture 1. Division of government affairs
Source: Law Number 23 of 2014 concerning Regional Government

Local governments at the district/city level are required to provide three types of basic disaster management services to every citizen in disaster-prone areas, namely disaster risk information services, disaster prevention and preparedness services, and disaster victim rescue and evacuation services. Disaster management is the responsibility and authority of the central government and local governments (Heryati, 2020). Disaster management is carried out in a planned, integrated, coordinated, and comprehensive manner. Disaster management is implemented while considering the rights of the community, including the right to receive assistance in meeting basic needs, the right to social protection, the right to education and skills in disaster management, and the right to participate in decision-making.

Service Type SPM Sub-division for Disaster Management

The minimum services that must be provided by the government in disaster management are stipulated in the Regulation of the Minister of Home Affairs (Permendagri) Number 101 of 2018 concerning Technical Standards for Basic Services in the Minimum Service Standards for Sub-Disaster Management Affairs at the District/Municipal Level. The types of basic services for sub-district/city disaster management include Disaster Risk Information Services, which provide information about disaster-prone areas within the district/city to residents living in disaster-prone zones and those at risk of being affected by disasters. Disaster Risk Information Services consist of two types of services: disaster risk assessment studies and Disaster Risk

Communication, Information, and Education (KIE) (per type of disaster). These services can be delivered through various methods, such as face-to-face outreach (conducted at the village and family levels at designated locations, e.g., village halls, district offices, etc.), social media outreach (targeted at the Gen Z segment using social media platforms with CIE content tailored to their demographic), and outreach through the provision and installation of evacuation signs and public information boards (conducted through the installation of evacuation signs and public information boards at strategic locations that serve as community activity hubs, such as markets, places of worship, hospitals, airports, terminals, government offices, and social activity centers, among others).

The next type of service is disaster prevention and preparedness services, which consist of a series of pre-disaster activities through prevention, mitigation, and preparedness by local governments and citizens in facing disasters. This service must at least include the development of disaster response plans, contingency plans, disaster prevention and mitigation training, preparedness drills, control of operations and infrastructure for disaster preparedness, and the provision of safety and disaster preparedness equipment.

The final type of service is rescue and evacuation services for disaster victims, which involve a series of immediate actions taken during a disaster to handle and rescue disaster victims. This service must minimally include the activation of the emergency disaster response command system, rapid response to extraordinary events (KLB) such as priority disease outbreaks/zoonoses, rapid emergency disaster response, and search, rescue, and evacuation of disaster victims. Search, rescue, and evacuation of disaster victims are carried out as efforts to search for, rescue, and evacuate citizens affected by disasters in areas where emergency disaster response is implemented in a coordinated and integrated manner across provincial and district/city government agencies, in accordance with the tasks assigned in the Regional Government Agency Unit (SKPDB). These three basic services are prepared to serve the community from the disaster mitigation phase to the disaster event (emergency response). This demonstrates that the government has a strategy in place for disaster prevention and response.

Achievement of SPM Sub-division for Disaster Management in 2019-2023

According to a report by the Directorate General of Regional Development (2024), disaster management in the regions, particularly in the implementation of the SPM Sub-Urusan Bencana (Disaster Management Standard Operating Procedures), has not been optimally implemented. There are several causes for the sub-optimal implementation of the SPM Disaster Management Sub-Sector by regions, one of which is the low quality and quantity of available resources (Hidayat, 2023). Based on the results of a mapping of the evaluation of the achievement of the SPM Disaster Management Sub-Sector since it became a basic service and mandatory for implementation by district/city governments as the responsible parties for disaster management in regions, the following results were obtained:

Table 1. Summary of SPM Achievement Results for Disaster Management Sub-Sector 2019-2023

No	Types of Services	2019	2020	2021	2022	2023
1.	Disaster Information Services	38,82%	49,21%	62,18%	68,49%	82,44%
2.	Disaster Prevention and Preparedness Services	38,10%	47,54%	60,20%	69,36%	82,99%
3.	Disaster Rescue and Evacuation Services	42,51%	54,42%	66,42%	69,52%	84,41%
		39,.81%	**50,39%**	**62,93%**	**69,12%**	**83,28%**

Source: Summary of SPM Achievement Results for Disaster Management Sub-Sectors in Regencies/Cities – Directorate General of Regional Development, Ministry of Home Affairs

The implementation of SPM in disaster management is not merely about fulfilling administrative obligations. Behind the achievement figures, there are real efforts by local governments to ensure that communities are better protected from disaster risks, including

earthquakes. If we look at the achievement data from 2019 to 2023, it is clear that there has been significant progress. In 2019, the average achievement rate for services was still below 40%, but five years later, that figure surged to over 83%. This is not just a regular increase; it indicates that more regions are beginning to take the development of protection systems seriously, systems that can be directly felt by the community.

