

## Research Article

# Evaluation of Community Participation in Restoration Efforts Following the Merapi Volcano Eruptions in Muntilan, Magelang

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Disasters due to the frequent eruptions of Mount Merapi have attracted great attention. For example, from the beginning of 2020 to June 21, 2020, 10 eruptions brought panic to the community. To avoid the unpreparedness of the community when a disaster occurs, the government and the private sector have provided programs to the victims. The program is running at the optimal planning and implication stage. However, in the next stage, programs that involve the active participation of affected communities run at a low level. This study uses a qualitative descriptive method to produce in-depth data from local government informants and community leaders who are victims of disasters and develop post-disaster reconstruction programs. Data collection techniques included in-depth interviews, observation, and documentation of appropriate and required data. The results of this study include, in Muntilan District, Magelang Regency, there has been a community recovery program in the form of post-disaster emergency assistance, as well as other economic recovery programs to restore life to normal. Initially, the handling of the community's economic recovery program did not go as expected. Many aids were given directly to the community but were not useful due to obstacles in the field; The results of the evaluation of the level of community participation in Magelang Regency, in general, can be classified as very low in post-disaster development programs.

**Keywords:** eruption, aid program, normal life, participation

## 1. Introduction

Indonesia as a country that can be classified as a country prone to natural disasters should be responsive to all matters related to the possibility of natural disasters such as earthquakes, tsunamis, floods, and landslides, as well as active volcanic eruptions. Three things can characterize this responsiveness, namely the existence of an education program and disaster socialization program for people who are prone to disasters, the appropriate program for handling when a disaster occurs, and the final program on disaster management and post-disaster recovery. All of these programs must be run in a relaxed manner and be able to completely solve the problems that occur.

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Proper handling of the program will affect the survival of the wider community, and impact further development activities and planning. Not only social and psychological problems such as traumatic disturbances of survivors, but community economic problems will also be a heavy burden for local governments to be able to revitalize them so that they can proceed as before the disaster. If the recovery program is carried out modestly and runs partially among the various implementing sectors that should be related, including the absence of an empowerment program for the community and the level of active community participation in the program being rolled out, then failure will always be a haunting specter.

Conditions of cooperation and good communication between the community and local government should also occur in areas affected by natural disasters. This can be seen in the rebuilding planning stage, the implementation phase, and the evaluation stage at the end of the program. However, as evidence of the weak community participation shown in Istiyanto's research (2010)<sup>[1]</sup>, it shows that the success of the redevelopment of Pangandaran Beach tourism object areas that were hit by the tsunami in 2006 initially did involve the community. However, the involvement only takes place in one stage, namely the planning stage, while the implementation and evaluation stages of community participation have been eliminated so that the ownership of the re-implemented development program is less directly felt according to the community's primary needs.

Based on data that since Mount Merapi first erupted from 26 October to 11 November 2010, it already killed 194 people and 360,557 became refugees in Magelang Regency. Besides, 498 people were hospitalized in several hospitals both in Central Java and Yogyakarta. Meanwhile, many 370,028 became refugees scattered in 687 refugee points <sup>[2]</sup>.

Research on evaluation of community participation in Post-Mount Merapi recovery located in Muntilan District, Magelang Regency is a new study and has never been done before. When looking at research from Sari <sup>[3]</sup> which aims to determine community participation in the rehabilitation and reconstruction program for the 2010 Mount Merapi eruption at the pre-disaster, disaster emergency response and post-disaster stages in the Cangkringan area. This study differs in focus and research location. Another study that can be compared is research conducted by Yusfida <sup>[4]</sup> entitled Community Participation In Disaster Prone Areas In Indonesia (Pre Disaster, Emergency Response And Post Disaster) located in Garut Regency, where this study describes three stages of community participation when a disaster occurs. In research conducted by Herutomo and Istiyanto <sup>[5]</sup> community participation in rebuilding their territory after the eruption

of Mount Merapi was prioritized on economic issues, and this is the difference with this study.

The urgency of the research is to look at the success of community recovery programs affected by disasters, especially those relating to community involvement as subjects of rebuilding. Therefore, the level of community participation in this matter also needs to be seen and empowered maximally.

## 1.1. Community Participation in Development

Participation can be interpreted as taking part, participating, or participating. This term is more popular in interpreting the following of a person or body in work or a big plan<sup>[6]</sup>. Community participation in development is community participation in a development project.

