

The local wisdom-based disaster mitigation literacy of the indigenous Pangandaran community

Ninis Agustini Damayani^{1*}, Encang Saepudin¹,
Agus Rusmana¹, Edwin Rizal¹, James M.B. McArthur²

¹*Faculty of Communication Science, Universitas Padjadjaran*

Raya Bandung Sumedang Avenue, Jatinangor, Sumedang, Indonesia

²*College of Arts, Humanities and Social Sciences, University of Denver*

2199 S University Blvd, Denver, CO 80208, United States of America

Email: ninis.agustini@unpad.ac.id, Phone: +6222-8428888

How to Cite This Article: Damayani, N.A. *et al.* (2022). The local wisdom-based disaster mitigation literacy of the indigenous Pangandaran community. *Jurnal Studi Komunikasi*, 6(2). doi: 10.25139/jsk.v6i2.4862

Received: 07-01-2022, Revision: 11-04-2022, Acceptance: 13-05-2022, Published online: 30-07-2022

Abstract Disaster mitigation is a series of efforts to reduce disaster risks through physical development, awareness, and capacity building to face disaster threats. Appropriate communication strategies are needed to increase awareness and the ability to cope with disasters. Delivering appropriate, accurate, and reliable messages can build a reliable disaster literacy community. This study aimed to examine disaster mitigation literacy based on the local wisdom of indigenous people in Pangandaran Regency, West Java. The descriptive qualitative method was employed to explain the phenomena and events occurring in the field comprehensively. Data were collected through interviews, observation, and literature study. Meanwhile, the data were analysed systematically through reduction, presentation, and conclusion stages. The key informants were traditional figures in Badud and Pananjung Villages. The results showed that some traditions contain moral, social, and spiritual messages about disaster mitigation. This study concludes that the local wisdom of the Pangandaran community is an appropriate communication strategy to build disaster mitigation literacy.

Keywords: disaster mitigation literacy; local wisdom; communication; indigenous community

INTRODUCTION

Natural disasters are events that can occur anytime and anywhere. These events are unavoidable and precisely predictable (Mysiak *et al.*, 2015). Recently, interactions with natural disasters have become unavoidable. People tend to surrender to disaster and often associate it with human fate (Blanco, 2015). Floods, landslides, volcanic eruptions, land shifts, and tsunamis are potential natural disasters in Pangandaran Regency. Disasters that often occur in Pangandaran Regency include floods, landslides, strong winds, and tsunamis. However, the tsunami is the most dangerous of the series of disasters that threaten.

*) Corresponding Author

Based on data from the Regional Disaster Management Agency (BPBD) of Pangandaran Regency, Pangandaran is the 16th disaster-prone area out of 514 regencies/cities in Indonesia. However, for the whole of West Java, it is in fifth place (Maarif, 2019). This is supported by the results of Suparya's research (2019), which explains that the disaster-prone area in the Pangandaran Regency is a coastal area facing the direction of the Indo-Australian plate. This plate can shift at any time, which could cause large earthquakes with a potential tsunami risk (Suparya, 2019).

Natural disaster-prone areas are areas that have a high potential for natural disasters. Protection of areas prone to natural disasters is carried out to protect humans and their activities from disasters caused by nature. According to Presidential Decree (Keputusan Presiden Republik Indonesia Nomor 32 Tahun 1990 tentang Pengelolaan Kawasan Lindung, 1990), the criteria for disaster-prone areas are divided into four categories: (1) Volcanic disaster-prone areas, namely areas with a certain radius from the eruption centre that is directly or indirectly affected with different levels of vulnerability. Areas in the form of valleys that will become lava and lava flow areas; (2) Earthquake-prone areas, namely areas that have a history of destructive seismicity, areas that are traversed by active faults, areas that have a record of earthquakes with a strength (magnitude) greater than five on the Richter scale, areas with bedrock in the form of loose deposits such as sediment rivers, coastal sediments, and weathered rocks, valley areas with cliffs composed of landslide-prone rocks; (3) Areas prone to landslides, namely areas with high susceptibility to landslides, mainly if human activities cause disturbance to the slopes in this area; (4) Flood-prone areas, or areas with high vulnerability to flooding.

A coastal and mountainous area of Pangandaran Regency is prone to natural disasters like floods, landslides, volcanic eruptions, land shifts, and tsunamis. Therefore, the government's readiness, in this case, the Regional Disaster Management Agency of Pangandaran Regency, continues to be tested to assist as quickly as possible when a disaster occurs. In addition, the government and community of Pangandaran Regency need to build good and effective communication to reduce disaster risk. This is reflected in the results of research conducted by (Sjoraida & Anwar, 2018), which suggests that the effectiveness of establishing a community communication system occurs with the development of community independence and the ongoing role of local institutions that support disaster mitigation. Thus, risk communication activities can reduce the risk of disaster victims. Risk communication is more effective when there is a synergy of various communication methods, both traditional, modern, and digital communication (Sjoraida & Anwar, 2018).

The implementation of disaster management has been regulated in the Regional Regulation of Pangandaran Regency Number 21 of 2016 concerning Implementation of Disaster Management (2016), especially

in chapter 2 article 2, which states that the Regional Government is authorised and responsible for the implementation of disaster management, related to disaster risk reduction through development programs. One of the important steps to reduce disaster risk is through disaster mitigation. It was explained that disaster mitigation is a series of efforts to reduce disaster risk through physical development, awareness, and capacity building to deal with disaster threats (Putri & Hamzah, 2021). According to article 47, paragraph 2 (c), one form of disaster mitigation activities is through education, counselling, and training, both conventionally or in a modern way.

