Merapi's Sacred Advice as a Warning of the Volcanic Eruption Disaster

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The purpose of this study is to analyze the perception of the society against the eruption of Merapi, to find a system and mechanism of Merapi's sacred advice as the local wisdom of the society for preparedness in facing the threat of its eruption, and to discover the concept of inheritance of Merapi's sacred advice as a form of disaster education for society. This research uses a qualitative approach. The informants in this study are people from the Cangkringan society, the caretaker of Mount Merapi, and the officers of Yogyakarta Regional Disaster Management Agency. The data collection techniques are conducted by observing and interviewing the participants. The collected data is analysed using domain, taxonomic, componential, and cultural themes analysis techniques. The results showed that the people have a perception in understanding the threat of Merapi eruption, namely, the Cangkringan society trusts the advice obtained from traditional stakeholders more than the volcanology agency. With this Merapi advice, it is expected that the society can be more prepared to take a stand independently and spontaneously (leadership) in facing the threat of Merapi's eruption. The contents of Merapi's sacred advice are local ideas that are full of wisdom, good value, and are embedded in the society to answer various problems..

Key words: *Disaster Prevention, Preparedness Management, Systems and Mechanisms, Perception.*

Introduction

Based on Law No. 24 of 2007, disaster management activities do not only require the responsibility of the government, but also the involvement and participation of the community, schools, universities, the business world, as well as local and international NGOs. Each related stakeholder is required to be able to play an active role in disaster management activities. Activities can be carried out through a variety of ways including the

implementation of spatial planning, relocation of settlements, development policies, and the use of community wisdom for disaster preparedness.

Disaster cannot be prevented, but casualties can be minimized if the community has preparedness for a disaster. One way to minimize the impact of disasters is to take advantage of community wisdom. According to Illich (1994), people have the wisdom to respond to their environments. In other words, the more people are able to utilize local wisdom, the more people will be naturally more alert to disasters. Therefore, the community can be more responsive in taking a stand independently and spontaneously so that efforts to build a disaster response community can be realized.

An example of the benefit of using community wisdom in reducing disaster risk is proven in the tsunami in the Indian Ocean region at the end of December 2004. If there are sea waves which are shown by the sudden sea water receding without the influence of weather and climate, the community must immediately avoid the beach and evacuate to the hills. This phenomenon has been believed by the Simeulue community to save them from the tsunami disaster (Kolbri, 2012).

The Cangkringan region is located in the south of Mount Merapi, which is a very vulnerable area to the threat of its eruption. However, the Cangkringan community has different perceptions from other Merapi slope communities, such as the Magelang, Klaten, and Boyolali communities who consider Merapi eruption to be a threat or danger. However, the Cangkringan community thinks that the eruption of Merapi is not a threat or a danger, but it is a gift.

This phenomenon can be understood as an attitude of Cangkringan community to always be ready to live modestly with the nature and environment even though the area has been completely destroyed by ash clouds and has been declared as a forbidden and uninhabitable area. The Cangkringan community considers that the slopes of the Mount Merapi volcano are blood-spilled, so Mount Merapi and its natural processes are assumed as a natural thing.

Until now, the perception of the Cangkringan community is unshakable that Mount Merapi is a gift. The community still does not want to be relocated, which is proof of the community wisdom to always be ready to live earthly with nature. Although the Cangkringan community faces a vulnerable position, they keep their daily routines (Data survey early, 2016).

According to the view of the Cangkringan community who are reluctant to leave their area, it is more understood as a basic reasonableness. This is because it concerns its existence as a Merapi Mountain slope community that has environmental wisdom, which means it is able to coexist harmoniously with the natural environment of Mount Merapi. Local wisdom owned

by the community is quite difficult to separate. Even though the community is afraid of the Mount Merapi eruption, they also expect the eruption of Mount Merapi as a gift (initial survey data, 2016).

Efforts made for preparedness to face the threat of Merapi erupting can be done by making bunker "volcano proof buildings" which aims to be a place of citizen protection from the danger of Merapi erupting (Plaat, 1994). On the other hand, the construction of the bunker in Cangkringan has taken many victims due to the bad construction which cannot withstand the heat of the Merapi lava.