Community participation according to Isbandi<sup>[7]</sup> is community participation in the process of identifying problems and potential that exist in the community, selecting and making decisions about alternative solutions to deal with problems, implementing efforts to overcome problems and community involvement in the process of evaluating changes that occur.

Mikkelsen<sup>[8]</sup> divides participation into 6 (six) terms, namely:

1. Participation is a voluntary contribution from the community to the project without participating in decision-making;
2. Participation is "sensitizing" (sensitizing) the community to increase the willingness to accept and the ability to respond to development projects;
3. Participation is voluntary involvement by the community in the changes that it determines on its own;
4. Participation is an active process, which means that the person or group involved, takes the initiative and uses their freedom to do so;
5. Participation is strengthening dialogue between local communities and staff conducting project preparation, implementation, and monitoring, to obtain information about the local context, and social impacts;
6. Participation in community involvement in the development of themselves, their lives, and their environment.

The importance of participation was stated by Conyers<sup>[9]</sup> as follows: First, community participation is a tool for obtaining information about the conditions, needs, and attitudes

of the local community, without which the development programs and projects will fail; Second, that the community will trust the project or development program more if they feel involved in the preparation and planning process because they will know more about the ins and outs of the project and will have a sense of ownership of the project; Third, that it is a democratic right if people are involved in the development of their society. What we want to achieve with participation is to increase the capacity (empowerment) of everyone involved both directly and indirectly in a development program by involving them in decision-making and subsequent activities and for the longer term.

In various development programs, it should be able to touch the interests, needs, and problems of the community through the stages of community participation. This is so that every development program can be communicated effectively and efficiently. The process of community participation or participation becomes very important because thus the communication program development efforts in the community will obtain optimal results <sup>[10]</sup>.

## 2. Method

This study uses a qualitative descriptive method based on problems that emphasize more on a process<sup>[11]</sup>. Descriptive research according to Sugiyono<sup>[12]</sup> is a research that is used to find a picture or result of an event, situation, behavior, subject, or phenomenon in society.

This research seeks to answer the questions of what, when, who, where, and how related to a problem under study. Descriptive research seeks to collect information to answer the researcher's questions by paying attention to aspects obtained from a lot of research data, so that it can describe a condition, event, or phenomenon specifically and sequentially.

This data on the level of community participation in Magelang Regency, Central Java, is the focus of this research. The level of community participation is related to post-disaster recovery programs provided by the government and the private sector.

The selection of informants is done by deliberate (purposive sampling), the researcher chooses the informant. Informants in this study were leaders and staff of the Regional Disaster Management Agency (BPBD) of Magelang Regency, Central Java, leaders and staff in local government agencies involved in disaster management, business actors (the economy), community leaders and victims of the disaster that befell in Magelang Regency, Central Java. They are all considered to know the problem under study. The

selection of informants will develop like a snowball (snowball sampling) according to the needs and stability of researchers in data collection.

Following the opinion of Sugiyono <sup>[12]</sup>, the data collection techniques used in this study include:

1. Direct observation (passive participation)
2. In-depth interview (In-depth Interview)
3. Documentation Analysis

### 3. Results and Discussion

Damage and Loss Assessment (DaLA) or assessment of damage and losses due to the eruption of Mount Merapi in 2010 in Magelang Regency presented in the form of damage and losses both due to eruption and rain lava until December 31, 2010. Damage and loss assessment is divided into 5 (five) sectors namely: housing, infrastructure, social, economic, and cross-sectoral. Based on the data collected and after verification, the temporary calculation of the total estimated damage and losses due to the eruption of Mount Merapi in Magelang Regency is Rp 661,173,000,000.00 consisting of a damage value of Rp 316,767,000,000.00 and a loss value of Rp 344,416,000,000.00.

Based on these data, an assessment of the need for rehabilitation and reconstruction in the aftermath of the Merapi eruption is needed, beginning with an analysis of the impact on humanity due to disruptions to access, functions/processes, and increased risk after the Mount Merapi eruption. Based on an analysis of the damage and losses as well as the impact on humanity after the Merapi eruption disaster, the total funding needs for post-disaster rehabilitation and reconstruction in Magelang District reached Rp 253,056.57 Billion divided into 5 sectors, namely the housing sector amounting to Rp 62,311 billion (24.62% of total funding needs), infrastructure sector Rp 42,565.36 billion (16.82%), productive economic sector Rp 106,616.89 billion (42.13%), social sector Rp 23,089.57 M (9.12%) and cross-sector Rp 18,473.75 billion (7.30%).