One form of service that has seen rapid improvement is the provision of disaster-prone information. From 38.82% in 2019 to 82.44% in 2023. This is important because communities that know they live in earthquake-prone areas will be better prepared mentally and physically. Education on what to do before, during, and after an earthquake is an important tool. Accessible and understandable information can prevent panic while providing a sense of security that they are not alone when disaster strikes. Another equally important service is prevention and preparedness. In 2023, the achievement of this service reached 82.99%, up from 38.10% in 2019. This means that more people are involved in simulations, evacuation training, and other awareness-raising activities. In the context of earthquakes, conducting such exercises is highly beneficial. It is not just about knowing where to run, but also about developing reflexes and composure when facing unexpected situations. When the community is accustomed to emergency procedures, the risk of casualties can be significantly reduced. The most notable achievement is in the service of rescuing and evacuating disaster victims, which reached 84.41% in 2023. This indicates that local governments are increasingly prepared to handle emergency situations, with trained rescue teams, adequate evacuation equipment, and well-established coordination channels. In disasters like earthquakes, the speed and accuracy of the response can be the difference between life and death.

It is clear that SPM is not merely a regulation on paper. If implemented sincerely, SPM can bridge policy with real action in the field. The community becomes more knowledgeable, more prepared, and more capable of protecting themselves and their environment. And when the community is prepared, earthquake mitigation efforts are no longer a one-way task from the government, but a living collaboration between the state and its citizens.

Disaster Mitigation

Disaster management in Indonesia since the birth of Law 24/ 2007 concerning disaster management has experienced a paradigm shift, from a responsive or emergency response paradigm in disaster management, to a preventive one with the intention of minimising the impact (Mitigation) (Faturahman, 2018). Disaster mitigation is all effort made to reduce the adverse effects of a disaster before they occur. The goal is simple but very important, namely minimizing losses due to disaster, both casualties, property damage and disruption of daily activities. Mitigation can be done by anyone, from the government, to organisations, to the community itself. Article 1 (9) of Law 24/2007 on Disaster Management, states that disaster mitigation is "Efforts to reduce disaster risk, both through physical development as well as awareness and improvement of the ability to face the threat of disaster". In accordance with the understanding of the article, it can be seen that disaster mitigation is divided into two forms. First, structural mitigation, which is measures related to physical development with a technological approach, such as building earthquake-resistant houses, building flood defences, or installing early warning systems. Second, non-structural mitigation, which are measures to reduce the impact of disasters that are not physical, such as making regional planning, providing education to the community, or conducting evacuation simulations on a regular basis.

The key to effective mitigation is awareness and preparedness. For example, in earthquake-prone areas, people can be trained to know what to do when an earthquake occurs where to run, what to prepare, and how to save themselves. All of these are part of mitigation that can save many lives. Similarly, the government's policy of establishing safe zones for development is also a form of mitigation so that people do not live or do activities in vulnerable places. Mitigation is not about avoiding disasters, because disasters often cannot be prevented.

However, mitigation is about reducing risk-so that when disaster strikes, we are better prepared, more resilient and less devastated. Therefore, investing in mitigation is a valuable long-term investment, as the benefits can be felt by current and future generations.

Earthquake Disaster Mitigation through the Implementation of SPM Disaster Sub-Affairs

In accordance with the definition of disaster in Law No. 24/ 2007 on Disaster Management, it can be understood that disaster management aims to reduce the potential for casualties, reduce property losses, and minimize environmental damage. In the context of earthquakes, which are one of the natural disasters with high destructive impacts and often occur without warning, mitigation efforts are crucial steps that must be carried out systematically, especially in vulnerable areas. Mitigation is not just a matter of responding after a disaster occurs, but prioritizes prevention and preparedness efforts. The disaster SPM can be used as an instrument for disaster mitigation efforts. SPM is a form of basic service that must be provided by the government to all communities, as stipulated in Permendagri Number 101/2018. Therefore, the implementation of SPM is not an option, but a constitutional obligation that must be fulfilled by local governments. According to Hidayat (2023), SPM in the context of disasters is the minimum guideline that must be implemented so that people get basic protection from disaster risks.

