

## Spiritual Communication for Disaster Mitigation in the Gunung Padang Area - West Java

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**Abstract** – Cianjur, West Java, is one of the areas with a high level of disaster threats according to the Indonesia Disaster Risk Index report in 2022. One of the disaster threats is the 100-kilometer long Cimandiri Fault in West Java which is the oldest fault, not to mention the danger of landslides. . Gunung Padang is a disaster-prone area, making Gunung Padang at risk of being affected by tectonic earthquakes because it is situated between earthquake generating lines divided into fault segments that cross 17 districts in Sukabumi, Cianjur and Bandung. Religious and cultural aspects often play an important role in disaster mitigation, especially in communities with strong religious and cultural values. This research aims to analyze spiritual-based disaster communication in the Gunung Padang area, West Java. This research used descriptive qualitative methods and collected data through semi-structured interviews. The data used for this research is primary data to be obtained directly from the first source or original source, including community leaders and local government by using observation and interview techniques. Meanwhile, the secondary data is obtained from other supporting documents. The results of this study show that the people of the Gunung Padang area traditionally uphold and maintain the wisdom and spiritual aspects of Lok which have an important role in conveying disaster mitigation messages. This study also highlights the importance of local beliefs, which shape the community's disaster awareness and influence their thoughts, attitudes, and behaviors. The religious aspect of local wisdom encourages harmony with nature and prevents its exploitation. Spiritual communication plays a significant role in the lives of the Gunung Padang community and is an essential aspect of disaster awareness, which is based on the integration of knowledge, skills, and local wisdom.

**Keywords:** Spiritual communication, mitigation, disaster, earthquake, landslide

### Introduction

Indonesia is highly vulnerable to natural disasters, including earthquakes. This is because Indonesia is situated in an active seismic zone, and Cianjur in West Java is one of seismically active areas. Cianjur's history is full of destructive earthquakes that caused loss of life and damaged infrastructure. Earthquakes are natural disasters that often come without warning and have very destructive effects. Public preparedness and understanding of earthquakes is very important to reduce risks and losses. Natural disasters are closely related to problems such as inequality and social vulnerability (Hidayat et al. 2024; Liu 2020).

The study of settlements in the Cianjur area is also of special concern because they are located in a highland area so they are at high risk if an earthquake occurs. This can be a basis for evaluating regional spatial plans aimed at minimizing future victims. In settlement studies, according to historical

records, locations that have experienced a disaster will have a risk of it recurring according to the return period of certain disasters (Muksin et al 2023)

Gunung Padang in Cianjur, West Java is a disaster-prone area, so that it is at risk of being affected by tectonic earthquakes because it is located between earthquake generating lines. The southern region of West Java is the subduction zone of the Indo-Australian plate and is right on the Cimandiri fault which is a large fault line which extends almost 100 km and is divided into fault segments that cross 17 districts in Sukabumi, Cianjur and Bandung (Nugraheni et al 2023). Disaster mitigation refers to actions used to reduce such risks and impacts. Four important aspects of disaster mitigation that need to be considered are the availability of information and hazard maps for each type of disaster; socialization to increase public understanding and awareness in dealing with disasters; and knowledge of what to do, how to avoid danger, and how to save yourself if a disaster strikes while a disaster is underway - managing time and space in disaster-prone areas to reduce the risk of an impending disaster (Mihardja et al. 2023).

Efforts and actions taken before a natural disaster occurs are a form of preparedness. This preparedness is carried out to quickly and effectively respond to conditions/situations during a disaster and immediately after a disaster. In the preparedness and mitigation process, community participation is very necessary to minimize the risk/impact of natural disasters, including loss of life to community members, material losses such as property, and environmental damage. This preparedness and mitigation effort requires good communication between the government and community members in order to gain a mutual understanding regarding the form of preparedness and mitigation for natural disasters in the Gunung Padang area, Cianjur, West Java (Frasetya et al. 2021).

The spiritual aspect is an important factor in handling disasters. A previous research (Sumual et al 2022) on the spirituality of the Kuta Gugung people who endured the eruption of Mount Sinabung in North Sumatra for 11 years also proves that the spiritual aspect is crucial. Based on the narrative outlined above, the problem formulation to be studied in the research is how spiritual communication is implemented for disaster mitigation in the Gunung Padang area.

## **Theoretical Framework**

### *Disaster Management*

Disaster management has four phases: mitigation, preparedness, response, and recovery. The mitigation phase refers to management activities preventing or minimizing emergencies and their consequences with long-term benefits. Examples of mitigation activities include enforcing state-of-the-art building codes and standards, repairing overpasses, hospitals, and shelters, providing information and educating the general public and stakeholders regarding hazards and potential mitigation strategies.

