The Local Wisdom of the Takome Community in Facing the Gamalama Volcano Eruption Disaster

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ABSTRACT
Ternate Island is one of the georgeus islands in Indonesia that has a volcano since become a part of the field with "active strato-volcano at South Pacific". In line with that statement, Gamalama Volcano which located in the North Maluku, Ternate Island becomes one of the active with a height of 1,715 meters above sea level. Takome Village is one of several villages that are included in the Disaster-Prone Areas I. In the face of disasters, the Takome community still uses traditions that have existed for a long time. The aim of this research was to determine the local wisdom forms of Takome community in dealing with disasters and analyze the success in implementing local wisdom to deal with volcanic eruption disasters. The method used was qualitative research with research informants namely community leaders in the Takome Village. Data collection techniques were carried out through interviews with Takome community leaders and literature studies. The results showed various types of local wisdom forms of the Takome community, such as visiting the sacred place (tagi jere) and reading prayers together in the mosque (tahlilan/ratiban). This local wisdom is still practiced today. The community believes this is a way to refuse reinforcements to avoid disaster. This local wisdom has succeeded in shaping the traditional knowledge of the community to be prepared to face the volcano eruption disaster.

Keywords: Disaster eruption, Disaster mitigation, Disaster preparedness, Local wisdom.

1. INTRODUCTION
Mount Gamalama is one of the volcanoes located in the arc of Halmahera Island, Northeast of Maluku. Gamalama volcano is formed in complex tectonic areas which are built by interactions between the Philippine plate in the north, the Pacific plate in the east, the Eurasian plate in the west, and the Indo-Australian plate in the south (Andreas & Putra, 2018). Gamalama volcano has a chronicle of eruptions on or after 1538 to 2014. The year 1538 was the first recorded eruption, while a major eruption occurred in 1775. The Gamalama eruption formed a maar nearby Soela Takomi Village within 1.5 km southwest of Takomi’s current location (May et al., 2017).

Ternate Island, when viewed from a geological point of view, is one of the georgeus islands in Indonesia that has a volcano since become a part of the field with "active strato-volcano at South Pacific" that intersects from East Asia to Southeast Asia, north to south, and one that is quite active in the North Maluku Islands with the altitude in 1,715 masl. Topographically, Ternate Island has a circular cone (stratovolcano) shape with a diagonal area from north to south 13 km, from west to east 11 km, and with a border of the island that is 55 km which involving lowlands and slopes. In addition, topographic features of most of the terrain are mountainous and hilly areas, containing volcanic and coral islands (Rahman, 2010).

Gamalama volcano has time-consuming eruption interval of 50 years and the briefest one year. The Gamalama volcanic eruption normally obtained space in the core crater and that almost always magmatic, excluding the explosion that happened in 1907 which took place on the eastern hill (sidewaysof eruption) and produced lava (Angus stone) up to the beach (Badan Penanggulangan Bencana Kota Ternate, 2011). The eruption of Gamalama volcano in December 2011 caused 2,711 people / 627 families to be evacuated in nine refugee points consisting of 974 people / 214 families of Ex-Governor Office, Persiter Inn of 179 people / 54 families, SMK Negeri 2 Ternate City Hall 466 souls / 96 families, Dufa-Dufa...
Mosque 216 people / 47 families, Ternate Kedaton 55 people / 14 families, Togafo Village 391 people / 99 families, 11 Taduma Junior High School 366 people / 78 families, Dufa-Dufa Office of Fisheries 39 people / 10 families, and Kipan Hall 55 people / 15 families (Badan Penanggulangan Bencana Kota Ternate, 2011).

Centre of Volcanology and Geological Hazard Mitigation of Ternate City recorded the impact caused by the eruption of Gamalama Volcano on July 16, 2015, on areas affected by volcanic ash, including in the Takome village with 1-2 mm ash thickness. Takome Village is one of the villages in the first disaster-prone Zone I. It is a zone that possible can be involved by lava and influenced by fall overthet material that exchange to ash rain with extreme acidity. If the eruption increases, this zone will have the prospectiveto impacted by the development of burning clouds and knobkobby fall overthet material in substantialash rain, along with lightning stones (National Disaster Management Agency, 2018). The impact is not so much but it can paralyze activities in various sectors. The eruption of Gamalama Volcano became a threat to the people who live around the foot of Mount Gamalama (Pradiptasari, 2015). An effort to prepare for disaster preparedness or a system is needed to prevent and reduce the impact of disasters that occur.

Local people or indigenous people depend their lives on natural conditions, such as the fertility of agricultural land, sand quarries, and the charm of beauty around the volcano has become the basis of community life. These natural conditions are the basis for the community's consideration to remain in their territory even though the Regional Disaster Management Agency determines the area as a disaster-prone area (Gunawan, 2015). This is aligned with what was established by Prasojo (2015) that people who live around Mount Merapi in Yogyakarta learn, be friends, and live side by side with nature. This then raises a variety of local knowledge as one solution to living side by side with nature that has potential danger. The aim of this research was to determine the local wisdom form of Takome people in dealing with disasters and analyze their success in implementing local wisdom to deal with volcanic eruption disasters.

2. RESEARCH METHOD

This research used a qualitative approach method by using a phenomenological approach to understand about social phenomena of society. A phenomenology is a research approach that focuses on human subjective experiences (Creswell, 2019). Researchers describe the experience of human life about a particular phenomenon as described. The researcher also uses a phenomenological research design to understand each event that occurs and its relation to the perpetrators of the event.