Preparedness to face the threat of an eruption by Merapi can also be done by utilizing amateur radio technology to provide information to the public when the Mountain status is on alert (Chin, 2006). The fact is that the Cangkringan community trust the sacred advice obtained from their traditional leaders rather than the volcanology agency, therefore it is seen as being still alive until now even in the midst of modern society.

It is hoped that the concept of programming computer-based mitigation games on each computer can allow people to practice to save themselves (Meng-han, 2014). However, the fact is that the Cangkringan community is not yet familiar with the use of computer technology because most of the Cangkringan community still adheres to traditionalism.

Various preparedness efforts in facing the threat of Merapi erupting have been conducted, but no one has utilized the wisdom of the community. For this reason, researchers are interested in analyzing the eruption of Merapi in the Cangkringan community and discovering the perceptions and wisdom of the community believed to face the threat of Merapi eruption. These findings are verified by experts and preparedness practitioners to look for implied and simplified educational meanings regarding the concept of Merapi's sacred advice.

It is hoped that the Merapi Advice will increase Cangkringan community's awareness, allowing them to be more prepared in taking a stand independently and spontaneously, thus the efforts to build a culture of disaster response can be realized.

Research Method

This research uses a qualitative approach with an ethnophenology method to find the concept of preparedness that is most suitable for dealing with the threat of an eruption by Merapi in Cangkringan. This research was conducted in Cangkringan District, Yogyakarta. The reason for choosing the Cangkringan Subdistrict is because geographically the Cangkringan region is located in the south of Mount Merapi, resulting in the area being very vulnerable to the threat of Merapi's eruption. The data collection instruments are observation (participatory,

direct and indirectly, and unstructured), interviews (using descriptive, structural, and contrast questions), and documentation. The data analysis technique uses domain analysis techniques, taxonomic, componential with the process of organizing and reducing data into patterns, so that it can draw a conclusion.

Result and Discussion

Public Perceptions about Merapi Eruption

Mount Merapi, as one of the natural elements which is the source of life, must always be considered well. It is necessary so that the relationship between society and nature is not exploitative. On the contrary, this relationship focuses more taking care of each other to create mutual harmony. The society has a perception, that whoever violates the interaction will be the subject to punishment (Data Analysis Results, 2016).

Figure 1. Public Perceptions About Merapi Eruption
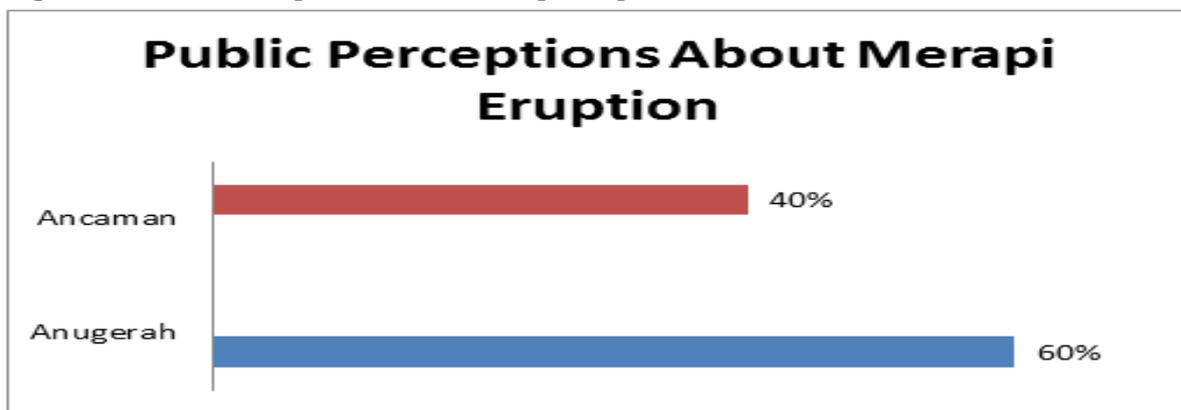
Researcher Data, 2016

From the 30 respondents, 40% state that the Merapi eruption has brought threats or dangers as the Merapi eruption can lead to potential environmental damage, death, injuries, property damage, and social disruption. While the remaining 60% of the community believes that the eruption of Merapi will bring gifts such as the wealth of natural resources of sand and stone, and the community believes that the remaining ash can later fertilize their agricultural lands and plantations.