After the emergency response period ended, rehabilitation and reconstruction activities after the Merapi eruption began immediately. Rehabilitation and reconstruction are intended as a means of rebuilding communities that are victims of disasters, opening jobs, and stimulating the community's economy, by integrating preparedness and disaster mitigation in recovery activities and disaster risk reduction within the framework of regional and long-term regional development policy.

The implementation of rehabilitation and reconstruction in Magelang District was directly coordinated by the Regent with the support of the ministries/institutions at the central level coordinated by the Coordinating Ministry for People's Welfare, and from the provincial SKPD coordinated by the Central Java BPBD. During the rehabilitation and reconstruction phase, the government through the national disaster management body is tasked with providing general policy direction, while the relevant sectors at the national level provide direction and technical assistance. Central Java Provincial Government and Magelang Regency Government are tasked with carrying out rehabilitation and reconstruction by operational guidelines that have been prepared.

Based on government regulation number 22 of 2008 concerning Disaster Relief Funding and Management, what is meant by disaster management funding is funds used for disaster management in the pre-disaster stage, during the emergency response, and post-disaster. Post-disaster rehabilitation and reconstruction activities are included in the post-disaster stages and following applicable regulations can use disaster management funds. These funds are the joint responsibility of the government and regional governments and come from the APBN, APBD, and or the community.

In the research process, it was obtained data that the form of post-disaster handling has been provided by local governments, donors from both foreign parties, and donors from the community to those disaster victims who are generally divided into two classifications, namely shortly after a disaster namely disaster emergency assistance and recovery assistance after several the time of the disaster <sup>[13]</sup>. Disaster emergency assistance is provided in the form of basic needs such as temporary shelter or referred to as 'shelter', food and drink, clothing, blankets, and other urgent. While recovery assistance is provided in certain forms that are planned and adjusted to the needs of the victims to continue their lives again.

The lava flood disaster caused by the eruption of Mount Merapi claimed the most casualties in the Sirahan area and the victims were evacuated to the Muntilan I Community Health Center. For nearly a year they lived in refugee barracks, so they were finally made temporary shelters (huntara) in the Nglarangan Kulon area of Salam District. Most of the inhabitants of the huntara who are victims of the disaster work as farmers or cultivators of rice fields, own businesses (home industries), and become laborers.

The results of interviews with Ms. Yuvita Isni Kadratin (Head of BPBD Rehabilitation Section in Magelang District) explained that the recovery program planned by the local government in early 2014 was sourced from the facilitation and coordination of post-disaster social, economic, and cultural recovery made by BPBD, particularly in the field of Rehabilitation and Reconstruction. Facilitation in the form of Focus Group Discussion

(FGD) with related SKPDs such as Bappeda, PU, BP2KP, Agriculture, Social Affairs, etc. While routine facilitation, although constrained by the budget of each SKPD, has experienced a significant increase. In 2011, it was budgeted at Rp 400 million, and then in 2012, it became Rp 1.2 billion. Increased in 2013 by Rp 4 billion, in 2014 to Rp 9 billion, and the 2015 budget to Rp 14 billion. The biggest proportion of the use of the budget is for land acquisition for permanent housing (huntap) for the victims of the disaster. This step was taken according to Ms. Yuvita to avoid letting the local government be blamed by the community.

In terms of improving the quality of permanent housing (huntap), which was originally on the ground floor, it has been upgraded to ceramic floors and formed farmer groups that can provide loans without collateral in the form of KUR. Beyond that, the disaster area recovery program also received emphasis from the government in the form of:

1. Making Destana (Desa tangguh bencana) or Disaster Resilient Village. The location of the creation of this destana was tilled under Mount Merapi and Mount Merbabu.
2. Making Sister Village. This program does not intend to pair local villages with overseas villages, although they are given names in English, but only pair villages that are included in the category of KRB (Disaster Prone Areas) with villages that are safe and quite far from the source of the disaster. It is expected that with the existence of these village pairs independently, a safe village can become a destination for community evacuation in the event of a disaster and become a major helper after a disaster event. The sister village stage is when a disaster occurs or the source of the disaster will be informed of the paired Village Information System (SID). Therefore, in each village, a village operator will be assigned to forward information on the occurrence of a disaster to get a response. In the final phase, there will be assistance from disaster facilitators funded by UNDP.
3. Making the final evacuation site a means of saving the community from the disaster.
4. Provided economic training for people affected by the disaster command by Disperinkop in the form of sewing training and from the Manpower Office in the form of HP service training.

