Inclusive Disaster Mitigation for Persons with Disabilities

Arnı Surwanti1*, Retno Widowati, PA2

1 Universitas Muhammadiyah Yogyakarta
2 Universitas Muhammadiyah Yogyakarta

Abstract. People with disabilities are particularly vulnerable to disasters. Socioeconomic and physical vulnerability makes them more vulnerable to disasters. Based on the international and national policies of the United Nations Convention on the Rights Persons with Disabilities, Law No. 8 of 2016 concerning persons with disabilities states that persons with disabilities must be protected in the event of a disaster. Unfortunately, persons with disabilities tend to be neglected in the preparedness system during emergencies. This study was conducted by reviewing existing disaster-mitigation programs in disaster-prone villages and identifying the need for inclusive disaster mitigation using a case study approach. The results of the study showed that inclusive disaster mitigation indicators are needed by realizing the availability of management information systems, disability data, formation and empowerment of village disability groups, strengthening of village administrator and disaster-resilient village teams, and providing persons with disabilities with information and knowledge about inclusive disaster mitigation.

Keywords: information system, disaster mitigation, persons with disabilities

1 Introduction

Over the past decade, Indonesia has experienced an increase in various types of natural disasters. The Indonesian Archipelago is geographically located at the confluence of four tectonic plates: the Asian Plate, Australian Plate, Indian Ocean Plate, and Pacific Ocean. In the southern and eastern parts of Indonesia, a belt of volcanoes (volcanic arc) extends from Sumatra, Java, Nusa Tenggara, and Sulawesi. These conditions cause Indonesia to have a high potential for disasters, such as volcanic eruptions, earthquakes, tsunamis, floods, and landslides.

It is estimated that approximately 15% of the population and persons with disabilities (PwDs) face a higher risk when a disaster occurs. Data show that the mortality rate of people with disabilities is two to four times higher than that of people without disabilities in many disaster situations (United Nations Department of Economic and Social Affairs, 2014). People with disabilities are often neglected during disasters. Therefore, there is a need to reduce disaster risk and build resilient communities and societies. One of the necessary mitigation efforts is to provide disaster risk reduction education.

Persons with disabilities are particularly vulnerable to disasters. Socio-economic and physical vulnerability makes them more vulnerable to disasters. Unfortunately, persons
with disabilities tend to be neglected in the emergency preparedness and registration system. They are often excluded from emergency preparedness and response efforts. This causes them to lack awareness and understanding of disasters, and how to deal with them. Limited physical ability, mobility assistance, and proper accompaniment are urgently required. Persons with disabilities are often forgotten in evacuation services, such as providing accessibility services at good evacuation sites, water and sanitation, and other services. Emotional conditions and trauma due to disasters during crises are sometimes fatal and have a long-term impact on persons with disabilities. Misinterpretation of situations and communication disorders make persons with disabilities more vulnerable during disaster situations.

Several studies show that incorporating the needs and voices of persons with disabilities at all stages of the disaster management process, especially during planning and preparedness, can significantly reduce their vulnerability and increase the effectiveness of response efforts. Neglecting to include PwDs in disaster management activities results in an inequality of emergency response and long-term recovery resources for PwDs. Rehabilitation and reconstruction efforts must not only be inclusive and responsive to the needs of all people, including persons with disabilities, but also involve the participation of persons with disabilities to ensure that their needs and rights are respected, protected, and fulfilled. It is important because they know their own needs better. Persons with disabilities, although a vulnerable group, have the right to be at the forefront of disaster risk reduction efforts through an inclusive and comprehensive approach for reducing disaster vulnerability. Women with disabilities are a particularly vulnerable group, whose needs must be included at all stages of recovery and reconstruction efforts (United Nations, 2012).