This belief as a form of culture in interacting convinced the community to stay, that the eruption of Merapi is only part of the dynamics that will ultimately provide welfare for the community. This belief is what makes people reluctant to leave their area even though their area is in a zone vulnerable to the eruption of Merapi.

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Figure 2. Merapi Eruption in 2010

Source: Researcher Data, 2016

The fact is that the Merapi eruption has devastated the Cangkringan region, but the community insisted they would not be moved or relocated. For the community, the activities of Mount Merapi are considered normal. The community continues to accept this with great heart even though the area is damaged by the flow of lava, because for the people, where they live is their blood. Even the areas that have been devastated by lava flows, they will return and rebuild their homes.

Existing societies' perception was drawn dialectically with the theory of Hegel (2012. The results are made as a concept of community perception, which is appropriate for preparedness to face the threat of Merapi's eruption. It also can be clarified by looking at Figure 3 as follows:

Figure 3. Concepts of Appropriate Community Perception in Facing the threat of Merapi Eruption
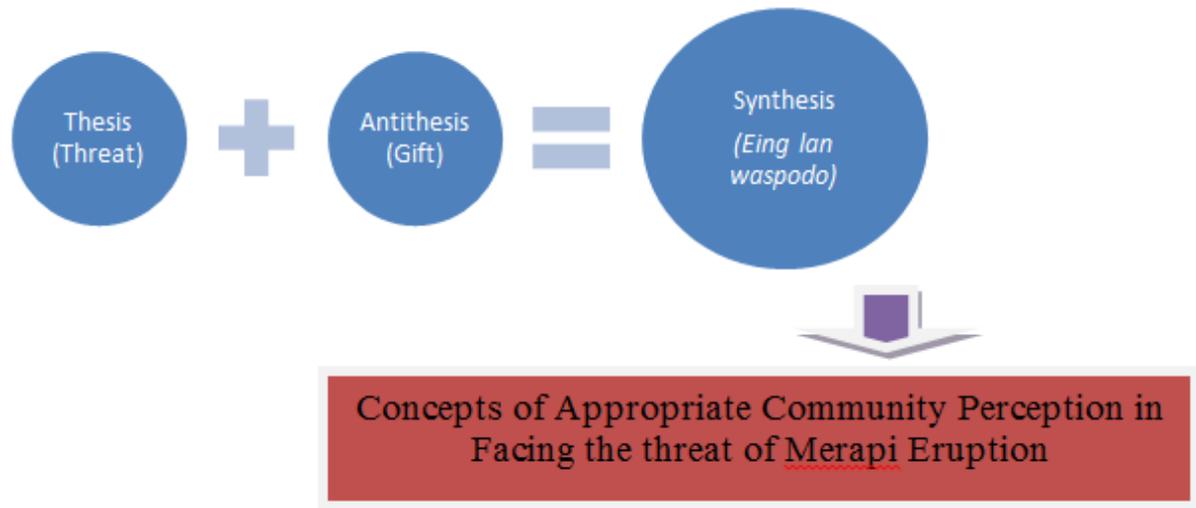
Researchers Findings, 2016

The perception of the community is that the Merapi eruption can bring threats (thesis). One side of the community expects Merapi's eruption. This is because, for the community, Merapi's eruption can bring grace (the antithesis, even though the community must remain mindful of *lan waspodo)* (synthesis). This perception of lan waspodo, which must always be embedded in their hearts, is used as a trust in order to be ingrained from a culture of responsiveness and an alert to the threat of Merapi's eruption. Therefore, when there is a stimulus (Merapi eruption), the community can respond positively so that the community is better prepared against the threat of Merapi eruption (Data Analysis Results, 2016).

***System and Mecanism of Merapi's sacred Advice as Community Wisdom***

a. The Formation System of Merapi's sacred Advice

According to Koentjaraningrat (1991), sacred advice involves community ideas that are wise, full of wisdom, and good value. These are embedded and followed by members of the community and as a way of life and knowledge in the form of activities carried out by local communities in answering various problems in fulfilling community needs.

