**The Local Wisdom of The Tenggerese People to Coexist with Disaster of The Mount Bromo**

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**Abstract.** The highest losses from global disasters are concentrated in poor countries. Disaster risk in poor countries is exacerbated by conditions such as weak government, vulnerable people especially in rural areas, and environmental degradation (ecosystems). The experience of the people who have long lived on the slopes of the mountain, providing community knowledge to learn about nature and adapt to the dangerous threats of Mount Bromo. Religious and customary institutions play an important role during eruption and post-corruption in collaboration with the Probolinggo District government and related institutions. Religious and customary institutions are very trusted by the community, therefore at the time of the eruption of religious and customary institutions became very important. The decision to evacuate or stay in the village will be fully implemented by the community. Religious institutions with customs, although they can read the activities of Mount Bromo with their knowledge and beliefs, also follow the development of volcano science and collaborate many institutions.

**Keywords:** local wisdom, disaster, tenggerese people

**1 Introduction**

The United Nations 2009 Risk and Poverty in the book Asian Tsunamy (Jayasuriya, 2011), writes that the highest losses from global disasters are concentrated in poor countries. Furthermore, the book, which worsens disaster risk in poor countries, is a weak government, vulnerable people, especially in rural areas, and environmental degradation (ecosystem). In the case of other disasters and specifically the Tsunami which in the book proves this, the Tengger community has the capacity to deal with disasters through local knowledge, experience and wisdom that has existed for hundreds of years.

Mount Bromo is one of the famous mountains in Indonesia in East Java. Mount Bromo is one of five mountains found in the Tengger Mountains complex. Mount Bromo is a volcano that has a long history, both in the natural process of its formation and its role in the spiritual life of the people of Tengger who live around it (Balai Bromo Tengger Semeru National Park, 2006). From historical records, the eruption of Mount Bromo was first recorded by humans in 1804 which informed that Mount Bromo was a very active mountain, with a deadline for resting from one eruption with another eruption of only a few months and a maximum of 16 years. The eruption period can last for one day and a maximum of nine months (Zaennudin, 2011). Actually the mountain area is a distinct advantage for an area. Fertile land to be processed into agricultural land, beautiful natural scenery and cool air are an inseparable part of the mountain region. The high potential of the area that can be developed makes this area attractive to residents. Behind the good potential, the mountain area is a dangerous area for humans to live in, because mountains are like time bombs that can erupt violently at any time.

Mount Bromo is a potential source of danger that threatens the safety of humans around it (Center for Volcanology and Geological Disaster Mitigation (PVMBG), 2007). At the end of November 2010, Mount Bromo erupted again which lasted for nine months until July 2011 (PVMBG, 2011). The 2010-2011 eruption was the longest eruption ever recorded in the history of Mount Bromo. Phreatomagmatic eruption which produces material in the form of dust to fine sand is a characteristic of Mount Bromo (Zaennudin, 2011). Fine dust and sand material spreads in the direction of the changing winds from north, east, northeast to southeast. Incandescent eruption material flew as far as 1.5-2 km in the desert area.

Rain of ash and fine sand from the 2010-2011 Bromo eruption caused several areas on the slopes of the Tengger Caldera to fail to harvest. The main agricultural products such as potatoes, leeks, and cabbage cannot be harvested. Plants wither and eventually die due to volcanic ash covered. From the data held by the East Java BPBD, agricultural losses caused by the eruption of Bromo reached 2,440 hectares with a value of losses reaching Rp 28 billion. The largest loss occurred in Ngadirejo Village, the area of ​​damaged land reached 304 hectares with a total loss of Rp 8.6 billion (BPBD East Java, 2011). Some villages that were also damaged due to the eruption of Mount Bromo in 2010-2011 include Ngadisari, Wonokitri, Wonoroto, Jetak, Ngadas, Wonokerto, Sambikerep, Sambikerep, Pakel, Kadiasari, Sariwangi, Sukapura, and Ngepung Villages.

Natural disasters are the consequences that humans must face as part of nature. Natural disasters usually take the form of disturbances caused by nature (such as mountain eruptions, earthquakes and landslides) that cause damage to community functions (UNDP, 2004). This damage is due to human limitations in handling disasters so that the nature of the disaster becomes a danger to human life. Disasters arise when behavioral threats meet vulnerability (human limitations) (Utami, 2011). Disaster management is a systematic process that involves the government and the community in using their strategies and survival capabilities to reduce the impact of disasters.

Disasters are seen from three management typologies namely routine, non-routine and complex (Handmer and Dovers, 2007). The eruption of Mount Bromo when seen from the typology is in the first type, routine, with low to moderate scale and with local impact (small) only in the villages around Bromo (but if the wind is strong enough it will have wider impact), it can be estimated / measured. The mundane approach to mountain and eruption is carried out by PVMBG and people's experience of seeing natural phenomena. This community experience is often used as a guideline in understanding the activities of Mount Bromo so that when an eruption occurs it is very difficult to evacuate people to distant areas.

Efforts to optimize the role of the community in disaster risk management, the various potential ones in the community must continue to be explored. Review in the form of research by taking an example of Tengger community life in Ngadirejo Village which is prone to the dangers of Mount Bromo. The review is linked to local wisdom, knowledge, and perceptions of the dangers of the eruption of Mount Bromo. Forms of local wisdom in society can be in the form of; values, norms, ethics, beliefs, customs, customary law and special rules. In this connection Ernawi (2009) explains that substantially local wisdom can be in the form of rules concerning; 1) institutional and social sanctions, 2) provisions on spatial use and estimated seasons for planting, 3) preservation and protection of sensitive areas, and 4) forms of adaptation and mitigation of dwellings to climate, disasters or other threats. Shifting the paradigm of disaster management from being responsive to preventive, demands a variety of new ways in the mechanism of disaster risk management. Involving the role of the community is an alternative model for disaster management, especially in Asia.

**2 Meterial and Method**

This type of research is qualitative research, to uncover and understand something behind the phenomenon [23]. According to Creswell [24], qualitative research is methods to explore and understand meaning by a number of individuals or groups of people ascribed to social problems. Data collection techniques using observation, in-depth interviews, and review of documentation [25].

**3 Result and Discussion**

**References**

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