Persons with disabilities and other vulnerable groups in disaster-prone villages have not had an understanding of what is called a disaster, how to save themselves from a disaster and how to prepare themselves when a disaster occurs yet. Meanwhile, the village administrators and village disaster response team do not all have an understanding of who is meant by persons with disabilities, and there is no updated data available on the number and characteristics of persons with disabilities in Glagaharjo Village yet. The Disaster Response Team also does not have sufficient understanding to treat persons with disabilities who are part of a vulnerable group when a disaster occurs. People with disabilities and vulnerable people also face economic problems as a result of the Covid-19 pandemic. The most widely felt problem in the economic field is the low wages of workers and the persistence of unemployment. In addition, there are several other problems that are also widely felt in several hamlets related to livelihoods and existing human resources. The Covid – 19 pandemic has had a major impact on the economic life of people, especially Glagaharjo because many companies are reducing employees and their purchasing power is also decreasing.

2 Methodology

This study was conducted by reviewing existing disaster mitigation programs in disaster-prone villages, and identifying the needs for inclusive disaster mitigation using a case study approach. The methods implemented included conducting surveys, focus group discussions, simulations, and pilot projects. The study was carried out in a volcano-prone village in Indonesia using samples from Glagaharjo village. The pilot project was conducted using a data collection approach, creating an information system, the formation of village disability groups, and community empowerment.

a. Data collection and creation of an information system for persons with disabilities: The existence of an information system that can be used to provide data on the characteristics
of persons with disabilities, continuous disaster education, and provision of other disaster information online. This information system will be integrated with existing information systems in the village.
b. The Village Disability Group was formed with the aim of becoming a bridge for disability communication with the village administrator and the Village Disaster Response Team.
c. Community empowerment: There is a strengthening of village administrator, disaster-resilient village teams, and persons with disabilities to obtain information and knowledge about inclusive disaster mitigation. Economic empowerment is also carried out for the Village Disability group to increase their income by making crispy food.

3 Results and Discussion

Glagaharjo Village is a village located on the border of the Special Region of Yogyakarta and Central Java. Glagaharjo Village is included in the Disaster-Prone Area, an area that is prone to being hit by hot clouds, lava flows, rockfalls, ejected rocks (incandescent) and heavy ash rain. Areas included in disaster-prone areas include Kepuharjo Village, Glagaharjo, Umbulharjo, Hargobinangun, Purwobinangun, Girikerto in Sleman Regency, Balerante Village in Klaten Regency, Jrakah Village in Boyolali Regency and Nglumut Village in Magelang Regency. As a village included in a disaster-prone area, it is important to carry out disaster mitigation for all residents, including persons with disabilities.

Data Collection for Persons with Disabilities

The village administrator, the village team on disaster preparedness, and the village cadres do not understand what is meant by persons with disabilities, so it is not surprising that the data available in the village show only a small number of them. The data on the number of persons with disabilities were obtained from information obtained from the village administrator; however, detailed data on the characteristics of persons with disabilities have not been obtained yet. The data on registered persons with disabilities were obtained from the Social Welfare Integrated Data of the Ministry of Social Affairs of Indonesia. Persons with disabilities who are recorded are persons with disabilities who are registered as persons with social welfare problems. It is estimated that the data of many people with disabilities have not been recorded yet. It is important to obtain data on persons with disabilities with detailed characteristics as a basis for determining government programs and activities, including the village administrator. The availability of data allows the village administrator to have a map of the whereabouts of persons with disabilities; if a disaster occurs, based on this data, it can serve as a guideline for the Disaster Response Team to evacuate when a disaster occurs, and provide good services to persons with disabilities when a disaster occurs.