The Cangkringan community trusts the sacred advice obtained from their traditional leaders rather than the volcanology agency, therefore, even until now, it is still considered alive even in the midst of modern society.

The following is the formation system of Merapi's sacred advice for preparedness to face the threat of Merapi's eruption which researchers successfully formed together with the Cangkringan community:

Figure 4. The Formation System of Merapi's sacred Advice
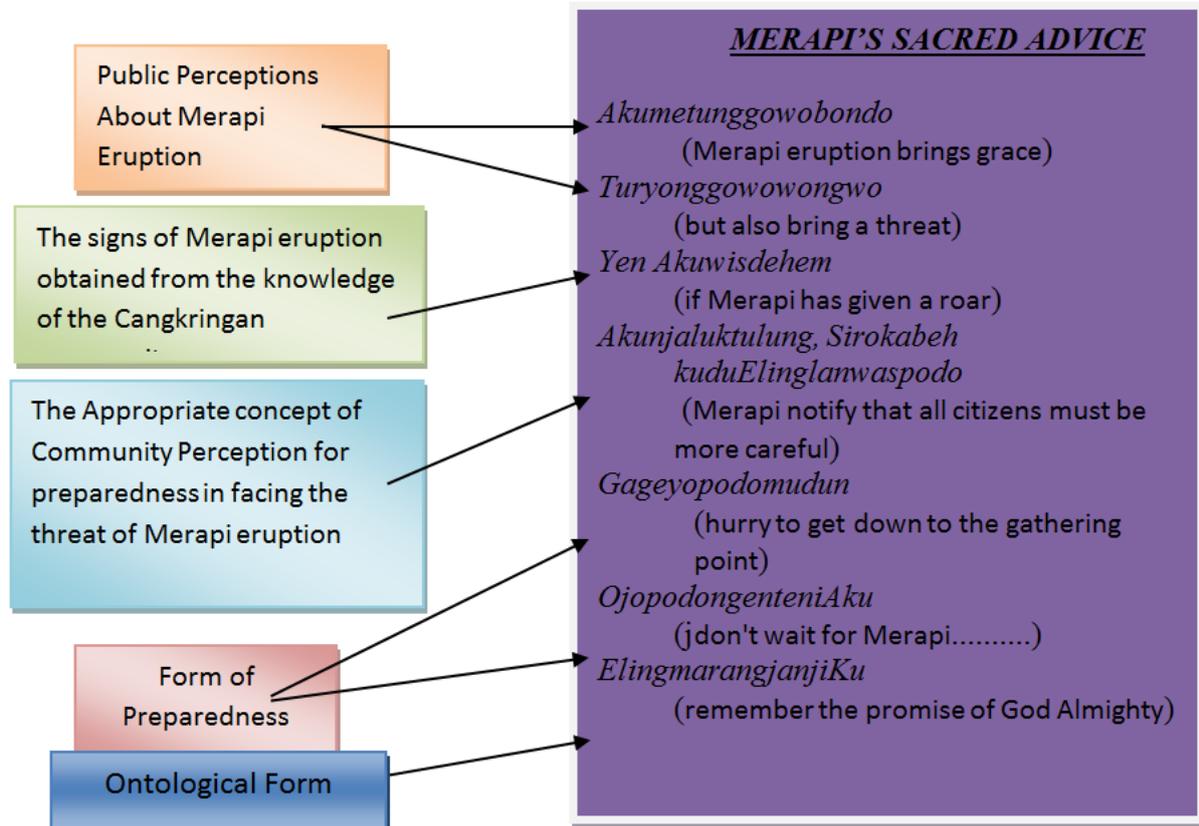
Researcher Finding, 2016

From a philosophical point of view, Merapi's advice has a deep meaning. "I" as the incarnation of Mount Merapi because the Cangkringan community who still strongly believes in Mount Merapi is an embodiment of *Jagat Gede* (House of God and the house of the ancestral spirits of the Cangkringan community). Therefore, cosmologically, Mount Merapi cannot be separated from the Cangkringan community. Merapi's sacred advice has a message that although Mount Merapi brings grace, at any time Merapi will bring threats. For this reason, the community must always be careful (Data Analysis Results, 2016).