Communication in a disaster is not only needed in a case of emergency but also important during a pre-disaster phase. Ensuring that people in disaster-prone areas are always vigilant must always be done. In addition to adequate information about potential disasters in an area, training and internalisation of habits in dealing with disaster situations must be carried out on an ongoing basis. The results of research conducted by Suherman (2018) indicate the need for interactive communication strategies in disaster preparedness, namely the determination of village officials/community leaders as communicators/credible sources, selection of messages that are easily accepted by the community, use of communication media in accordance with community characteristics, and understanding the characteristics of society (Suherman, 2018).

Building community understanding in disaster-prone areas regarding disaster mitigation requires the role of communicators who are competent and trusted by the community. Public trust is very important in terms of receiving information. People will easily receive and digest information because the person who conveys it is trusted. This is proven by the results of Darmastuti, Purnomo, Utami and Yulia's research (2019), which shows that "the media literacy model based on Balinese culture, shows that housewives are the main agents to convey messages to their children. Therefore, media literacy learning based on Balinese local wisdom needs to be conveyed to mothers by a community leader in Banjar and through dance studios" (Darmastuti et al., 2019).

Disaster mitigation is a series of efforts to reduce disaster risk, both through physical development and awareness and capacity building in dealing with disaster threats (de Leon et al., 2021; Hikichi et al., 2018; Saito & Matsuyama, 2012; Yamakawa, 2019). Appropriate communication strategies are needed to increase awareness and deal with disasters. Communication in a disaster is not only needed in a disaster emergency. However, it is also important during and pre-disaster as it is said that communication is the best way for successful disaster mitigation, preparation, response, and recovery of situations in time of disaster. Communicating messages about disasters to the public, government, media, and opinion leaders can reduce the risks and impacts of disasters and save lives (Suherman, 2018).

One of the important points of concern regarding communication in disasters is the issue of uncertainty. According to Frank Dance (Azwar et al., 2014), one of the important aspects of communication is the concept of uncertainty reduction. Communication arises because of the need to reduce uncertainty and act effectively to protect or strengthen one's ego in interacting individually or in groups (Susilo, Indrasari, Harliantara, et al., 2020). In disaster management, accurate information is needed by the public and private institutions concerned for disaster victims.

Reducing uncertainty in disaster mitigation can be strengthened by disaster communication management. This is in line with the opinion of Lestari, quoted by (Badri, 2018), which explains that "disaster communication management is a comprehensive effort to prevent and reduce disaster risk by managing the process of producing messages or information about disasters, distributing and receiving messages from pre-disaster, during a disaster, and post-disaster. Organising in disaster communication management is closely related to forming a team of parties with duties and functions responsible for managing the disaster. Organising involves various parties with the right selection." (Badri, 2018). This is supported by Susilo's research (2020) which proves that strategic planning and preparation of preventive actions to face uncertainty is a good combination in dealing with natural disasters (Susilo, Indrasari, Prayudha, et al., 2020).

In particular, uncertainty reduction can be seen in the context of risk communication in disaster management activities. This uncertainty reduction will consist of planning pre-disaster activities based on the identified disaster potential map, activities when a disaster occurs, and post-disaster activities (Asteria, 2016). These three activities must be disseminated to all parties involved in disaster management, namely the government, disaster-prone communities, and other parties involved. Thus, all relevant parties will be literate about disasters. Furthermore, message design, media selection, and dissemination methods will be part of the disaster communication strategy that will be built (Susilo, 2022).

Concerning the context of disaster risk communication, the people of the Pangandaran Regency already have local wisdom to guide them. Local wisdom is a traditional view and knowledge that becomes a reference in behaviour and has been practised from generation to generation to meet the needs and challenges in the life of a society. Local wisdom has functions and meaning in society, preserving natural and human resources, maintaining customs and culture, and being useful for life (Permana et al., 2011).

This includes how to reduce risk (mitigation) if a disaster occurs. According to disaster expert Dr Rahma from Institut Teknologi Bandung (ITB), it is better to gather information about the tsunami disaster starting from the downstream (disaster-prone areas), not from the upstream (city), which assumes that information is obtained from

archives or books related to it. This statement illustrates that digging for disaster information should start from the conditions, situations, and culture of disaster-prone communities. Through the acquisition of community-based information, disaster management can be more targeted. A study proves that local wisdom can be a disaster early warning system. This is proven by Gadeng, Maryani, and Rohmat's research (2018), which stated that the local wisdom of smong is a tsunami early warning system implemented by the people of Simeulue. Early warnings are delivered through *manafi-nafi*, *mananga-nanga* (cradle songs to lull babies), and *nandong* (humming). Smong local wisdom is socialised through information boards of appeals and songs included in small and medium enterprises' products that are widely consumed by the public. This tradition effectively increases public knowledge about tsunami disaster mitigation (Gadeng et al., 2018).

As previously mentioned, the people of the Pangandaran Regency have local wisdom in dealing with disasters. Local wisdom is maintained in several indigenous groups. Demographically, the Pangandaran people live in coastal and mountainous areas, giving birth to local wisdom in dealing with disasters aligned with their place of residence. For example, coastal communities recognise the *Hajat Laut*, one of the cultural traditions in Indonesia, as a form of gratitude to God Almighty and a request for protection from various disasters that come from the sea, such as a tsunami. As for the people living in the mountains, they are familiar with the traditions of *Badud* called *Seni Badud* is a traditional activity that teaches how to care for and protect forests and agricultural land from disaster. Both traditions are communication strategies to create a literate community against disaster.