The preparedness phase is carried out when an emergency or disaster may occur. This relates to preparatory activities before a disaster occurs to save lives and assist response and rescue operations, such as stockpiling food and water, posting emergency contacts, and preparing for evacuation. With plans and strategies developed in advance, the response phase primarily puts them into action. Response activities occur during a disaster, usually involving evacuation of threatened areas, fear, search and rescue efforts, shelter management, and humanitarian assistance.

Post-disaster, the recovery phase refers to repair and reconstruction efforts to restore normal function or even better levels. Recovery measures typically include debris removal, proper damage assessment, and infrastructure reconstruction, as well as financial assistance from government agencies and insurance companies (Sun et al. 2020).

### *Disaster Risk Communication*

Disaster communication plays an important role in the disaster management cycle starting from pre-disaster, emergency response and post-disaster. Success in implementing the disaster communication model can assist the community and various stakeholders in dealing with natural and non-natural disasters. In essence, all activities in disaster management require good communication and coordination (Hidayat et al. 2022).

One of the important things that must be considered and carried out is disaster mitigation communication. This includes how the government and related parties prepare people living in disaster-prone areas to face disasters by conveying initial information about disaster problems, in this case earthquakes (Roskusumah 2013).

Risk communication is an interactive process of exchanging information about and beyond risks between individuals, groups and institutions. This is not only limited to providing information about risks in the form of messages or opinions expressing concerns and reactions, but also includes actionable information on how to prepare for, protect against, respond to and recover from risks. Risk communication plays an important role in the risk management cycle, where it is necessary to identify hazards, conduct risk analysis, and develop, implement, and evaluate policies (Khan et al. 2022; Infanti et al. 2013).

### *Society participation*

Basically, in terms of disaster management, the government has the authority to set regulations. On the other hand, the function of society as a disaster management center is also very important. Before assistance from external parties, both government and private, the community was responsible for disaster management (Umeidini et al. 2019; Noza 2017).

In disaster management, community participation is very important. Participation is community involvement in the planning and decision-making process about what to do, program implementation, contribution to resources, cooperation with certain organizations or activities, sharing of profits from construction programs, and program evaluation. (Nugraheni et al. 2022; Lengkey et al. 2020).

The importance of the community's role in disaster management is also evident from the project carried out by the American Federal Emergency Management (FEMA) to motivate the community's ability to reduce disaster risk. The objectives of the project include creating partnership structures in communities, identifying risks and taking necessary actions to reduce vulnerabilities at the local level. This explains that human existence plays a fundamental role in social resilience and disaster resilience (Hosseini et al. 2014; Khusna et al. 2023).

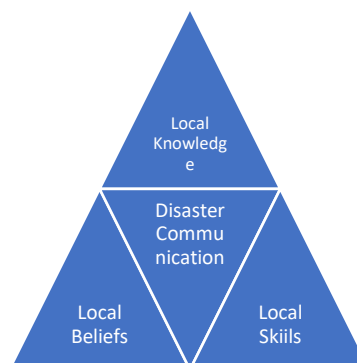
### *Disaster and Spiritual Communication*

The process of combining religion, culture and beliefs characterized by local wisdom is embedded in the community around Gunung Padang (Rustandi & Wibisono 2020). Religious and cultural aspects often play an important role in disaster mitigation, especially in communities with strong religious and cultural values. This is not only visible in practices and rituals, but also in the way society understands and responds to disasters.

Respecting and utilizing religious and cultural structures and teachings can help make disaster mitigation efforts more inclusive and effective.

Each village community who still adheres to religion and culture better understands the ins and outs of their region. In protecting the environment in village communities as local communities, religious and cultural elements can be utilized as a forum for information, outreach and education, aimed at providing understanding to the community and increasing community preparedness for disaster threats (Hidayat et al. 2022).

Spiritual communication is part of science that can be taught and learned by everyone. This area of spiritual communication studies has received attention from communication scientists from various fields such as interpersonal, organizational, rhetoric, health and media studies (Lodra 2017; Widjanarko 2023).



**Figure 1.** Disaster communication pyramid based on local wisdom (Hidayat 2024)

## Material and Methodology

This research uses data collection techniques by conducting interviews and observations. The reason this observation technique is used is because it is related to the approach used and to reveal information related to spiritual communication for disaster mitigation in the Gunung Padang area. This research will be conducted from January 2024 to June 2024 in the Gunung Padang area, Cianjur, West Java.