Dehem, as a symbolic language, means signs of the eruption of Merapi. This includes: there was a great roar, volcanic earthquake, rain of ash, ash clouds, and the flash of fire. It is expected that when Mount Merapi appears with these signs, the community is urged to immediately gather at the meeting point so that the volunteers can easily evacuate them.

These signs are obtained from the knowledge of the community's experience of the eruption of Merapi from year to year (Data Analysis Results, 2016).

Eling is a form of meaning for humans to always remember the commandments of God and avoid all His prohibitions by not damaging the environment and exploiting it. For the view of the Cangkringan community, when the human heart is one with God (Manunggaling Kawula-Gusti) then luck (kebegjan) will come.

b. *Merapi's Sacred Mechanism*

A mechanism, according to Sutanta (2003), is a group of things or activities or elements or subsystems that work together or are connected in certain ways to form a unity to carry out a function or achieve a goal. Therefore, it can be concluded that the mechanism is a way of working from the system to achieve a certain goal, while the mechanism is a way of working to achieve goals.

The purpose of Merapi's sacred advice is to train and to educate the public towards preparedness by utilizing the wisdom of the community. This is because the community has the wisdom to respond to the environment. In other words, the more the community is able to utilize local wisdom, they will naturally be more alert to disasters and be more responsive in taking action independently and spontaneously.; Indeed, the efforts to build disaster response communities can be realized (Illich, 1994). For more details, the mechanism of Merapi's sacred advice can be seen in Figure 6 below:

Figure 6. Merapi's Sacred Advice
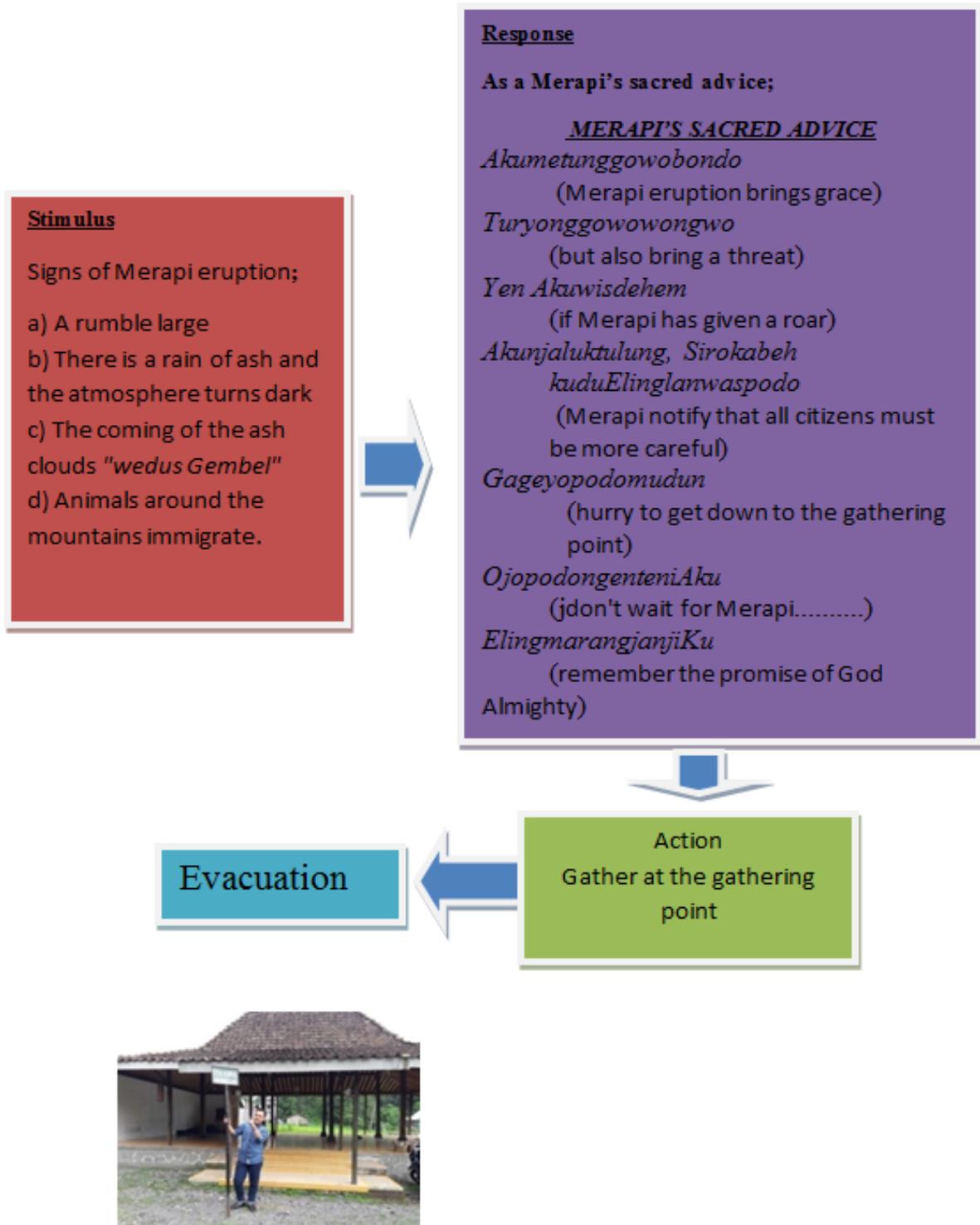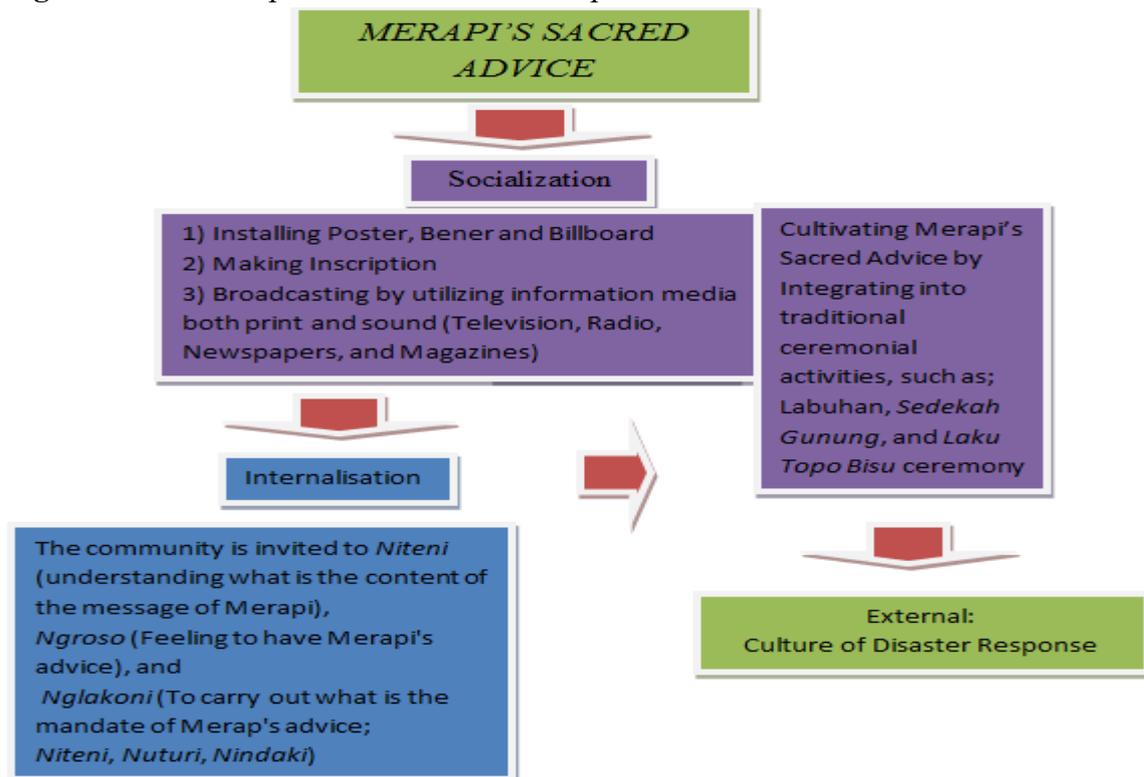