Based on the description above, the purpose of this study is to describe disaster mitigation literacy based on local wisdom. This study describes new things related to local wisdom as a medium for disseminating disaster mitigation information. Through local wisdom, the community is provided with various information containing social, moral, and spiritual values through verbal and non-verbal messages regarding steps to anticipate disasters. Through communication media, message delivery will be right on target. This shows that communication media is very important in disseminating information. Technology-based and traditional communication media will greatly affect the achievement of effective communication. The use of information technology in communicating has proven to be effective in disseminating information. This is proven by the results of Sukmono and Junaedi's research (2020), which states that in dealing with disasters in West Nusa Tenggara, the government, disaster mitigation and recovery agencies, journalists, and the public use internet chat-based digital technology to carry out effective coordination (Sukmono & Junaedi, 2020).

METHODOLOGY

The descriptive qualitative method was used in this study so that the results can explain in detail the phenomena and events that occur. This is in line with Astuti's opinion regarding qualitative descriptive methods: collecting data, analysing it, and then explaining the results of field observations. This method also describes a systematic, factual, and accurate description of the facts and characteristics of a particular research object (Astuti, 2018). Through a descriptive qualitative approach, it is hoped that the phenomenon of disaster mitigation literacy based on local wisdom in the Pangandaran Regency community can be explored objectively. Thus the results of the study can describe new things related to local wisdom as a medium for disseminating disaster mitigation information (Djalante et al., 2020; Pandya, 2006; Wahyuni & Haryadi, 2020; Yoshihama & Yunomae, 2018).

The object of this study is the nature and environment of the Pangandaran Regency community, which still applies local wisdom in their daily lives. Local wisdom in question is a variety of traditions that contain messages or information about disaster mitigation. Determination of informants is done by a purposive sampling system so that they become more focused according to the object of study. Purposive sampling was also used so that the data obtained remained relevant to the research setting. Some of the requirements as informants are the indigenous people of Pangandaran, who are directly involved in various local traditions and understand their moral and social messages. Based on several conditions set, the key informants are not only the religious leaders but also the traditional figures of the Pangandaran Regency area. Key informants consisted of 5 people, three men and one woman. The five people are H. Adwidi, Aminah, Usnadi, Abdurahman, and Edi Rusmiadi. The complete description of key informants can be seen in the table 1.

Table 1. Background of Informants

Code	Informant	Gender	Age	Background
1	H. Adwidi	Male	around 70	Head of the Badud Village, Margacinta Village, Cijulang District, Pangandaran Regency
2	Usnadi	Male	around 80	Head of Pananjung Village, Pangandaran district, Pangandaran Regency
3	Aminah	Female	around 60	Badud villager , Margacinta Village, Cijulang District, Pangandaran Regency
4	Abdurahman	Male	around 60	Head of Margacinta Village, Cijulang district, Pangandaran Regency
5	Edi Rusmiadi	Male	around 50	Head of Kompepar, Pangandaran Regency

Source: Data Processing by Author (2021)

Data collection was carried out in several ways, one of which was interviews with key informants. In-depth interviews were conducted on various local traditions with a moral and social message regarding disasters, especially from the mitigation point of view. Data from in-depth interviews show that various local traditions are full of moral, social, and even spiritual messages regarding the harmony of human life with nature. This data illustrates that local traditions contain various messages on protecting nature so that disasters do not occur. Observations were made to understand the implementation of local traditions so that researchers could further understand and experience firsthand various local traditions that contain disaster mitigation messages. Secondary data is obtained from various documents that can support primary data. Secondary data sources are in the form of textual and non-textual information containing disaster mitigation information.

Research data analysis was carried out systematically, starting from the reduction, presentation, and conclusions stages. Data reduction is made by selecting and focusing on important things to provide a clear picture and make it easier for researchers to collect further data. The data reduction step starts by categorising the data from interviews and observations into each problem according to the research objectives through a brief description. This step also includes removing unnecessary data and organising it to retrieve and verify it. The data is presented in the narrative text so that the things that happen in the research are easy to understand. Conclusions in qualitative research are temporary and will change during the data collection process. The conclusions are credible if the data obtained is valid and consistent when the researcher returns to the field.

RESULTS AND DISCUSSION

Building Disaster Literacy

Local wisdom is still a trusted source of information for people who strongly believe in ancestral customs. This can be seen in the lives of the Kampung Naga people, the Baduy community, the people of Kampung Pulo, the people of Kampung Kute, and others. Likewise, the people of the Pangandaran Regency still maintain local wisdom as a source of knowledge for community life. Tradition or knowledge acquired from generation to generation from the ancestors is implemented in life to preserve it so that the next generation can continue to carry it out. Local wisdom in the Pangandaran Regency community is still being carried out, such as Hajat Laut, Gondang, Ronggeng Gunung, and Seni Badud (mask parade) is a tradition that is carried out as an effort to prevent them from disaster.

The Baduy community holds the same beliefs and customs, making it a philosophy of life or *pikukuh* (rules) in their daily lives. This philosophy aims to prevent them from disasters such as earthquakes, landslides, floods, and fires by (1) regulating farming traditions; (2) sticking to *pikukuh* to use certain materials in building houses, bridges,

barns, and others; (3) dividing forest zones into three areas as a way to preserve ecosystems (Suparmini et al., 2014). Likewise with the people of Rote Ndao. Even though they have no certain knowledge regarding disasters, they hold local wisdom that will be applied in the event of an earthquake, namely shouting *AMI NAI IA O* continuously so that people will run from their homes to find a safe place (Thene, 2016).