The data were obtained through observation, interviews, and documentation techniques. The observations were conducted directly in the Takome village, a disaster-prone area I. Whereas the interviews were conducted in the form of unstructured interviews and open interviews with key informants. Imam of the Takome Village, village heads, and the community who participated in local wisdom rituals. Then, analysis of datum used an interactive model, which is data collection, data reduction, data presentation, and the last is concluding.

3. RESULTS AND DISCUSSION

Local wisdom can be explaining as the attitudes, views, and abilities of a community in managing the spiritual and physical circumstancesthat offerthes public endurance besidesgrowth in the regionwhere the community is pinpointed. Likewise, local wisdom is ingeniousresponse to a geographical-political, historical, and situational which the citizen (Saini in Prasojo, 2015). Therefore, local wisdom has become part of a wise way of life in dealing with the problems of life.

It is seen that the research local wisdom and disaster mitigation in traditional communities in Indonesia concerns with natural and humanwealth. In local societies, human and nature become one entity because God's creations. Nature and human are considered to have the samefortitude. Thus, nature can be responsiveif human handleitconsciously. In contrast, nature can be outraged when humans break it.

In addition, local understanding and wisdom in Indonesia have been generallyconfessed by the society, beginning from the capability of cooperating with its ecologicalescosystem. For instance, human who live on the slopes of Merapi Mountain. Also, in variousdistricts in West Sumatra, so the community can calculate the probabilty of an eruption. The local wisdom itself can be stated in the LHK ministerial regulation, Number P.34 / MENLHK / SETJEN / KUM.1 / 5/2017, that is the virtuosprinciplesthat apply in the local community's living arrangements, among others to keepand accomplish the surroundings and naturalassets sustainably. Furthermore, local wisdom entailsoft words, those are local wisdom. It can be understood as local thoughtthat are judiciousand occupieof wisdom that is of worthyvalue and also peaceablewhich is keep onlythe society. Local wisdom in the latestyears has been greatly deliberated, especially concerningto local wisdom that is related with local communities in the local area. [source: Nurningsih].
3.1. Kololikie Local Wisdom

*Kololikie* kie, according to Dano (in Syukur, 2014), is a traditional ritual tradition of going around Mount Gamalama on Ternate Island while visiting the sacred tombs around the island. Etymologically, the word *kololikie* comes from the native language of Ternate, "*kololi*" which means to go around and "*kie*" which means mountain, island, and land. In general, *kololikie* is defined as an activity to go around an island/mountain.

![Figure 1 Kololikie Rituals](image)

The ritual of *kololikie* mote ngolo is an activity to go around the mountains or the island of Ternate by sea and is nothing but a ritual conducted to ask for protection from God so that this country is protected from disaster (Djafar & Thaib, 2011). This activity is also interpreted by the people of Ternate as part of living side by side with nature.

*Kololikie* ritual is said to be one of the local wisdom of the Ternate community which has been done for a long time and is believed to be one of the efforts to protect the environment. In the Ternate community, the harmony between humans and nature is apparent. Thus, this ritual is believed to protect the people and the city of Ternate from all the disasters that will occur.

3.2. Tagijere Local Wisdom

The *tagijere* or sacred tomb pilgrimage is carried out by the people of Ternate, especially the Takome people in respecting nature and asking for protection from Almighty God so that they are given safety and are kept away from all kinds of disasters. *Tagi jere* or tomb pilgrimage is usually conducted by the community to make a pilgrimage to a place that is considered sacred or to the tomb of a respected figure who is considered meritorious for the community. Based on the statement of the Imam of Takome Village, this ritual is carried out if the community starts to feel there will be a danger, such as a volcano erupting or as has just been done in June 2020 to pray to be kept away from the dangers of the covid-19 pandemic. This *tagi jere* activity is conducted by taking water from a spring in Takome village and then praying together.

![Figure 2 Tahililan or Praying together](image)

After the *tagi jere* activity is conducted, *tahlilan* or a prayer is read together on the last day of a series of rituals at night which means the whole rituals have been completed. The recitation of the prayer or *tahlilan* is carried out in the mosque and followed by the community to pray for the water that had previously been taken at a sacred place while performing the *tagi jere* ritual. The water is then drunk by the whole community as part of the ritual to ask for protection from God.

![Figure 3 Drinking water taken from tagijere activities](image)

3.3. Efforts To Maintain Local Wisdom For Eruption Disaster Preparedness

The values contained in each archaeological resource are varied. Resources that are very valuable in a particular community or place, may not have any value in communities in other places (Pearson & Sullivan, 1995: 127). Also, cultural resources, in each different period, will be interpreted differently. Likewise, the potential contained in every cultural resource will also change with times (Feilden & Jokilehto, 1993: 15).
In the Law No. 11 of 2010 article (1) paragraph 22, what is meant by preservation is an active strength to preserve the subsistence of a Cultural Heritage and its value by defending, progressing, and exploiting. The efforts in preserving the Cultural Heritage also include protection, rescue, and security. Preservation does not mean we forget the safety of cultural preservation. Problems that arise in the protection of cultural heritage itself arise from the society, such as cultural heritage that is in the process of establishment.

4. CONCLUSION

Local wisdom that still lives with the community is traditional knowledge related to mitigation in dealing with disasters. The people of Ternate in general, and Takome in particular, use traditional knowledge such as seeing natural signs around them to indicate that volcanoes will erupt. These important values must be preserved because they can form a community that understands the surrounding of natural conditions. Furthermore, local wisdom in a community can be developed as part of disaster mitigation efforts because it has been performed by ancestors, passed on to the next generation, and is believed by the community.

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