According to Boga (2023), the implementation of the disaster SPM provides concrete direction on the mitigative measures that local governments should take in the face of disasters, including earthquakes. These include disaster education, the development of early warning systems, the conduct of evacuation simulations, and the provision of emergency response infrastructure. Local governments have an important role in socializing disaster risks to the community, especially through information on the vulnerability of the area, as well as training on what to do when an earthquake occurs. The implementation of the SPM is carried out through various activities, such as socializing earthquake hazards to the community, installing evacuation signs, preparing evacuation routes, and strengthening the early warning system. The community must be given an understanding of what to do before, during and after an earthquake. This knowledge is the basis for establishing a disaster-aware culture at the local level. Local governments can also utilize digital media and local mass media to disseminate disaster information. Education through radio, social media, disaster applications and other public campaigns has proven effective in reaching various segments of society, including the younger generation. This activity is part of a disaster literacy strategy that can build community resilience from an early age. Based on the data on the achievements of the disaster sub-matters SPM in 2019-2023, there is an improvement in the performance of local governments in providing disaster services. This shows that awareness and institutional capacity in dealing with disaster risk is starting to improve, although there are still many regions that need to improve the quality of their services. Periodic evaluation is needed so that SPM-based mitigation programs can continue to be improved. One crucial form of service is the implementation of disaster management simulations. Simulations serve as a training tool for the community in dealing with emergency situations. Through this activity, the community is introduced to evacuation routes, safe gathering points, and emergency response procedures. Simulations that are carried out regularly are able to foster real community preparedness. By conducting simulations, the community not only understands the procedures theoretically, but also has practical experience in responding to disasters. These exercises are a much-needed form of hands-on learning, especially for people living in earthquake-prone areas. This experience can help reduce panic and increase calmness in making decisions when a disaster does occur. However, the effectiveness of SPM implementation cannot be separated from cross sectoral cooperation. Local governments must build strong coordination between agencies, such as BPBD, health department, education department, public works department, and village and kelurahan government officials. Each institution has its own role and contribution in strengthening the disaster management system in

its region. BPBD as the main technical agency has a role in designing policies, developing contingency plans, and coordinating program implementation. The health office is responsible for providing emergency medical services, while the education office plays a role in incorporating disaster material into the school curriculum. Meanwhile, village governments are the direct implementers of disaster programs at the community level. With consistent, collaborative and data-driven SPM implementation, local governments can strengthen regional capacity and build community resilience to earthquake disasters. Collaboration between government, communities and businesses is the foundation in creating a resilient and sustainable disaster management system. In the future, this approach is expected to be an adaptive solution in facing increasingly complex disaster risk challenges.

Challenges in Implementing of SPM Sub-matters of Disaster Management in Indonesia

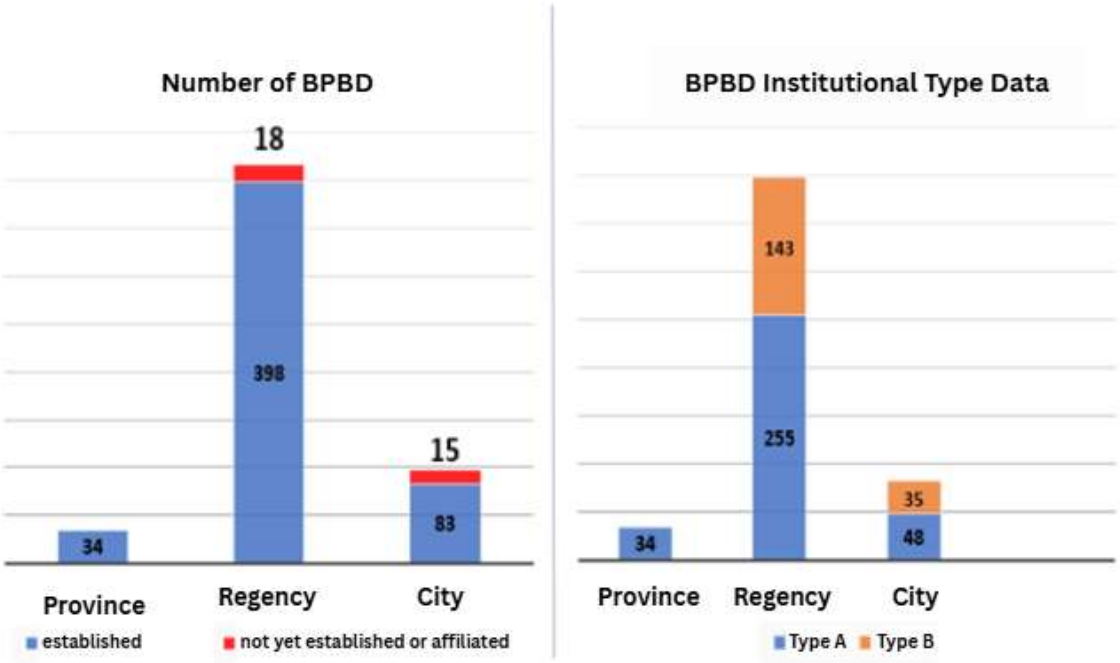
The vast area and the large number of inhabitants become a challenge in the midst of Indonesia's reality as an area with a very high earthquake vulnerability, so that a systematic, integrated and coordinated implementation of earthquake disaster management is needed. In an effort to handle earthquake disasters in a systematic, integrated and coordinated manner, Law No. 24/ 2007 on Disaster Management is a reference for various parties ranging from the government, local governments and stakeholders. Disaster management as stated in Article 4 of Law No. 24/ 2007 on Disaster Management aims to provide protection to the community from the threat of disasters and ensure the implementation of disaster management in a planned, integrated, coordinated and comprehensive manner.