Researcher's Finding, 2016

Merapi's Sacred Advice starts when there are Signs of Merapi eruption, such as: "1) A large rumble, 2) There is a rain of ash and the atmosphere turns dark 3) The coming of the ash

clouds *"wedus gembel"* 4) Animals around the mountains immigrate. With this sign, it is expected that the community will be willing to *nglokoni* (carry out) what the message of the contents of the Merapi's sacred advice is (Results of Researcher Data Analysis with Theoretical Studies, 2016).

The mechanism of Merapi's advice makes it easy for the community to understand what the mandate of Merapi's sacred advice is. Therefore, when the community knows the signs of Merapi's eruption and implements these signs into the heart of the community, then the community is naturally able to take a stand independently and spontaneously to immediately get to the meeting point so that the volunteers or BPBD officers are easy to evacuate (Data Analysis Results, 2016).

c. ***The Inheritance Concept of Merapi's Sacred Advice for the Next Generation as a Form of Disaster Education***

Figure 7. The concept of inheritance of Merapi's sacred advice

Researchers Findings, 2016

Socialization

In the process of socialization, individuals from childhood to old age learn about the values, norms, and patterns of community action in preparedness to face the threat of Merapi's eruption. In addition, being able to interact with nature and the environment they occupy, for example, a child has been taught the elements in Merapi's sacred advice when Merapi has signs of 1) A large rumble, 2) There is a rain of ash and the atmosphere turns dark 3) The coming of the ash clouds *"wedus gembel"* 4) Animals around the mountains immigrate and 5) the flash of fire on Mount Merapi, "the children must hurry to get to the gathering point".

Internalization

The internalization process takes place slowly, patiently, carefully, and requires the right moments. If the process is rushed, or careless and not at the right moment, then internalization will fail. Every community is introduced to what the mandate of Merapi's sacred advice is so that when Merapi erupts, the community is able to take an independent and spontaneous attitude in facing the threat of Merapi eruption.

Enculturation

Enculturation is a process of civilization in which the community learns and adjusts their minds and attitudes towards what is in the contents of Merapi's sacred advice. In other words, enculturation is the inheritance of Merapi's advice by means of the elements of the advice which is cultivated by the community. For example, it is cultured through community activities such as *labuhan, laku topo bisu, dan sedekah Gunung* ceremonies.

Conclusion

The results of research in the form of Merapi's sacred advice can be used as a concept of disaster education for community preparedness in facing the threat of Merapi's eruption in Cangkringan. Merapi's sacred advice is community ideas that are wise, full of wisdom, good value, and are embedded and followed by members of the community as a way of life. This knowledge is in the form of activities carried out by local communities in response to the problem of preparedness in facing the threat of Merapi eruption.

Merapi's sacred advice is the result of drawing dialectics among researchers and the Cangkringan community, NGOs, and Merapi's key gatekeepers. If it is viewed from the philosophical point of view, Merapi's sacred advice has a deep meaning. Merapi's sacred advice is an incarnation of Mount Merapi because the Cangkringan community still believes strongly in Mount Merapi as an embodiment of *Jagat Gede* (a home of the gods or spirits of

the Cangkringan community), so that cosmologically, Mount Merapi can be separated from the Cangkringan community.

Merapi's sacred advice has the message that the community must always be *eling lan waspodo* (although Merapi brings gifts, but at any time Merapi can bring threats).

The success of Merapi's advice as a public wisdom for preparedness in facing the threat of Merapi eruption can be indicated by the following characteristics:

1. Communities are responsive in taking a stand independently and spontaneously
2. People have skills in thinking and living in areas that are vulnerable to the threat of Merapi's eruption
3. The establishment of a partnership and working group system in preparing for the threat of Merapi's eruption
4. The community can solve problems in facing the threat of Merapi's eruption in their area
5. The community is able to make appropriate decisions to reduce the threat of Merapi's eruption in the area

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