The issue of permanent shelter (huntap) for disaster-affected communities is indeed considered to be a solution when the old dwelling is damaged. However, the existence of the hunter itself is still complained about by residents of the inhabitants caused by several reasons such as the existing hunter is constrained by electricity, there is no legal ownership certificate for the owner (ownership status is not yet the right of occupants),

the security situation of the hunter is still felt to be less secure and this making residents feel uncomfortable, the progress of the house itself was only completed by the end of 2013.

By the people who own the existence of the 'huntap' as if it is no longer a primary need to live in. Some of the reasons are that they returned to their previous location (which was affected by the eruption of Mount Merapi) because they considered it safe again, and the old job as a farmer could be done again. After all, the paddy field area could be planted (This is different from the 'hunt' area where there is no area for planting). Then another reason is that the house that was affected by the disaster but was classified as slightly damaged has also been repaired so that they can live again. Some are entitled to a 'huntap', and after being given one, they are left behind because they chose to migrate to work outside areas such as Java.

The 'Huntap' that is not inhabited by the rightful occupants (victims of disasters) does not change its function, but its use is changed. What was originally intended for those affected by the disaster or become victims because the house was damaged or lost, but because many residents of "huntap" decided to return to the old place, "huntap" was inhabited by those who have no rights. Ibu Daru exemplified this, as lived by her children who had recently been married or relatives returning from overseas. The village officials of Ngawen regret this condition because it makes the problem of population administration more difficult.

The administrative problems of residents who were victims of the disaster were initially not implemented, even until 2014. Even if there is data collection only for those carried out in the village of Sirahan (data from the Sirahan village head, Mr. Moeryono). Had been promised to make a free certificate from Magelang District Dukcapil for permanent residents (especially those whose birth certificates were lost by the lava flood) but because there were still many who had not moved the administration to a new place so it was still constrained. The initial solution made was a domicile and this could be used to borrow KUR as business capital or consumption.

According to informants from the community, giving 'huntap' as if not using careful planning. For example, when there is a 'huntap' that is damaged it will have difficulty repairing it. Ibu Daru told that there was a church that made the RCTI's house and handed it over to 20 families, unfortunately, the land where the 'huntap' was built turned out to belong to someone else so it had difficulty managing the ownership. Others make 'huntap' used by unnecessary ones, such as being rented to other parties. Therefore, it is natural that there are informants who say that although the community's economic recovery program exists, it cannot yet be considered successful, such as hunting, some



are used but not optimally. Not to mention the target program itself is not clear. Through the process of communication that is not optimally mentioned by Arismastuti <sup>[14]</sup>, it becomes a reasonable condition if the assistance received confuses the community because some have been given but given more, or some have been given to other people.

Several informants based on several causes including assessed the assessment that the recovery program for disaster victims in the district of Magelang was running was not optimal:

1. Institutionally the BPBD was formed after the disaster so coordination has not proceeded optimally
2. The handling of aid for disaster victims is not coordinated and how managed it. In the beginning, after the disaster given emergency assistance in the form of food and drink, but the next aid was given a pair of goats with the aim that victims who work as farmers can maintain and breed them, but because the mental condition of disaster victims are still experiencing trauma and stress so that almost all the goats provided are sold.
3. The purpose of assisting is not focused on what, such as giving venture capital of each KK of Rp. 2 million but it is not directed managerially, thus making the community not even independent. Another example is from the Department of Agriculture which gives 'tabulampot' and is given seeds, which are eventually sold instead of being developed by them.
4. The issue of the mentality of disaster victims also received less attention so until now it has become very dependent on the giving of others. Many of those who used to be independent now actually like to ask. This can happen as described by Ms. Daru because the assistance provided to them is not nonexistent, but rather because there is too much help coming and not coordinated from one door. This institution assists, the agency provides assistance, community A provides assistance, community B also, and there are still many so that seems excessive. Therefore, those who are given will receive it but are then resold.
5. Too often being helped to make disaster victims lazy and passive. As a result, the level of community participation in solving their problems is minimal. They did not take the initiative to solve their problems but became dependent on the aid providers in this matter, especially the local government or donors. There was a story told by the informant that once they were given a machine to make cassava

criping so that they could try again, but what happened was that the machine was sold plus other assets, and the workers were not paid it caused disappointment.