This location was chosen because it is found in an area prone to disasters and the people still adhere to religious and cultural aspects. The data used for this research is primary data to be obtained directly from the first source or original source, including community leaders and local government by using observation and interview techniques. Meanwhile, the secondary data is obtained from other supporting documents.

## Result and Discussion

Gunung Padang is a hill located on the slopes of Gunung Malati. Geographically, Gunung Padang can be considered one of the many hills in the area. Uniquely, the Gunung Padang area and its surroundings is composed of layered rocks. These rock formations are not only found in the area now known as the Gunung Padang site but also in nearby areas such as Kampung Empang and Kampung Ciukir in the Gunung Malati hamlet. The structure consists of tightly packed rocks serving as the foundation for the fertile soil above, which is planted with crops like rice or is covered with naturally growing plants.

Structurally, the surface of Gunung Padang and its surroundings appears solid. However, landslides occasionally occur, endangering settlements, rice fields, and people's farms. There are two main causes of landslides in the area: earthquakes and water. Vibrations from earthquakes can cause the soil and underlying rocks to shift. The unstable, hollow rock structure can lead to surface collapse. However, the presence of large tree roots in the area helps prevent significant surface movement solely due to earthquakes. The tree roots bind the soil, filling gaps in the rock structure. If the rocks shift, the surface movement is not significantly affected. However, heavy rainfall can exacerbate the situation. Water penetrating the soft soil and seeping into the gaps between the rocks can erode and cause landslides, especially in steep areas.

Field observations revealed that some areas experienced severe landslides. Not only were trees and soil on the surface displaced, but also large rocks were carried away or pushed by the force of the water. This is evident from the presence of large rocks on the surface. According to local residents, these rocks were carried down during landslides. This is the type of disaster most feared by the local community, especially since many of them prefer to build their homes on or below cliffs.

As we know, the first signs of an earthquake can be identified using scientific approaches involving technology and disaster cycles. However, almost all traditional communities throughout the archipelago have their own ways of identifying pre-disaster symptoms. The community in the Gunung Padang area relies on two methods passed down through generations: sounds produced by self-made tools or those caused by shifting rocks. A simple handmade mechanism for pre-earthquake signals involves hanging metal utensils from the roof beams. If an earthquake occurs, the metal utensils collide, producing noise. According to interviews with members of the local tourism awareness group (*Pokdarwis*), the community becomes alert when they hear rumbling sounds, caused by rocks colliding beneath the shallow ground, indicating an impending earthquake.

However, this method only provides a short warning before the earthquake occurs. While considered important, the local community places greater importance on seeking protection from God and their ancestors through personal prayers or specific ritual beliefs.

The people living around Gunung Padang adhere to Islam and local cultural beliefs called Sunda Wiwitan. The process of combining religion and culture characterized by local wisdom has been going on for generations and persists to this day. This is in line with the statement from the Head of Melati Hamlet as follows:

"The majority of the people living around Gunung Padang are Muslim and we have always maintained local culture. This is evident from the local culture-based religious rituals that we hold regularly, such as celebrating the Prophet's birthday and Isra Mi'raj in the area as a form of gratitude for the good fortune given by Allah SWT. We also hold cultural events during the fasting month. The event was called Cipta

Wening Wangun Wijaya Kusumah. However, basically this activity, which has been carried out for generations, is originally taught in Sunda Wiwitan related to the change from the rainy season to the dry season, or the transition period. During this period, disease outbreaks often occur, unpredictable weather changes, natural disasters such as heavy rain that causes floods or landslides. However, these activities do not conflict with the celebration of the Prophet's birthday, so we organize them together."

Good practices related to local wisdom and spirituality in disaster management have been proven and have become a reference source for the world community in responding to disasters. This was also explained by the source as follows:

"Certainly elements of religion and local wisdom that have been taught here for a long time are about protecting nature. Such as the rules for opening plantation and agricultural land which cannot be done haphazardly. Almost every local wisdom and art that is born has a positive message to protect nature so as to prevent disasters from occurring."

Local wisdom and spiritual aspects become a strong wall against the threat of disaster because through local wisdom and spiritual aspects the community can increase awareness of disaster mitigation and behavior to protect nature. The combination of local and spiritual wisdom has long been a community system in the Gunung Padang area. This was also explained by the source as follows:

"We always regularly hold community activities such as cultural events to coincide with Islamic holy days. Such as 10 Muharram (Suro), Garda Manggala Sutra 20 Rojab, Ngarawat or Ngeramut Pusaka, Panglajer Putih Adat, Pencak Silat Karinding and Flute Harp, Marhabah Manakib and Tausiyah.