Data collection and assessment of persons with disabilities are carried out by involving the village and sub-village administrators and village cadres. The results of data collection on persons with disabilities in Glagaharjo Village showed that there were 104 persons with disabilities that spread across several sub-villages, with the following description:
Data of Persons with Disabilities in the Glagaharjo Village

Provision of Disaster Information System

It is necessary in creating a disability information system. There is an information system that can be used to provide data on the characteristics of persons with disabilities, continuous disaster education, and other disaster information online. This information system can be used to update the data. Changes in data due to new persons with disabilities, movements from or to villages, and increases and decreases in the number of disabilities due to birth or death can be explained through this information system. Public reports regarding data changes will be verified by the government. Providing opportunities for the public to be able to provide reports to the government if there are changes to the data allows the data to be valid because there is always updating data. This disability information system was integrated with the existing information system in Glagaharjo Village. The web address of disabilities information system is https://simdis.desaglagaharjo.id.
Formation of Village Disability Groups

The formation of a Village Disability Group makes this group a bridge for communicating with the village administrator and Village Disaster Response Team.

In Glagaharjo village, a Village Disability Group has not been formed. So far, there have been no representatives with disabilities capable of voicing their rights. Representatives of Persons with Disabilities who attended had no understanding of and had never interacted with each other. They also do not have a good understanding of what is meant by a disaster or what to do when a disaster occurs. The experience of the Merapi eruption in 2010 was that they had difficulty in using the toilet and did not receive good services regarding eating and drinking. Basic needs for sleeping are also not obtained. In the event of a disaster, self-rescue relies heavily on the family’s role in bringing them to a safe place. There is also no easily accessible information available for persons with disabilities in Glagaharjo Village. Knowledge about disaster risk reduction has never been conveyed to persons with disabilities. This village disability group can convey to various parties the need to focus on facilitating inclusive disaster mitigation. The formation of disability groups at the village level impacts on the existence of a special village budget allocation for empowering persons with disabilities.
Community Empowerment in Inclusive Disaster Mitigation

There is strengthening of village administrator and disaster resilient village teams, from which persons with disabilities obtain information and knowledge about inclusive disaster mitigation, such as policies that provide protection for persons with disabilities in disaster conditions.

Protection and fulfilment of the rights of persons with disabilities in a disaster situation have been regulated by various policies, including international, national, provincial, and regency level policies. Based on Law No. 8 of 2016, every person with disabilities who experiences physical, intellectual, mental, and/or sensory limitations for a long time in interacting with the environment may experience obstacles and difficulties in participating fully and effectively with other citizens based on equal rights.

In disaster conditions, the state has the obligation to take all necessary steps to ensure the protection and safety of persons with disabilities in risky situations, including armed conflict, humanitarian emergencies, and natural disasters (UN-CRPD Article 11). Meanwhile, Law No. 8 of 2016 article 20 explains that the Right to Protection from disasters for Persons with Disabilities includes the right to obtain easily accessible information about a disaster and gain knowledge about disaster risk reduction. In PERDA DIY Province No. 4 of 2012 articles 80-87 concerning Disaster Management state that every Person with Disabilities has the right and obligation to participate in every stage of the disaster management process, which includes pre-disaster, emergency response, and after the disaster. Every Person with Disabilities has the right to access priority services and service facilities at every stage of the disaster management process, according to their needs. Regional government organizations and institutions that have duties and functions in the field of disaster management conduct education, training, and simulations for rescuing Persons with Disabilities in emergency situations for the community. Education, training, and rescue simulations, as intended, are also provided to every Person with Disabilities. Local government organizations that have the main tasks and functions in the field of disaster management have developed operational policies in the form of standard operations and procedures for evacuation and rescue in emergency situations that provide special protection for Persons with Disabilities. Implementation of an emergency response is an effort to protect Persons with Disabilities, which is carried out by prioritizing rescue, evacuation, security, health services, psychosocial, and fulfilment of basic needs. The protection efforts referred to in this case are carried out by related agencies and/or institutions coordinated by local government organizations that have duties and functions in the field of disaster management with a pattern of assistance and facilitation. Local government organizations and institutions engaged in disaster management provide accessibility and fulfilment of special needs at evacuation sites and temporary shelter locations. During the post-disaster period, local governments and institutions engaged in disaster management are obliged to carry out rehabilitation and reconstruction for persons with disabilities who have experienced the effects of the disaster, in accordance with statutory provisions.