There is also unique local wisdom in the form of Smong songs in Simeulue, an island in Aceh Province. Thanks to this song, the death toll from the tsunami in Simeulue in 2004 was relatively small, with only six people. In various countries, the death toll from the tsunami could reach thousands (Ardi, 2020). The Smong song, whose verse tells of a call to run to the hills if there is a sea wave, is still being sung to this day. Local wisdom holds a lot of knowledge and guidance on how to avoid disasters. Local wisdom must be preserved by conveying and teaching it to the next generation. People living in disaster-prone areas need to be literate about potential disasters and how to overcome them.

Disaster literacy in communities in disaster-prone areas needs to be developed continuously. The literacy development process regarding disaster mitigation needs to be done in synergy between the government and the community. The government can build literacy through related institutions, while the community via community leaders. Government agencies build disaster literacy in disaster-prone communities through local regulations, while community leaders should convey moral, social, and spiritual messages. In addition, there are means of delivering communication messages that are closely related to people's lives, namely local traditions and local wisdom. Local traditions can be a medium of communication and dissemination of information to the public. Thus, local traditions can become a communication strategy for building public awareness about disaster risk. Local traditions are a source of knowledge that is full of life values.

A disaster-literate community can be realised through the right communication strategy. Disaster literacy is "the capacity of individuals to read, understand and use the information to make an informed policy by following instructions in the context of disaster mitigation, preparedness, response, and recovery" (Brown et al., 2014; Muktaf, 2017). Based on the limitations of disaster literacy, a disaster literate community is a society that can determine the nature and extent of the information needed; can access information effectively and efficiently; can critically evaluate information and its source of origin; can combine information into something coherent into a database knowledge and its value system; able to use information effectively for specific purposes; able to understand various issues in the economic, legal, and social fields concerning the use of information, access, and use it legally and ethically (ACR, Association of College and Research Libraries).

A tradition of Seni Badud

As previously mentioned, local traditions or wisdom are a source of knowledge for the community that owns them. Through the procession of local traditions, the community is presented with various attractions and messages through the symbols displayed. Both the stages of implementing a tradition and its attributes have a message to be conveyed to the community. Therefore, all elements in local traditions are full of moral messages, both verbally and non-verbally. One of the community groups in Pangandaran Regency that still maintains local traditions is the Badud village community in Mekarsari Village, Cijulang District. This community group has a Seni Badud tradition. Seni Badud is a traditional art that is performed at harvest time. This art expresses gratitude to God Almighty for the abundance of crops.

The Badud art procession contains a communication message about disaster mitigation. Seni Badud processions are used to communicate messages to the public regarding farming procedures without damaging the natural environment. When clearing forests for agricultural land, one must pay attention to the balance of nature. Opening agricultural land without considering the balance of nature can lead to a natural disaster. Therefore, through the Seni Badud tradition, a message is conveyed that if the farming activity does not consider the preservation of nature, the harvest may end up failing or even triggering a natural disaster. This is depicted in the characters in Seni Badud. The characters in Seni Badud consist of the figure of a grandmother, grandfather, tiger, monkey, and *bebeguan* (wild boar). These figures symbolise the balance of nature. If farmers carelessly clear forests, animals will damage agricultural land. Monkeys and pigs symbolise the destruction of agricultural land, while the tiger is the forest protector. The message in Seni Badud's characters is a non-verbal communication message. Non-verbal in this context are human actions that are intentionally sent and interpreted according to their purpose and have the potential for feedback from the recipient (Kusumawati, 2016).

In addition to non-verbal communication messages, there are also verbal communication messages in the form of prayers and poetry that are delivered during the Seni Badud procession. Communication messages in prayer and poetry are full of moral, social, and spiritual messages. This is conveyed as a *piwuruk* to the people who live their lives in this world. Life in this world is only temporary; therefore, living life must be in harmony and balance (*Didunnya ukur ngumbara, peupeujeuh sing repeh rapih*) (Awidi, interview, 24 August 2021). The following is an example of a poem delivered by *pupuhu* at the opening of Seni Badud (Aminah, interview, 24 August 2021).

Pepeling jalan pituduh
(Advice and guidance)
Nuduhkeun diri sing lilir
(shows that one has to wake up)

Hahalang lugay di sugular
(obstacle stop at sugular)

Mun hayang salamet diri
(If you want to be safe)
Di dunya ukur ngumbara
(in the world just wandering)
Peupeujeuh sing repeh rapih
(proverb should be calm and peaceful)

Through the moral message in the Badud tradition, the community is made aware of the risks of forest destruction. Thus, they become very careful in cultivating the forest. Indirectly, the message in Seni Badud can build public awareness in tackling disaster risk. Thus, the Badud tradition acts as a communication medium for disaster risk. The main purpose of risk communication is to provide meaningful, relevant, and accurate information in clear and easy-to-understand terms to a specific audience (Astheria, 2016). Delivering relevant and accurate messages is expected to build community preparedness in reducing disaster risk.