In general, the community thanked the assistance provided, although in terms of community empowerment it was still considered lacking. Budi Sumantri (village community leaders) was given an analysis that the main obstacle was that most victims of the disaster had limited education, and certain community cultures made the economic recovery program offered by the government unable to work, for example in Gempol Village which refused to relocate even though it was classified as a disaster-prone area.

Regarding the issue of community participation, it is deemed to exist and is quite good although not optimal. The form of community involvement by the local government uses consultants such as for making village maps, hazard maps, community evacuation routes, and identification of problems and community needs. All of them invited the community to assist in the settlement process.

The lack of participation of disaster victims in Magelang District does not indicate community participation in the process of identifying problems and potential in the community. They are also not involved in the selection and decision-making about alternative solutions to deal with the problem, the implementation of efforts to overcome the problem, let alone involve the community in the process of evaluating the changes that occur. This is the opinion of Isbandi <sup>[7]</sup>. The government seems preoccupied with prioritizing physical assistance, while non-physical ones tend to be ignored. Whereas the problem of mentality to want to rebuild from a disaster that befell is a non-physical problem. Communities are kept busy receiving assistance without understanding how to be independent when assistance is stopped or stopped.

## 4. Conclusion

In Muntilan Subdistrict, Magelang Regency there has been a community recovery program in the form of emergency assistance after the disaster, as well as other economic recovery programs to restore life to normal as before; Initially, the handling of the community's economic recovery program did not go as expected. A lot of assistance is given directly to the community but it is not useful, due to the obstacles in the field; Evaluation results for the level of community participation in Magelang District, in general, can be classified as very low in post-disaster development programs.

## Conflict of Interest

The author declares that there is no conflict of interest related to the writing or publication of this article

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## References

- [1] Istiyanto SB. Model Terpadu Pemulihan Ekonomi Masyarakat Kawasan Obyek Wisata Pantai Pasca Bencana. *Ilmiah Pariwisata Sekolah Tinggi Pariwisata Trisakti*. 2010;15(2).
- [2] Suhendi A. Korban Tewas Letusan Gunung Merapi Menjadi 194. Retrieved from <https://www.tribunnews.com/regional/2010/11/11/korban-tewas-letusan-gunung-merapi-menjadi-194>; 2010.
- [3] Sari NL. Partisipasi Masyarakat Kecamatan Cangkringan. Yogyakarta: UNY; 2016.
- [4] Yusfida I. Partisipasi Masyarakat Pada Kawasan Rawan Bencana Di Indonesia (Pra Bencana, Tanggap Darurat Dan Pasca Bencana). Bogor: ITB; 2014.
- [5] Herutomo C, Istiyanto SB. Program Pemulihan Ekonomi Masyarakat Pasca Bencana Erupsi Gunung Merapi di Kabupaten Klaten Jawa Tengah. *Purwokerto: Jurnal Acta Diurna*. 2015;11(2).
- [6] Marbun, B.N. Kamus Politik. Jakarta: CV. Muliastari; 2012.
- [7] Isbandi RA. Partisipasi Masyarakat dalam Bidang Kesehatan. Jakarta: Depkes; 2016.
- [8] Mikkelsen B. Metode Penelitian Partisipatoris dan Upaya-Upaya Pemberdayaan: Sebuah Buku Pegangan Bagi Para Praktisi Lapangan. Jakarta: Yayasan Obor Indonesia; 2013.
- [9] Conyers D. Perencanaan Sosial di Dunia Ketiga, Suatu Pengantar. Yogyakarta: Gadjah Mada University Press; 1994.
- [10] Istiyanto SB. Komunikasi Pemberdayaan Masyarakat. Yogyakarta: Pustaka Ilmu; 2016.

- [11] Moleong LJ. Metode Penelitian Kualitatif. Bandung: Rosda; 2017.
- [12] Sugiyono. Metode Penelitian Kuantitatif, Kualitatif dan R & D. Bandung: Alfabeta; 2017.
- [13] Andayani TT. Dana Sumbangan Masyarakat untuk Pembangunan Ekonomi Pasca Bencana Merapi. *Jurnal Penanggulangan Bencana*. 2011;2(1).
- [14] Arismastuti A. Tahapan Proses Komunikasi Fasilitator Dalam Sosialisasi Pengurangan Resiko Bencana. *Jurnal Penanggulangan Bencana*. 2011;2(2).