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# Capacity Of Magelang Regency In Protecting The Historical Site Of Mendut Temple From Mount Merapi Eruption

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***Abstract***

*Mount Merapi is one of the most active volcanoes in Indonesia, which is administratively located on the western side of the mountain in Magelang Regency. There is a historical site, namely the Mendut Temple in Magelang Regency which was affected by the eruption of Mount Merapi. To reduce the impact of the eruption of Mount Merapi on the historical site of Mendut Temple, capacity and cooperation from stakeholders in the Magelang Regency area are needed. The purpose of this study was to analyze the capacity of Magelang Regency in protecting the historical site of Mendut Temple from Mount Merapi Eruption. This research method uses a qualitative approach with the locus of research conducted in the Magelang Regency area. Data collection techniques through interviews, observation and documentation. As for data checking by triangulation and data analysis techniques using interactive analysis models. The results of the study show that mitigation focuses on structural aspects, especially post-disaster activities by covering tarpaulins while non-structural ones are not optimal due to gaps in coordination, communication and cooperation between agencies. The Mount Merapi disaster risk assessment in increasing the capacity of Magelang Regency through strategic efforts ranging from study procedures or SOPs to well-prepared scenarios and alternatives such as several evacuation signs and symbols. Aspects of innovation and knowledge have been carried out by Magelang Regency through the sister village program to provide information on evacuation with a mutual cooperation system. The Magelang Regency disaster risk factor in the aspect of the policy plan refers to existing regulations and has prepared land for settlements for eruption disaster victims with a grant system from the Magelang Regency Government. Institutional capacity needs to be understood together by collaborating and establishing a shared consensus on the policies to be built.*

***Keywords: Mount Merapi, Mendut Temple, Risk, Institutional Capacity.***

## INTRODUCTION

Mount Merapi is one of the most active volcanoes in Indonesia which is administratively located in Sleman Regency and the rest is within the territory of Central Java Province, namely Magelang Regency on the west side, Boyolali Regency on the north and east sides, and Klaten Regency on the southeast side. Mount Merapi has a high disaster risk where this volcano erupts every two to five years.

According to the Central Java Province KRB Document, the City/Regency of Magelang is in second place in terms of potential for volcanic eruption hazard. The Disaster-Prone Areas (KRB) for the eruption of Mount Merapi are divided into three areas, namely KRB III, KRB II, and KRB I. KRB III is an area that is often hit by hot clouds, lava flows, and volcanic bombs.

In Disaster Prone Areas III, permanent residence and commercial use are prohibited. KRB II is an area that has the potential to be hit by hot clouds, maybe lava flows, ejected rocks, avalanches, heavy ash rain, generally occupying the slopes and the foot of the volcano. Meanwhile, KRB I is an area that has the potential to be hit by lava/floods. During an enlarged eruption, this area has the potential to be hit by falling material in the form of heavy ash rain and ejected stones (incandescent). Magelang Regency is included in KRB III and KRB II.

KRB III is an area that is not suitable for use as a residential area, but this area is still inhabited by the surrounding community. The areas included in KRB III in Magelang Regency are 19 villages in three sub-districts, namely Srumbung District, Shaman District, and Sawangan District. KRB III Mount Merapi is an area that is located close to a source of danger that is often hit by hot clouds, lava flows, rockfalls, ejected stones (incandescent) and heavy ash rain. Due to the high level of vulnerability, this area is not allowed to be used as permanent residence. However, many people who live in the area do not want to be relocated.

To reduce the impact of the natural disaster of the Mount Merapi eruption on the world historical site Mendut Temple, various efforts and cooperation from all stakeholders are needed to jointly find solutions to resolve this problem. This problem is the responsibility of all stakeholders to jointly prepare the community and the government to protect Mendut Temple in the face of the eruption of Mount Merapi. Thus, Magelang Regency is responsible for minimizing its vulnerability by coordinating with related parties to reduce the impact of disasters through disaster mitigation and preparedness which are part of the pre-disaster stage. Disaster mitigation and preparedness is very important to increase capacity in maintaining the continuity and preservation of the historical site of Mendut Temple. In the context of disaster mitigation and preparedness, human resources (HR) are needed that are capable of dealing with disaster impacts and risks. This quality of human resources can be achieved by increasing the capacity of all parties so that disaster risk reduction can be carried out effectively and optimally.