At the beginning of its development, Seni Badud was only instrumental. In Sundanese culture, it is called Waditra. Waditra is a musical instrument commonly used in several types of traditional Sundanese music. At this time, Seni Badud has changed, especially with the addition of its attractions and Waditra. The added attraction is the role that features a grandmother, grandfather, and several animal figures. Animal figures displayed in Badud attractions are tigers, monkeys, and wild boars (*bebeguan*) (Awidi, interview, 24 August 2021). The figures of grandparents depict farmers who own agricultural land. Generally, rice farming lands in the Sundanese context include paddy and *huma* fields. *Huma* is agricultural land, not paddy fields, which are usually planted with seasonal crops, and their use is only for one or two seasons before being abandoned when they are no longer fertile.

The role of animal figures depicts pests and protectors of agricultural land. The animal figures of monkeys and pigs represent pests, while tigers are protectors. Tiger is generally perceived as the king of the jungle. Therefore, the figure of a tiger is meant to drive away monkeys and pigs from the farm. These figures of grandfathers, grandmothers, tigers, monkeys, and pigs symbolise the process of rice farming activities, especially in *huma* fields. Seni Badud depicts the farming process and various efforts to protect agricultural land from disturbances or pests.

Waditra has additions, musical instruments, and movements in the Seni Badud procession. Seni Badud currently has forward, backward, left, and right movements. There is also one specific movement that forms the number eight symbol. These movements are combined with the movement of the rice carriers with the *rengkong* tool. *Rengkong* is

a tool for carrying rice. In the past, before there was a means of transportation, the process of transferring the rice harvest to the barn (*leuit*) was carried out using a *rengkong pikul*. *Rengkong* consists of *gombong* bamboo, palm fibre rope, kerosene, and one stalk of rice. *Gombong* bamboo serves as a pole, while the palm fibre rope functions as a binder of rice that is hung on a pole.

The implementation of the Seni Badud procession is led by a *pupuhu* or an elder whose job is to invite the spirits of the ancestors (*karuhun*) to enter the bodies (*awak*) of the Badud players and return them to their place of origin after the procession ends. The goal is for the players to be in a trance (*mendem*) during the Seni Badud process. Thus, the Badud art *pupuhu* must have the knowledge and ability to invite and return the spirits of the ancestors (*karuhun*).

Some Seni Badud participants wore masks (*kedok*), and some used makeup directly on their faces. The use of masks is an effort to strengthen the character of the role it displays. The clothes used include *kampret* shirts, *pangsi* pants, and headgear using *iket* and *bendo*. The colour of the clothes is dominated by dark colours, namely black and *bungur*. The colours and types of clothing used are typical folk clothing, which illustrates that this art was born from the people. The types and colours of the Seni Badud players' clothes depict the daily life of the farming community. Therefore, the clothes of Seni Badud players are dominated by dark colours, namely black and *bungur*. This colour depicts the life of the farmers who struggle with the soil daily.

The clothes of the Seni Badud players can be described as follows; the pig wears a long black blouse. The black colour is used to match the actual pig (*begu*). The pig symbolises ploughing activity and agricultural pests, adapted from its nature, who like to dig the soil and destroy agricultural land. The tiger wears a long yellow-black blouse. The yellow and black colour corresponds to the actual colour of the tiger. This colour symbolises strength, courage, and toughness. The monkey wears a long black blouse, which symbolises diligence or tenacity. Diligent in this context describes farmers who are diligent in farming.

The figure of an old woman dressed in a *kabaya*, cloth (*samping*), a headscarf, flip-flops, and carrying a tray (*nyiru*). The figures of an old man are dressed in black *kampret*, black *pangsi* pants, sarongs, and flip-flops. The Waditra *angklung* and *dodog* holders are dressed in long t-shirts, black pantyhose, and black *iket*. The *pupuhu* or elders are dressed in black *pangsi*, *kampret*, and *iket*. The figure of an old woman and man wear masks to strengthen their characters.

Tradisi Hajat Laut

The Seni Badud tradition is owned by the people of Pangandaran Regency, who live in the mountains. Meanwhile, the people of the Pangandaran Regency on the coast have the Hajat Laut tradition. The Hajat Laut is a local tradition of fishing communities along Java's north and south coasts. This tradition is full of myths about the ruler of the

sea. However, in line with the development of coastal communities, the Hajat Laut tradition is a form of gratitude to God Almighty, who has given abundant sustenance from the ocean. This abundance of sustenance is in the form of abundant fish caught by fishers, beautiful beaches, an interesting natural atmosphere, and others. Pangandaran coastal communities as coastal communities and fishers can not be separated from this tradition. The Hajat Laut is part of the life and beliefs of the Pangandaran beach community. *"Respect for the sea is obligatory, grateful for the results given by the sea, grateful for the giver of blessings from the sea because all of that is the sustenance that comes from the sea"* (Unsadi, interview, 1 August 2021)

Hajat Laut tradition must have a functional value and benefit for humans. *"Many fishermen give offering to the sea. Some provide food, for example, lamb, beef, head of livestock, or others."* Whatever is given to the sea through the *Hajat Laut* tradition is still a form of gratitude to God. The traditional practice of Hajat Laut must pay attention to the physical and spiritual aspects of giving offerings to the sea. The physical aspect is in the form of giving various goods from the Pangandaran community to the Hajat Laut tradition, while the spiritual aspect includes the willingness of the heart to give offerings to the sea. These conditions must be met, and if they do not, there will be consequences for the individuals concerned. *"Some play with the board (of Hajat Laut), and when they come home, they cannot sleep, possibly because they are tinkering with the board. If they want to be able to sleep normally again, they must be thrown into the sea"*(Unsadi, interview, 1 August 2021)

Apart from being a tradition to show gratitude to the sea, Hajat Laut is also a practice to prevent disasters that can happen to the Pangandaran community at any time. The disaster can be experienced by a specific individual, such as those who previously could not sleep because they did not meet the requirements of the Hajat Laut tradition. Disasters can also befall some or all of the Pangandaran coastal community. Gratitude and efforts to prevent the disaster are addressed to the Queen Mother (Ibu Ratu) or interpreted as Nyi Roro Kidul, whom some Indonesian people trust as the ruler of the Southern Seas (Laut Selatan). *"One of the purposes of doing Hajat Laut is to prevent disaster or calamity, get rid of bad luck, and hope that the Ibu Ratu will not ask for sacrifices from our children and grandchildren"* (Unsadi, interview, 1 August 2021).

