

# Local Wisdom in Vernacular Communities: Natural Disaster Mitigation Values in the Nyi Roro Kidul Folklore of Yogyakarta, Indonesia

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## Abstract

Natural disasters pose a serious threat to human life, and understanding mitigation is key to reducing their negative impact. This research explores the role of folklore as a means of instilling an understanding of disaster mitigation. It examines how values in folklore can shape the attitudes and actions of the community regarding disaster mitigation. In reality, the significant role of folklore in instilling an understanding of disaster mitigation is not well understood or practiced by the community.

The study is conducted in the coastal areas of Parangtritis and Parangkusumo, Kretek District, Bantul Regency, Yogyakarta. The community there believe that the folklore of Nyi Roro Kidul, harmonizes with Nature through a series of traditional rituals and beliefs, including offering ceremonies. This research this folk lore.

It uses a qualitative approach with a focus on the narrative analysis of the Nyi Roro Kidul folklore related to natural disasters. Data collection methods involve in-depth interviews with informants who have local knowledge of folklore related to natural disasters.

Findings show that folklore plays a significant role in conveying the values, experiences, and knowledge of the community related to natural disasters. The Nyi Roro Kidul folklore provides a deeper understanding of the relationship between people and Nature, warnings about early signs of disasters, and learning from past experiences. It concludes that folklore can be used to make disaster mitigation campaigns more effective because folklore has emotional and cultural appeal that can motivate behavioral change. These findings contribute to the development of more culturally relevant disaster mitigation communication strategies. Stakeholders and disaster mitigation practitioners can use the heritage of folklore to educate and mobilize the community in natural disaster mitigation efforts.

**Keywords:** Folklore, Local wisdom, Disasters, Mitigation, Indonesia.

## Introduction

Natural disasters present a global challenge that requires communities to continually enhance their understanding and preparedness for potential risks. The destructive and often life-threatening impacts make disaster mitigation a primary focus in efforts to safeguard the safety and well-being of communities (Pelling, 2001; Hossain, et al., 2021). A profound understanding of disaster risks and appropriate mitigation actions is crucial to minimizing losses and protecting affected communities (Esterwood & Saeed, 2020). In this endeavor, cultural and traditional aspects of communities, particularly in the form of folklore have a significant influence in instilling an understanding of disaster mitigation (Hidalgo & Baez, 2019).

Folklore holds many mysteries behind their emergence. These mysteries can include stories of significant events in the past that have prompted the communities to respond to such events (Dundes, 1965). The responses that emerge can take the form of science fiction stories (Shah et al., 2018). Indeed, natural events such as natural disasters have often become the foundations of folklore in society.

Folklore arises as a response and means for communities to adapt to natural disaster events. One form of adaptation that emerges is the inclusion of geological or earthly elements in folklore to provide future generations with insights into facing natural disasters (Dafalla, 2015). This adaptation is manifested in the form of commands and prohibitions through stories that develop in communities with high disaster potential. These stories have been preserved as myths or legends and continue to be believed in some areas to this day. Thus, folklore plays a role as a means for past generations to adapt to life and be in harmony with Nature (Brunvand, 1968).

In addition to scientific knowledge and modern technology, local culture and traditions also play a crucial role in shaping the perceptions and responses of communities to natural disasters. Folklore, as an inseparable part of the cultural heritage of a society carries values, experiences, and local wisdom that can be valuable resources in disaster mitigation efforts (Appleby-Arnold, et al., 2018).

Folklore is not just entertainment; it is also a reflection of life and the community's knowledge of the world around them (Gadeng, et al., 2018). In the context of disaster mitigation, folklore can be an invaluable resource for embracing and educating the community. In fact, folklore, as an expression of local wisdom, often reflects the relationship between people and Nature and provides insights into how ancestors have dealt with natural threats. For example, myths and folklore contain clues about natural signs that can be interpreted as warnings of disasters. Therefore, an understanding of folklore can serve as a foundation for more contextual and relevant disaster mitigation strategies (Harris, et al., 2019).

