

Participation of Persons with Disabilities in the Disaster Preparedness Program in Kepuharjo Village

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Abstract. Persons with disabilities face a higher risk during disasters. Socioeconomic and physical vulnerabilities make them more vulnerable to disasters. Unfortunately, persons with disabilities tend to be overlooked in emergency preparedness systems. This fact causes persons with disabilities lack an understanding of disasters and how to overcome them. This community service program is conducted in Kepuharjo Village, a village prone to the "Merapi" volcano disaster. The programs implemented ensure that persons with disabilities are subjects in disaster preparedness. Activities are carried out by making innovations by realizing inclusive disaster risk reduction. The result of the innovation programs is the management information systems, disability data, and village disability groups. There is the increasing knowledge of village governments, disaster resilient village teams, persons with disabilities to obtain information and about disasters; there is standard operating inclusive evacuation and rescue procedure; there is advocacy for the availability of accessible refugee barracks. The village already had a policy and allocated a budget for providing protection and fulfilling the rights of persons with disabilities. The sister village also has an inclusive disaster preparedness program.

Keywords: information system, disaster mitigation, persons with disabilities

1. Introduction

Over the past decade, Indonesia has experienced an increase in natural disasters. The Indonesian Archipelago is geographically located at the confluence of four tectonic plates: the Asian Plate, the Australian Plate, the Indian Ocean Plate, and the Pacific Ocean. In Indonesia's southern and eastern parts, a belt of volcanoes (volcanic arc) extends from Sumatra, Java, Nusa Tenggara, and Sulawesi. These conditions cause Indonesia a high potential for disasters, such as volcanic eruptions, earthquakes, tsunamis, floods, and landslides. The World Health Organization (WHO) estimates around 1.3 billion persons with disabilities worldwide in 2021. That is roughly 16% of the global population [1]. Persons with disabilities' mortality rate can be two to four times higher than the rest of society when facing a disaster [2]. Persons 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.

Based on Law No. 8 of 2016, every person with disabilities who experiences physical, intellectual, mental, and 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 [4]. Persons with disabilities are particularly vulnerable to disasters. Socioeconomic and physical vulnerability makes them more vulnerable to disasters. Unfortunately,

persons with disabilities tend to be neglected in the emergency preparedness and registration system. Persons with disabilities are often excluded from emergency preparedness and response efforts. This fact 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, etc. Emotional conditions and trauma from 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 [3]. Neglecting to include Persons with disabilities in disaster management activities results in an inequality of emergency response and long-term recovery resources for Persons with disabilities. 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 essential because they know their own needs better [4]. Persons with disabilities, although a

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vulnerable group, have the right to be at the forefront of disaster risk reduction efforts through an inclusive and comprehensive approach to reducing disaster vulnerability. Women with disabilities are a particularly vulnerable group whose needs must be included at all stages of recovery and reconstruction efforts [5].

When a disaster occurs in Kepuharjo Village, and this village is in an unsafe condition, this village needs support from sister villages. Sister Village is a form of cooperation in the context of the Merapi Volcano disaster crisis. If a disaster occurs in one village, another village assists residents in the affected village, for example, in providing evacuation shelter and assisting in the evacuation process[6].

Persons with disabilities and other vulnerable groups in Kepuharjo Village Sleman district of Yogyakarta in disaster-prone villages do not yet understand what is called a disaster, how to save themselves from it, and how to prepare themselves when it occurs. Meanwhile, the village government and disaster response team do not all understand what is meant by persons with disabilities. No updated data is available on the number and characteristics of persons with disabilities in Kepuharjo Village. The Disaster Response Team also does not have sufficient understanding to treat persons with disabilities who are part of a vulnerable group during a disaster. Kepuharjo Village There is no standard operating procedure for evacuation and rescue in emergencies that provide exceptional protection for Persons with disabilities. The village does not yet have a particular disaster management policy for persons with disabilities and vulnerable groups and does not yet exist. Availability of village budget for disaster management for persons with disabilities Based on the problem in Kepuharjo village, an innovation program was needed to solve the problems. The innovative program developed a disaster mitigation program to anticipate adverse impacts for Persons with disabilities when the "Merapi" volcano disaster occurred. The programs implemented ensure that persons with disabilities are subjects in disaster preparedness. Activities are carried out by making innovations by realizing the management information systems, disability data, and village disability groups; strengthening village governments and disaster resilient village teams, persons with disabilities to obtain information and knowledge about disasters; there is standard operating evacuation and rescue procedure, advocacy for availability accessible refugee barracks; and policy and budgeting that protect to persons with disabilities, This innovation program also ensures that Sister Village has inclusive disaster preparedness for persons with disabilities.

2. Methodology

This study reviewed existing disaster mitigation programs in disaster-prone villages and identified the need 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 Kepuharjo village. The pilot project used a data collection approach, creating an information system, forming 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 to become a bridge for disability communication with the village government and the Village Disaster Response Team.
- c. Community empowerment. There is a strengthening of village governments, disaster-resilient village teams, and persons with disabilities to obtain information and knowledge about inclusive disaster mitigation.
- d. Prepare sister village in the disaster preparedness program that is inclusive of the disability.