The Pangandaran people think that the Ibu Ratu is one of God's messengers to guard the Southern Sea, but blessings are still believed to come from God. Through the Hajat Laut ritual, people are grateful for their blessings from the sea. So, this tradition is carried out as an expression of gratitude to God and is addressed to the ruler of the Southern Seas, Ibu Ratu. The Queen Mother or Ibu Ratu is considered a figure to be respected. The Pangandaran community obliges anyone who comes to Pangandaran beach to respect Ibu Ratu by greeting and asking for permission when visiting the beach. If these things are not done, the

people of Pangandaran believe that Ibu Ratu will be angry and bring disaster. *"Asking God through the intermediary of Ibu Ratu is not a sinful act because we remain obedient to God, just like asking Prophet Sulaiman, Prophet Noah, and Prophet Idris, we remain faithful to God. Ibu Ratu does not like it when there are people who do not have permission in her territory. Many people who come to Pangandaran do not say hello or goodbye to the guards here. If they do not do that, it can bring calamity"* (Unsadi, interview, 1 August 2021)

Disaster literacy in communities living in disaster-prone areas needs to be continuously developed and requires various parties' synergy, including between the government and the community. For example, the government could provide early information about disasters to the public, either in writing or other formats. Thus, the level of community sensitivity to disasters can be formed (Susilo, Indrasari, Prayudha, et al., 2020). One of the efforts to develop disaster literacy in the Pangandaran community is through the local tradition of seni badud and hajat laut. Local traditions can be a means of communication or dissemination of information to the community. In addition, local traditions that have many life values and knowledge can also be a communication strategy in building public awareness about disaster risk.

As previously mentioned, local traditions are a source of knowledge for the community. Through the procession of local traditions, the community is presented with various attractions and messages through symbols. The stages of implementing a tradition and the attributes have a message to be conveyed to the community. Therefore, all elements in the local tradition are full of moral messages, both verbally and non-verbally.

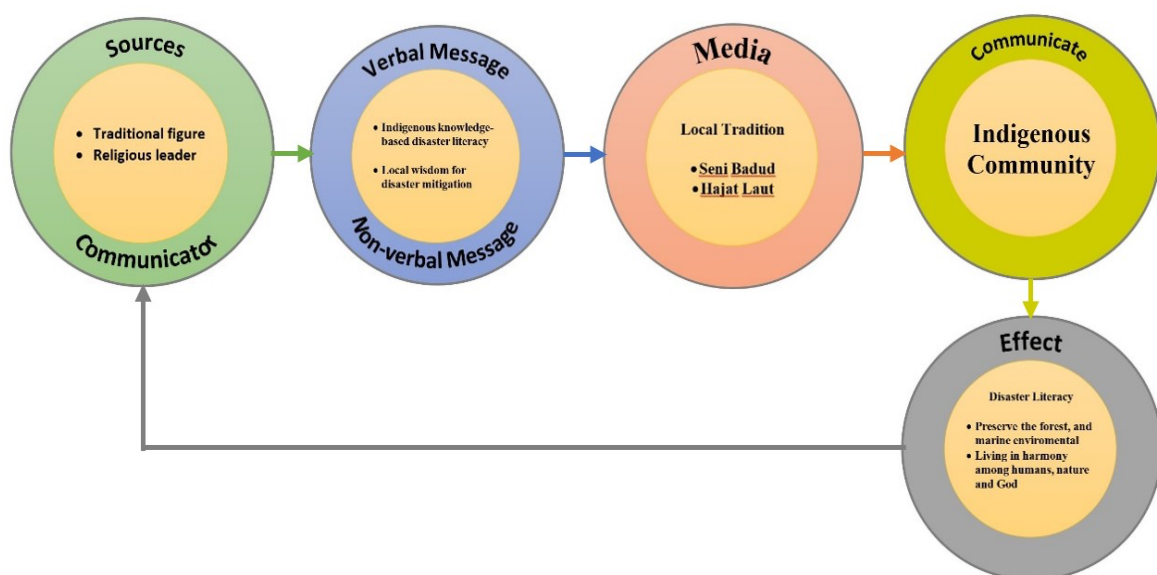


Figure 1. Local traditions as communication media in building disaster literacy
 Source: Research data (2021)

Building disaster literacy through local traditions, namely seni badud and hajat laut, is the right communication strategy. These two traditions

contain moral, social, and spiritual messages about building harmonious life between humans, humans and nature, and humans and God. By following these two traditions, communities become better at understanding the information and using it for disaster mitigation, preparedness, response, and recovery. Local traditions as communication media in building disaster literacy can be seen in Figure 1.