Policies at the regency level are explained in PERDA Sleman Regency No. 1 of 2018 articles 79-87. The policy emphasizes that every person with disabilities has the right and obligation to participate in every stage of the disaster management process, which includes pre-disaster, emergency response, and post-disaster. Every person with disabilities has the right to access priority services and service facilities at every stage of the disaster management process, according to their needs. Regional apparatus and institutions that have duties and functions in the field of disaster management conduct training and simulations for rescuing persons with disabilities in emergency situations for the community. Training and rescue simulations are also provided to every person with a disability. Regional apparatuses that have the main tasks and functions in the field of disaster management have developed.
operational policies in the form of standard operations and procedures for evacuation and rescue in emergency situations that provide special protection for persons with disabilities. The implementation of an emergency response is an effort to protect persons with disabilities, which is carried out by giving priority to: rescue, evacuation, security, health services, psychosocial, and fulfillment of basic needs. Protection efforts are carried out by related agencies and/or institutions coordinated by Regional Apparatuses that have duties and functions in the field of disaster management, with a pattern of assistance and facilitation. Regional apparatus and institutions engaged in disaster management provide accessibility and fulfillment of special needs at evacuation and temporary shelter locations. Regional apparatus and institutions engaged in disaster management are obliged to carry out rehabilitation and reconstruction for persons with disabilities who experience the impact of disasters in accordance with provisions of the legislation.

Meanwhile, Law Number 24 of 2007 concerning disaster management states that disaster mitigation involves a series of efforts to reduce disaster risk. Through physical development, maps of disaster-prone areas, earthquake-resistant buildings, mangrove trees, and reforesting forests can be constructed. Disaster mitigation also provides awareness and capacity building for dealing with disaster threats. Based on various existing policies, it can be concluded that there are several things that need to be emphasized in providing protection to persons with disabilities when facing a disaster, namely:

1. Persons with disabilities have the right and obligation to participate in every stage of the disaster management process which includes pre-disaster, during emergency response, and after the disaster.
2. Persons with disabilities have the right to access priority services and service facilities at every stage of the disaster management process according to their needs.
3. Persons with disabilities obtain easily accessible information about disasters and gaining knowledge about disaster risk reduction.
4. The government conducts education, training, and simulations of rescuing persons with disabilities in emergency situations for the community.
5. The government develops operational policies in the form of standard operations and procedures for evacuation and rescue in emergency situations that provide special protection for persons with disabilities.
6. The government provides accessibility and fulfillment of special needs at evacuation sites and temporary shelter locations.
7. The government is obliged to carry out rehabilitation and reconstruction for persons with disabilities who experienced the impact of disasters in accordance with statutory provisions.

**Economic Empowerment**

When a disaster occurs, people often lose their livelihoods because their homes and workplaces are damaged. Therefore, the community must be equipped with economic resilience. One way is to provide skills that can be used to open businesses to provide additional income for people, including persons with disabilities.
The empowerment is carried out for the Village Disability group to be able to increase income through making crispy food. Empowering persons with disabilities through training in the skills of making crispy food that can be sold in tourist areas, as well as providing an understanding of how to package and market the product.

4 Conclusion

The role of the village administrator and the community is to provide protection for persons with disabilities in the event of a disaster. The implementation of inclusive disaster mitigation needs to be committed by the government and society in all places in Indonesia. Preparing village communities to face disasters will create villages that are resilient to disasters.

This study was made possible with funding support from Universitas Muhammadiyah Yogyakarta, Australian Volunteer International, and the CIQAL Foundation as partners in the implementation of this study. The implementation of the study also received support from the Glagaharjo village administrator and the community, including persons with disabilities in the village who actively participated in every stage of the study.

References

[2]. https://glagaharjosid.slemankab.go.id/first/artikel/46