The population in this study are citizen in The Kepuharjo Village and it's sister village: Wukirsari Village. The respondents of this study are persons with disabilities in Kepuharjo and Wukirsari. There are 25 persons that active to be participant in all activities of this study. The active participant in this programs are persons with disabilities, village government staff, community figures such member of team of Tagana, member of PKK, head of sub village, village deliberative body. They active in doing data collection, forming the village disability group, empowerment program in inclusive disaster mitigation, and prepare sister village in the disaster preparedness program that is inclusive of the disability

3. Results and Discussion

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

Data Collection for Persons with Disabilities

The village government, 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. These data on the number of persons with disabilities were obtained from information

obtained from the village government; however, detailed data on the characteristics of persons with disabilities have not yet been obtained. The data on registered persons with disabilities were obtained from the Social Welfare Integrated Data of the Indonesian Ministry of Social Affairs. Persons with disabilities who are recorded are persons with disabilities who are registered as persons with social welfare problems. It is estimated that many Persons with disabilities have not been recorded. It is important to obtain data on persons with disabilities with detailed characteristics to determine government programs and activities, including the village government. The availability of data allows the village government 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 involves the village government, sub-village, and village cadres. The results of data collection on persons with disabilities in Kepuharjo Village show that there are 104 persons with disabilities spread across several sub-village. This figure also show persons with disabilities in Wukirsari as sister village.

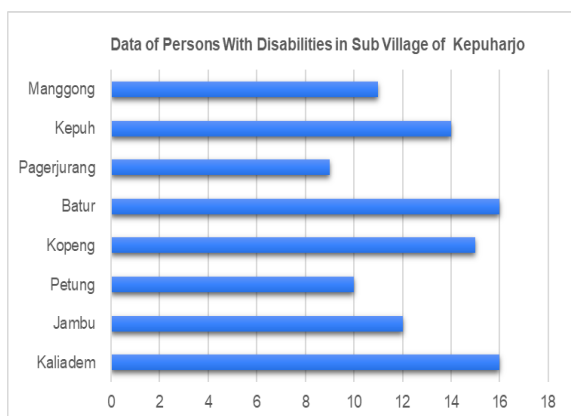


Figure 1. Data of Persons With Disabilities in The Kepuharjo

Data of Persons With Disabilities in the Kepuharjo Village updated the old data. Old data that belong to Village government only refer 20 persons with disabilities. It mean that there are many persons with disabilities that had not recorded. This is because of there is differences definition of persons with disabilities that is used the village government with the definition based on national policy that is used in updating data in this program.

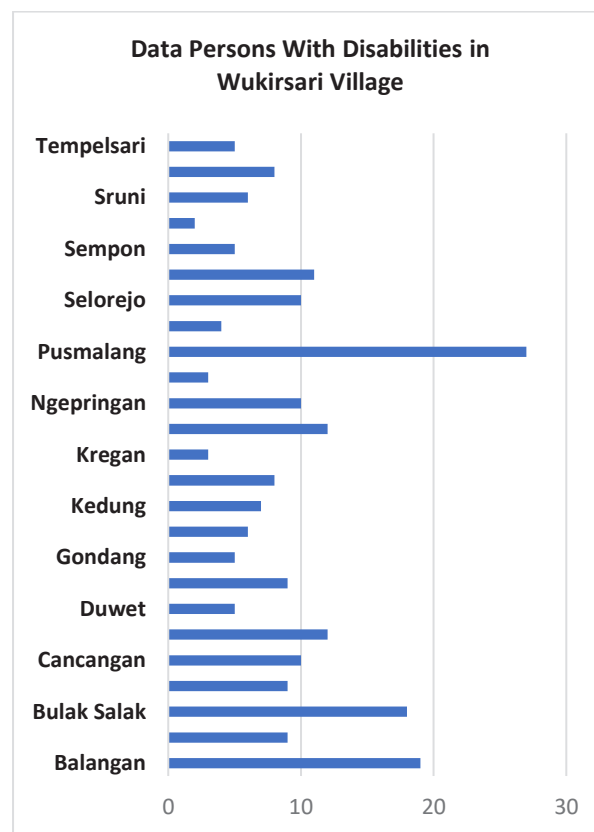


Figure 2. Data of Persons With Disabilities in The sister village: Wukirsari Village

The total data persons with disabilities in sister village: Wukirsari Village refer 223 persons with disabilities. This data update the old data that refer only 110 persons with disabilities.

Provision of Disaster Information System

Creating a disability information system. An information system 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. The government will verify public reports regarding data changes. Providing opportunities for the public to provide reports to the government if there are changes to this data allows the data to be valid because there is constant data updating. This disability information system was integrated with the existing information system in Kepuharjo Village. The web address of the disabilities information system is <https://simdis.desakepuharjo.id>.



Figure 3. Disability Information System

Formation of Village Disability Groups

Formation of a Village Disability Group to make this group a bridge for communicating with the village government and the Village Disaster Response Team.