CONCLUSION

Building capacity and increasing public awareness in dealing with disasters is an effort to reduce disaster risk. Various efforts have been made to improve this capability by the government and the community. Indigenous community groups also convey disaster mitigation communication messages through various traditions handed down from their ancestors. Some traditions contain moral, social, and spiritual messages regarding disaster mitigation. For people who live in the highlands and make a living from farming, there is a Seni Badut tradition that describes the protection of forests and agricultural land. As for the coastal community, there is the Hajat Laut tradition. The Hajat Laut tradition, apart from being a tradition to show gratitude to God Almighty, is also a form of practice to prevent disasters that might happen to the Pangandaran community at any time. Thus, the local wisdom of the Pangandaran community can be a medium and the right communication strategy for building disaster literacy. This is proven that in the procession, each local tradition conveys moral, social, and spiritual messages about building a harmonious life between humans, nature, and their God. In addition, with the community's involvement in every stage of the local tradition procession, they can build their trust in the communication message conveyed through that procession.

Based on the study's results, it is known that the seni badud and hajat laut traditions become a medium of communication for the local community in building disaster literacy. This is because the messengers in these two traditions are people who are trusted by the community. The messengers or communicators are religious and traditional leaders. The messages are moral, social, and spiritual messages can build harmony between humans, nature, and God. This message is conveyed verbally and non-verbally. So who speaks about what is very important to persuade others? A communicator who is trusted and considered to have credibility will be obeyed by his words. In addition, local wisdom/indigenous knowledge can be the right medium to build disaster literacy for local communities.

REFERENCES

- Ardi, R. (2020). *Kearifan Lokal Budaya Indonesia dalam Mitigasi Bencana*. Kompasiana.Com.
<https://www.kompasiana.com/riardi/5ed0c3e1d541df798e288393/kearifan-lokal-budaya-indonesia-dalam-mitigasi-bencana?page=all#section3>

- Asteria, D. (2016). Optimalisasi komunikasi bencana di media massa sebagai pendukung manajemen bencana. *Jurnal Komunikasi Ikatan Sarjana Komunikasi Indonesia*, 1(1), 1–11.
- Astuti, P. (2018). Penggunaan Metode Black Box Testing (Boundary Value Analysis) Pada Sistem Akademik (SMA/SMK). *Faktor Exacta*, 11(2), 186–192. <https://doi.org/http://dx.doi.org/10.30998/faktorexacta.v11i2.2510>
- Azwar, R. Z., Sunarto, Rakhmad, W. N., & Widowati, S. (2014). Hubungan Tingkat Ketidakpastian dan Konsep Diri terhadap Tingkat Kecemasan Komunikasi Pria pada Tahap Perkenalan dengan Wanita. *Interaksi Online*, 2(4).
- Badri, M. (2018). Sistem Komunikasi dalam Pembangunan Sosial Paca Bencana. *Jurnal RISALAH*, 29(1), 66–80. <https://doi.org/http://dx.doi.org/10.24014/jdr.v29i1.6574>
- Blanco, D. V. (2015). Disaster Governance in the Philippines: Issues, Lessons Learned, and Future Directions in the Post-Yolanda Super Typhoon Aftermath. *International Journal of Public Administration*. <https://doi.org/10.1080/01900692.2014.979198>
- Brown, L. M., Haun, J. N., & Peterson, L. (2014). A Proposed Disaster Literacy Model. *Disaster Medicine and Public Health Preparedness*, 8(3), 267–275. <https://doi.org/10.1017/dmp.2014.43>
- Darmastuti, R., Purnomo, J. T., Utami, B. S., & Yulia, H. (2019). Literasi Media Berbasis Kearifan Lokal pada Masyarakat Bali. *Jurnal Studi Komunikasi*, 3(3), 402–423. <https://doi.org/https://doi.org/10.25139/jsk.v3i3.1538>
- de Leon, M. v, Susilo, D., Putranto, T. D., Hartati, F. K., & Santos, R. R. T. (2021). Managing the uncertainty during COVID-19 pandemic: Communicating disaster and food industry sustainability. In Y. A.C., S. D.F., M. M.T., & R. R. (Eds.), *2nd International Conference Earth Science and Energy, ICESE 2020* (Vol. 819, Issue 1). IOP Publishing Ltd. <https://doi.org/10.1088/1755-1315/819/1/012039>
- Djalante, R., Lassa, J., Setiamarga, D., Mahfud, C., Sudjatma, A., Indrawan, M., Haryanto, B., Sinapoy, M., Rafliana, I., Djalante, S., Gunawan, L., Anindito, R., Warsilah, H., & Surtiari, I. (2020). Review And Analysis of Current Responses to COVID-19 in Indonesia: Period of January to March 2020. *Progress in Disaster Science*, 6. <https://doi.org/https://doi.org/10.1016/j.pdisas.2020.100091>
- Gadeng, A. N., Maryani, E., & Rohmat, D. (2018). The Value of Local Wisdom Smong in Tsunami Disaster Mitigation in Simeulue Regency, Aceh Province. *IOP Conference Series: Earth and Environmental Science*, 145(012041), 1–6. <https://doi.org/10.1088/1755-1315/145/1/012041>
- Hikichi, H., Aida, J., Matsuyama, Y., Tsuboya, T., Kondo, K., & Kawachi, I. (2018). Community-level social capital and cognitive decline after a natural disaster: A natural experiment from the 2011 Great East Japan Earthquake and Tsunami. *Social Science and Medicine*. <https://doi.org/10.1016/j.socscimed.2018.09.057>
- Kusumawati, T. I. (2016). Komunikasi Verbal dan Nonverbal. *AL-IRSYAD*, 6(2), 83–98. <https://doi.org/http://dx.doi.org/10.30829/al-irsyad.v6i2.6618>
- Maarif, S. (2019). *Pangandaran Daerah Rawan Bencana, Tsunami Jadi Ancaman Paling Berbahaya*. <https://news.okezone.com/read/2019/01/04/525/1999911/pangandaran-daerah-rawan-bencana-tsunami-jadi-ancaman-paling-berbahaya>
- Muktaf, Z. M. (2017). *Studi Literasi Bencana dalam Perspektif Ilmu Komunikasi*.
- Mysiak, J., Surminski, S., Thieken, A., Mechler, R., & Aerts, J. (2015). Brief Communication: Sendai Framework for Disaster Risk Reduction – success or warning sign for Paris? *Natural Hazards and Earth System Sciences Discussions*, 3(6), 3955–3966. <https://doi.org/10.5194/nhessd-3-3955-2015>
- Pandya, C. (2006). Private authority and disaster relief: The cases of post-tsunami Aceh and Nias. *Critical Asian Studies*. <https://doi.org/10.1080/14672710600671277>
- Permana, R. C. E., Nasution, I. P., & Gunawijaya, J. (2011). Kearifan Lokal tentang Mitigasi Bencana pada Masyarakat Baduy. *Makara Human Behavior Studies in Asia*, 15(1), 67–76. <https://doi.org/https://doi.org/10.7454/mssh.v15i1.954>