**Table 1.** Cultural and Spiritual Activities of the Gunung Padang Community

Local Wisdom Activities	Spiritual Activities
Bubuka Up Site White Panglajer Customs Holding Pencak Silat and Kacapi Flute Culture Caring for Heritage Crawling over Heirlooms	Siang Padang Mandate 10 Muharram (Suro) Garda Manggala Sutra 20 Rojab Tausiyah Qiroatul Quran Istigosah Tarawangsa's reflections Marhaba Manaqib

As stated by the Gunung Malati hamlet leader, who is also an elder in the Gunung Padang area, that the people around Mount Malati, including Mount Padang, are currently embracing Islam. However, the majority of people still believe in and practice the teachings of Sunda Wiwitan faith that have been traditionally passed down from generation to generation. The folklore that is used as a reference to practice the teachings of one of the indigenous faiths of the archipelago is related to the existence of Aki Resi Pancanata considered the ancestor of the local community. For example, when someone is going to build a building, he needs to pay attention to the appropriate raw materials, when the raw materials are taken and processed, which direction the building should face, and so on. This is also true with someone who wants to open plantation land or rice fields. By doing so, the manufacturing process runs smoothly and ensures safety.

The existence of Sunda Wiwitan is always associated with ancient monotheism which has the highest belief in Sang Hyang Kersa. This belief is also related to the worship of natural forces and ancestral spirits who are united with nature. This spiritual belief is very close to the disaster mitigation practices implemented by the local community. The Gunung Malati Hamlet told that in 1986 there had been a landslide in the Kampung Empang area.

The landslide buried people's houses underneath. However, eight residents who lived there survived because they followed instructions from a spiritual figure who gave warnings before the landslide occurred. It was said that the head of the resident's family had a grandfather visit who asked them to move because there was a "train passing by". Due to belief in Sunda Wiwitan teachings which teach how to read natural signs and ancestral teachings not to ignore spiritual signs, the family was saved.

In addition to relying on signs believed to be supernatural, the community around Gunung Padang also uses their knowledge and skills to prevent and mitigate disasters. This knowledge comes from two sources: inherited knowledge and government and university outreach programs. Inherited knowledge relates to environmental management to protect the land. For example, when opening land for rice fields, the soil surface is terraced, and stones are arranged along the edges to prevent erosion. The irrigation system connecting adjacent rice fields is constructed using stones to channel water from springs to the fields. When not planting rice, the area is used to grow crops. Trees with strong roots are also planted around the fields to reinforce the soil structure.

Government and university outreach programs provide additional knowledge, such as building large channels to direct water from springs and high-moisture soil on the hilltops to safer, flatter areas. This channeling system helps prevent water from spreading to disaster-prone areas.

Another field observation revealed that houses are built on terraces with solid stone foundations. This construction, combined with traditional house designs, allows for flexible building movement during earthquakes. The houses in the Gunung Padang area are built along the main transportation route, which also serves as the disaster evacuation route. However, the close proximity of houses, separated only by narrow alleys, poses a challenge for evacuation.

The combination of local knowledge, skills, and beliefs forms a strong disaster resilience in the Gunung Padang community. Despite Gunung Padang's location atop the Cimandiri Fault, which makes it highly susceptible to earthquakes, the area has rarely experienced significant disasters. The last earthquake and landslide occurred in 1986. The integration of these three key factors in disaster mitigation has resulted in resilient infrastructure and settlements. Consequently, the Gunung Padang community has developed water channels to reduce the risk of dangerous water accumulation in underground water pockets. Additionally, the fields and farms are designed with potential hazards in mind. However, this study also highlights the importance of local beliefs, which shape the community's disaster awareness and influence their thoughts, attitudes, and behavior. The religious aspect of local wisdom encourages harmony with nature and prevents its exploitation.

## Conclusions

The people living in the Gunung Padang area have for generations upheld and maintained local wisdom and spiritual aspects. The long history of megalithic sites is also related to the local culture of the surrounding community. Spiritual communication plays a significant role in the lives of the Gunung Padang community and is an essential aspect of disaster awareness, which is based on the integration of knowledge, skills, and local wisdom.

Spiritual communication such as rituals, prayers, or other worship activities are used to strengthen the relationship between humans and spiritual forces or efforts to protect nature and the surrounding environment so that disasters do not occur. This research also discovered how folklore which is part of local wisdom, which is knowledge and practices passed down from generation to generation, helps maintain the identity and unique culture of the Gunung Padang community, in addition to being a reference considered important in local community mitigation practices.

This local wisdom can include farming methods, preserving the environment, or maintaining social harmony. One of the important findings is that spiritual practices and local wisdom encourage environmental preservation and cultural conservation. Local communities use these practices to protect life, nature and cultural heritage from external influences and excessive modernization.

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