Mitigation efforts and disaster preparedness in dealing with the threat of a volcanic eruption of Mount Merapi will support national security in Indonesia. In addition, this must also be done because this location has the Mendut Temple which is one of the centers of the economy. The Mendut Temple world heritage site is not enough to just be a sustainable world history site, but it must also become a formidable tourism industry. The purpose of this study is to analyze the capacity of Magelang Regency in protecting the world historical site Mendut Temple from the eruption of Mount Merapi.

## RESEARCH METHODS

This research method uses qualitative methods with a descriptive approach. This research was conducted at BPBD Magelang Regency. In addition, research was also conducted at the Mendut Temple Conservation Center, Magelang Regency and the Tourism Office of Magelang Regency. The research subjects consisted of competent informants who were used to provide information about the situation and conditions regarding a research.

## RESULT AND DISCUSSION

Magelang Regency is geographically located between 110º01'51" and 110º26'58" East Longitude, 7º19'33" and 7º42'16" South Latitude. Administrative boundary in the north is bordered by Temanggung Regency and Semarang Regency, in the east it is bordered by the Regency Semarang and Boyolali Regencies, to the south are bordered by Purworejo Regency and the Special Region of Yogyakarta, to the west by Temanggung Regencies and Wonosobo Regencies and in the middle by Magelang City. The total area of Magelang Regency is 108,573 Ha (1,085.73 km2).

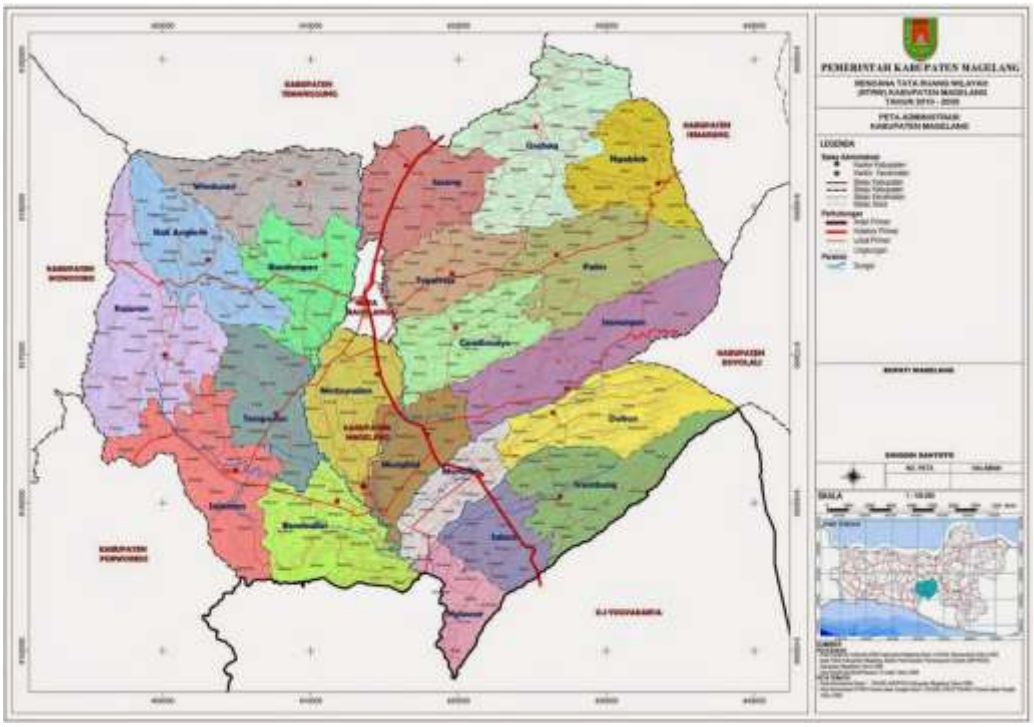

**Figure** Administrative Map of Magelang Regency
Source: penataanruangjateng.info

The importance of the Mendut Temple research locus considering this has become the concern of various government agencies and national vital objects in the tourism industry and has become a world magnet as a historic site. Besides that, Mendut Temple's relation to disaster management in supporting national security lies in the prevention efforts that have not been optimally carried out by Mendut Temple managers in an effort to prevent the wider impact of the threat of the eruption of Mount Merapi.