- Keputusan Presiden Republik Indonesia Nomor 32 Tahun 1990 tentang Pengelolaan Kawasan Lindung, 1 (1990).
- Putri, C. E., & Hamzah, R. E. (2021). Aplikasi Pedulilindungi Mitigasi Bencana Covid-19 Di Indonesia. *Jurnal Pustaka Komunikasi*, 4(1), 66–78. <https://doi.org/https://doi.org/10.32509/pustakom.v4i1.1321>
- Saito, H., & Matsuyama, H. (2012). Catastrophic landslide disasters triggered by record-breaking rainfall in Japan: Their accurate detection with Normalized Soil Water Index in the Kii Peninsula for the year 2011. *Sola*, 8, 81–84.
- Sjoraida, D. F., & Anwar, R. K. (2018). The effectiveness of risk communications as a disaster risk reduction strategy in Taragong Garut. *AIP Conference Proceedings 1987*, 1–8. <https://doi.org/https://doi.org/10.1063/1.5047326>
- Suherman, A. (2018). Strategi Komunikasi Bencana pada Masyarakat Kabupaten Buton Selatan. *MEDIALOG: Journal Kajian Komunikasi*, 1(2), 10–18. <https://doi.org/https://doi.org/10.35326/medialog.v1i2.272>
- Sukmono, F. G., & Junaedi, F. (2020). Towards industry 5.0 in disaster mitigation in Lombok island, Indonesia. *Jurnal Studi Komunikasi*, 4(3), 553–564. <https://doi.org/https://doi.org/10.25139/jsk.v4i3.2424>
- Suparmini, Setyawati, S., & Sumunar, D. R. S. (2014). Mitigasi Bencana Berbasis Kearifan Lokal Masyarakat Baduy. *Jurnal Penelitian Humaniora*, 19(1), 47–64. <https://doi.org/10.21831/hum.v19i1.3511>
- Suparya, Y. (2019). *Identifikasi Kesiapsiagaan Masyarakat Di Kawasan Rawan Bencana Kabupaten Pangandaran Terhadap Bencana Gempa Bumi Dan Tsunami*. Universitas Pasundan.
- Susilo, D. (2022). *Teori Komunikasi: Kajian Interdisipliner dalam Kajian Publik dan Kajian Media*. Indomedia Pustaka.
- Susilo, D., Indrasari, M., Harliantara, Iristian, J., & Yunus, E. (2020). Managing uncertainty during disaster: Case on typhoon hagibis japan. *IOP Conference Series: Earth and Environmental Science*. <https://doi.org/10.1088/1755-1315/519/1/012015>
- Susilo, D., Indrasari, M., Prayudha, H. H., Iristian, J., & Yunus, E. (2020). Managing Uncertainty During Disaster: Case on Typhoon Hagibis Japan. *IOP Conference Series Earth and Environmental Science*, 1–7. <https://doi.org/10.1088/1755-1315/519/1/012015>
- Thene, J. (2016). Mitigasi bencana gempa bumi berbasis kearifan lokal masyarakat rote Kabupaten Rote Ndao Provinsi Nusa Tenggara Timur. *Jurnal Teori Dan Praksis Pembelajaran IPS*, 1(2), 102–106. <https://doi.org/http://dx.doi.org/10.17977/um022v1i22016p102>
- Wahyuni, H. I., & Haryadi, F. T. (2020). Haze Disaster Discourses in Local Indonesian Media: Examining Niklas Luhmann's Perspective on Ecological Communication. *Asia-Pacific Social Science Review*, 20(1).
- Yamakawa, A. (2019). KDDI、千葉県全域で災害時無償Wi-Fi「00000JAPAN」を開放--キャリア問わず利用可能 (KDDI opens free Wi-Fi "00000JAPAN" in case of disaster throughout Chiba Prefecture). CNet. <https://japan.cnet.com/article/35142391/>
- Yoshihama, M., & Yunomae, T. (2018). Participatory investigation of the Great East Japan Disaster: PhotoVoice from women affected by the calamity. In *Social Work (United States)*. <https://doi.org/10.1093/sw/swy018>