Thus, Law No. 24/ 2007 provides a balance of attention in the implementation of disaster management from the initial tendency to aid and provide assistance to pre-disaster handling efforts that focus on disaster risk reduction. Mitigation measures by local governments need to be carried out through several stages, first through strategic disaster management measures carried out during pre-disaster, emergency response and post-disaster. Second, regional policy measures that emphasize preventive efforts in pre-disaster. Third, the preparation of a coordination mechanism in providing easy access for BPBDs during emergency response, and Fourth, Strengthening coordination in the implementation of rehabilitation and reconstruction efforts in post-disaster.

Then based on Law Number 23 of 2014, each region according to its regional character will have different priorities from one region to another in improving the welfare of the community. This is an asymmetrical approach, meaning that although the regions are both given the widest possible autonomy, the priorities of government affairs carried out will differ from one region to another. The logical consequence of this asymmetrical approach is that regions will have different priorities for government affairs and institutions according to the character of the region and the needs of its people.

The implementation of disaster affairs in Indonesia still lacks the main stage in the implementation of government administration. Whereas the implementation of disaster affairs needs to be supported by adequate disaster management institutions (Bazargan et al., 2015). The size of the regional apparatus organization both to accommodate mandatory government affairs and optional government affairs at least considers the factors of population, area, workload, and regional financial capacity. To accommodate variations in the workload of each government affairs that are different in each region, the size of the regional apparatus organization is also not the same between one region and another. Based on this discussion, a typology of regional offices or agencies is formed according to their size in order to form an effective and efficient Regional Apparatus.

Figure 2. Institutional Data of District/City BPBD
Source: Directorate of Disaster and Fire Management, 2024



Another challenge is the lack of cross-sectoral integration and coordination between Regional Apparatus Organizations (OPD). The SPM requires cooperation between BPBD, health, education, public works, and sub-district/village officials. However, in practice, this coordination is not optimal, often sectoral and not integrated into an integrated disaster management system. This has led to overlapping programs, delays in response, and weak implementation of simulations or community education. Furthermore, in many cases, the implementation of SPM monitoring and evaluation has not been maximized. Local governments struggled to meet quantitative and qualitative SPM performance indicators due to the unavailability of valid and up-to-date data. Limited information technology and weak reporting systems have led to low accountability and transparency in service delivery.

On the other hand, community participation in disaster mitigation efforts is still relatively low. In fact, the active involvement of citizens is very important to form a strong disaster awareness culture and ensure the successful implementation of SPM in the field of disaster. Unfortunately, the lack of disaster education and lack of trust in the existing disaster management system are obstacles. Without good synergy between the government and the community, efforts to build regional resilience to disasters will be difficult to achieve optimal results.

Given these challenges, more targeted and comprehensive measures are needed. Local governments need to be strengthened both in terms of institutional capacity and budget support. At the same time, there needs to be a serious effort to socialize the importance of SPM and provide training to officials and communities. An approach that involves various parties including civil society, academics, the business world and the media will greatly help build a more inclusive, resilient and sustainable disaster mitigation system.

CONCLUSION

The implementation of Disaster Sub-Meters SPM by local governments is a concrete step in disaster mitigation efforts, especially earthquakes. With clear regulations, local governments are obliged to provide basic services to communities in disaster-prone areas, including the delivery of information, increasing preparedness, and evacuating victims. Although SPM implementation achievements showed an increasing trend from 2019 to 2023, implementation is still not optimal in most regions. The implementation of disaster management is carried out by taking into account the rights of the community, which include obtaining assistance in fulfilling basic needs, obtaining social protection, obtaining education and skills in the implementation of disaster management and participating in decision making. Fulfillment of the Disaster Sub-Region SPM by the regions is a real effort by the government to provide security, peace and welfare for the community through the provision of better basic services. It is the obligation of the Regional Government to provide these services optimally. Various challenges, such as budget limitations, lack of experts, low technical understanding, and lack of community participation are serious obstacles in achieving effective mitigation goals. For this reason, a more comprehensive and participatory approach is needed by involving various elements, including civil society, academics, the private sector and the media. In addition, support from the central government in terms of guidance, supervision, and strengthening regional capacity is essential to ensure the success of SPM implementation in a comprehensive and sustainable manner. If implemented consistently, SPM can be an important foundation in building community resilience to the threat of earthquakes and other disasters in Indonesia.

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