**a. Implementation of Eruption Disaster Mitigation**

Disaster mitigation is a priority for the Government of Magelang Regency in protecting the world historical site Mendut Temple from the eruption of Mount Merapi. Disaster mitigation needs to be supported with resources that support institutional preparedness activities. So far, the Mendut Temple management institution, both the Conservation Center, PT. TWC, the local government and the community have prepared their resources because of the stakeholders' awareness of the dangers of Mount Merapi eruptions which often hit the Magelang Regency area. HR capacity building activities are important to provide understanding for action, but sometimes each institution runs separately in resource readiness. Disaster mitigation is one of the activities in the pre-disaster stage. Mitigation is defined as an effort to reduce the impact caused by a disaster.

The non-structural disaster mitigation carried out by the Government of Magelang Regency is in the form of simulation activities and training of personnel with rapid assessments, securing the Mendut Temple and tourists, and cleaning the Mendut Temple. Non-structural mitigation carried out by the Government of Magelang Regency is focused on developing human resources, in this case the government, the business world, and the community itself as well as organizational strengthening and institutional reform.

The zoning division of the authority to maintain the Mendut Temple is a challenge for each managing institution. This is because the existence of the temple is administratively in the Magelang Regency area with management institutions from the central government, namely the Ministry of Education and Culture and the Ministry of BUMN. This has become a policy polemic

that has not been synchronized between agencies to unite views. In the study of disaster management, the concept of mitigation is an important component to be considered by every disaster agency in order to reduce greater risk. Disaster risk reduction is becoming a national and local priority with a strong institutional basis for implementation.

**b. Implementation of Disaster Risk Assessment**

Regional capability in formulating disaster risk studies is something that must be carried out by disaster agencies, in this case the BPBD of Magelang Regency. It contains hazard and vulnerability data to cover risks for key regional sectors. Another component includes systems in place to monitor, archive and disseminate data on potential disasters and key vulnerabilities. An early warning system that is ready to operate on a large scale with a broad reach to all levels of society. Regional risk assessment considers cross-border risks to promote inter-regional cooperation for risk reduction. Early warning was also carried out by PT TWC Mendut and the Magelang Regional Government through websites and social media that could be accessed by the public.

The Mount Merapi disaster risk assessment for capacity building in Magelang Regency has been prepared by BPBD Magelang Regency. Strategic efforts ranging from review procedures or SOPs to scenarios and alternatives have been well prepared. In the risk assessment in collaboration with BPPTKG Yogyakarta, then the steps taken were the establishment of an emergency command post, several scenarios, and the organization of sectors or clusters.

The information system has been running effectively to the public in providing information on the current state of affairs both from the temple management and from the Yogyakarta BPBD and BPPTKG which informed the activities of Mount Merapi. Disaster education and access to information have been running effectively, it can be seen in the field that there are signs for disaster and educational content, especially for eruption victims in refugee camps, where the Regional Government of Magelang Regency through BPBD is collaborating with universities and various volunteers.

**c. Use of Innovation and Knowledge**

The efforts of the Magelang Regency Government above constitute a strategy to increase the efficiency, effectiveness and responsiveness of government and community performance in dealing with the eruption of Mount Merapi. The efficiency in question is the resources needed by the Government of Magelang Regency to achieve the goal, which is to protect the world historical site Mendut Temple from the eruption of Mount Merapi. The effectiveness in question is the appropriateness of the effort made for the desired result. The Government of Magelang Regency determined disaster risk reduction and protection of the world historical site Mendut Temple as the desired result of the various disaster mitigation and preparedness activities carried out.

Aspects of innovation have been carried out by the Government of Magelang Regency, including aspects of education. The educational aspect is carried out by including disaster in local content at elementary schools. Even though disaster has not yet become a curriculum, this is the beginning of an effort to create a disaster-resilient community in Magelang Regency. This is in accordance with the context of human resource development which is focused on providing technical professional personnel and society in the theory of capacity building according to Grindle.