Figure 4: Village Disability Group Formation Meeting

In Kepuharjo village, a Village Disability Group has not been formed; so far, there have been no representatives with disabilities capable of voicing their rights. Persons with village disabilities have not been involved in various village activities. This condition causes Persons with disabilities not to have the opportunity to interact with the community and also interact with Persons with disabilities in the village. The problems faced by persons with disabilities have been solved alone or with their families. In disaster conditions, Persons with disabilities and families are often forgotten in disaster mitigation programs. 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 using the toilet and did not receive good services regarding eating and drinking. Basic needs for sleep are also not obtained. In 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 Kepuharjo 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 inclusion of persons with disabilities in disaster planning is essential because they know their own needs better. Persons with disabilities, despite being a vulnerable group, have the right and deserve to be at the forefront of disaster risk reduction efforts through an inclusive and holistic approach to reducing disaster vulnerability[2]. The existence of village disability organizations can play an active role in fighting for justice and equal rights as villagers, inviting other community members to be able to change their perspectives and eliminate various bad judgments against Persons with disabilities[3]. The representation of organizations of persons with disabilities makes it easier for village governments to communicate with persons with disabilities. The formation of disability groups at the village level impacts the existence of a particular village budget allocation for empowering persons with disabilities.

Community Empowerment in Inclusive Disaster Mitigation

There is a strengthening of village government and disaster resilient village teams, and persons with disabilities to obtain information and knowledge about inclusive disaster mitigation. Policies that Provide Protection for Persons with Disabilities in Disaster Conditions

Protection and fulfillment of the rights of persons with disabilities in a disaster situation have been regulated by various international, national, provincial, and district policies.

Based on UN-CRPD article 11, in disaster conditions, the state should take all necessary steps to ensure the protection and safety of persons with disabilities in risk situations, including armed conflict, humanitarian emergencies, and natural disasters [5]. Meanwhile, Law No. 8 of 2016 article 20[6] 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 disaster management stage, including pre-disaster, emergency response, and after-the-disaster[7]. 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 disaster management conduct education, training, and simulations for rescuing Persons with Disabilities in emergencies for the community. As intended, education, training, and rescue simulations 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 fulfillment of basic needs. The protection efforts referred to in this case were 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 fulfillment 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 under statutory provisions.

Policies at the district 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 disaster management stage, including pre-disaster, emergency response, and post-disaster[8]. 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 with duties and functions in disaster management conduct training and simulations for rescuing persons with disabilities in emergency situations for the community. Training and rescue simulations were also provided to every person with a disability. Regional apparatuses with the main tasks and functions in 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 institutions coordinated by Regional Apparatuses that have duties and functions in 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 under provisions of the legislation.



Figure 5. Community Empowerment in Inclusive Disaster Mitigation

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[9].

Based on various existing policies, it can be concluded that several things need to be emphasized in protecting persons with disabilities when facing a disaster, namely, persons with disabilities:

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. The right to access priority services and service facilities at every stage of the disaster management process according to their needs.
3. Obtaining easily accessible information about disasters and gaining knowledge about disaster risk reduction.
2. Conduct education, training, and simulations of rescuing persons with disabilities in emergencies for the community.
3. Develop operational policies in the form of standard operations and procedures for evacuation and rescue in emergencies that provide exceptional protection for persons with disabilities.
4. Provide accessibility and fulfillment of special needs at evacuation sites and temporary shelter locations.
5. Obligated to carry out rehabilitation and reconstruction for persons with disabilities who experienced the impact of disasters under statutory provisions.

Prepare Sister Village In The Disaster Preparedness Program That Is Inclusive For The Disability

Sister Village is a form of cooperation in the context of the Merapi Volcano disaster crisis. If a disaster occurs in one village, other villages function to help residents in the affected village, such as providing evacuation shelter and assisting in the evacuation process. This program also prepares the implementation of an inclusive Sister Village program from Kepuharjo Cangkringan Sleman Village, Yogyakarta Special

Region, which is in an area that has a volcanic threat with Wukirsari Cangkringan Sleman Village, Yogyakarta Special Region which is in a safer area. This program ensures

Sister Village has inclusive disaster preparedness for Persons with disabilities. The preparation of sister villages is carried out with disability data in Wukirsari Village, the development of SIM Kalurahan Kepuharjo, which is integrated with Sister Village in Kalurahan Wukirsari. Developing an integrated information system between disaster-prone and sister villages is crucial to facilitate coordination between two villages during a disaster. The village government and the village tagana team can identify their residents in the refugee camp and understand their needs so that they can be followed up quickly. This integrated information system is with the link: <http://simdis.desawukirsari.id/>



Figure 6. Integrated Disability Information System in Sister Village

There are standard operating procedures for evacuation and rescue cooperation between Kepuharjo Village and Wukirsari Village as Sister Villages. Standard operating procedures cooperation between the two villages is essential so each village understands what to do when a disaster occurs. Advocacy for the provision of accessible shelter in the Sister Village, as well as policies and budgets that protect persons with disabilities in the Sister Village.

4. CONCLUSION

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

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