Innovation and knowledge provide stimulants to increase the capacity of Magelang Regency in an effort to protect Mendut Temple in particular from the eruption of Mount Merapi. Access to information is very much a means of public transparency of the activities that have been and will be carried out by the local government, in this case BPBD Magelang Regency, as well as public accountability efforts. The culture of disaster awareness is a shared understanding between regions affected by the eruption, including Magelang Regency. The Brothers Village

Program is an alternative policy through local government programs as an effort to be responsive to disaster affairs.

**d. Implementation of Disaster Risk Factor Reduction**

Disaster risk reduction in an effort to increase the capacity of Magelang Regency in protecting the Mendut Temple site from the eruption of Mount Merapi can be seen from the aspects of policy plans, community socio-economic reviews and development procedures. The policy plan for the socio-economic sector of the community is intended to reduce the vulnerabilities of existing economic activities in the Magelang Regency area.

The disaster threats faced by Magelang Regency include Mount Merapi eruptions, cold lava floods, landslides, and flash floods. In addition, at the time this research was conducted, Magelang Regency was also facing the Covid-19 pandemic which had an impact on economic activities at Mendut Temple. The biggest vulnerability experienced by Magelang Regency is in the socio-economic sector which has experienced a decline from the impact of the eruption of Mount Merapi and the Covid-19 pandemic. The Mendut Temple Conservation Center has prepared SOPs for future development with steps to improve quality. This is done so that Mendut Temple becomes a magnet so that the economy of the surrounding community returns to life.
Associated with low capacity, there are research findings, where the manager of the tourist park area still lacks a role in the Mendut Temple area in terms of sharing benefits in the form of CSR. So far the Regional Government has not received a report on the incoming budget from the management of the tourist area to the regional treasury.

The disaster risk factors for Magelang Regency based on the aspect of the policy plan refer to existing regulations and continue to monitor existing developments by collaborating with BBPTKG Yogyakarta regarding Mount Merapi activities. The socio-economic aspects of the community have not fully benefited from the existence of the manager of the Mendut Temple Area, especially now that they are facing a pandemic situation. The strategic effort of the Government of Magelang Regency has prepared land for settlements of victims of the eruption disaster with a grant system which is an asset of Magelang Regency.

**e. Implementation of Strengthening Preparedness**

The quick response from the Regional Government of Magelang Regency is a concern in the disaster sector. Strengthening preparedness through institutional capacity with disaster risk reduction mechanisms in its implementation will be a government stimulant. In addition, disaster contingency plans that have the potential to occur at all levels of government, regular exercises are held to test and develop disaster emergency response programs and are supported by post-disaster information reviews.

Capacity building is carried out through structural mitigation and non-structural mitigation. Structural mitigation carried out to protect Mendut Temple is limited considering that the eruption of Mount Merapi is an unavoidable disaster. Thus, the Mendut Temple Conservation Center and the Magelang Regency Government created an evacuation route and covered Mendut Temple with cloth to protect the preservation of the temple. While the non-structural mitigation that is carried out is by developing human resources through training, simulation, and local disaster content.

Strengthening preparedness institutionally needs to be understood together by collaborating and establishing a consensus on the policies to be developed. So far, the management of the temple area, which is divided into three zones, is still operating independently, very closely related to the sectoral ego of the institution, so that there is no clear light on the authority to manage the temple which leads to an increase in institutional capacity.

## CONCLUSION

The conclusion of this study can be conveyed that the Magelang Regency Government's Magelang Regency Government's eruption disaster mitigation focuses on structural mitigation, especially post-disaster activities. This includes how to protect and clean Mendut Temple from volcanic ash from the eruption of Mount Merapi. In disaster mitigation, the Government of Magelang Regency is still faced with obstacles such as the lack of coordination between agencies and the lack of involvement of the Mendut Temple Conservation Center. This is because there is still sectoral ego from each agency and this must be minimized or even eliminated. This will certainly become an obstacle in disaster risk reduction which is the goal of mitigation activities.

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