Folklore often reflects the relationship between people and Nature and how a local community views natural phenomena that may pose risks. In these stories, there is accumulated knowledge passed down from generation to generation about early signs of disasters, patterns of extreme weather, and steps that can be taken to protect oneself and the community (Maskrey, 1989).

The importance of research related to folklore and disaster mitigation lies in the potential to uncover local wisdom contained in these narratives. They can thus serve as an effective medium for disseminating information about disaster risks and mitigation strategies to the community, especially in areas still heavily reliant on oral traditions.

In this context, this research explores the role of folklore in instilling an understanding of natural disaster mitigation. Its aim is to unravel the values, norms, and local knowledge that may support mitigation efforts.

Its objectives are:

1. To provide deeper insights into folklore in order to empower the communities to face disaster challenges with better knowledge and higher readiness.
2. To identify how to integrate them into educational programs and community communication.

It is based on the premise that through a better understanding of the relationship between folklore and disaster mitigation, more holistic and culturally-based approaches can be designed to address natural disaster challenges. This leverages not only cultural heritage but also enhances

community participation in mitigation efforts, creating sustainable solutions that align with the local contexts.

## **Theoretical Framework**

### **Folklore**

Folklore is oral literature that emerges and develops within a community, passed down through generations with various functions. They appear as cultural phenomena with universal characteristics in society. Oral literature generally manifests as a response and product of thought within a social system (Kasim & Pardosi, 2000). It is one form of literary work, categorized into oral and written literature. Oral literature is defined as literary works spread orally among people (Brunvand, 1968).

Generally, society recognizes folklore as part of social life and a cultural component. It is often accompanied by the emergence of traditions, rituals, ceremonies, or other activities involving the community of storytellers. The occurrence of communal activities becomes a symbol of the existence of folklore in the midst of the community. The concept is "as the internal relationship through which constituents of a whole are organized" (Propp, 1975).

Every tradition has a story about its origin in the form of folklore. They take various forms such as myths, fairy tales, and legends. In fact, they serve various general functions, such as (1) a means of preaching, (2) an educational tool, (3) a means of remembering history/past events, (4) a tool for social control, (5) a means of shaping social concern in the community, and (6) a form of entertainment (Dundes, 1965).

Folklore is a cultural heritage passed down by ancestors as a means of learning experiences and the meaning of life (Olajide & Billy, 2010). As cultural heritage, they are used as tools to convey moral messages which can be used for teaching life lessons (Zolotova, 2017).

Initially, folklore has been part of folk literature, with stories being passed down to both the young and the old. In the past, Royal families would listen to tales told by renowned storytellers as entertainment or education for Royal children. As Huck and Kiefer (2010) point out, with the development of knowledge, these stories have transformed into children's poems, and they continue to be passed down by caregivers or parents with the aim of delighting them.

Propp (1984) says that there are three types of relationships between folklore and real life. First, folklore, like other arts, originates from reality. Even the most fantastic images are based on reality. Second, regardless of the creator's intentions, folklore reflects real life. The form and content of this reflection vary according to the period and genre. Third, a folk artist sets the goal of representing reality. Such a goal characterizes the songs of history and folk tales. Often, folklore involve lessons about disasters and mitigation.

### **Disaster Mitigation**

Disaster mitigation is a series of efforts to reduce the risk and impact of disasters, both through physical capacity building and awareness-raising in facing natural disaster threats (Maskrey, 1989). Mitigation consists of structural and non-structural measures. Structural mitigation involves minimizing disasters through the construction of physical infrastructure using technology. Examples of structural mitigation include building dams to prevent floods, creating detectors for volcanic activity, establishing early warning systems to predict tsunamis, and constructing earthquake-resistant structures. Non-structural mitigation involves reducing the risk and impact of disasters through regulations, policies, and other documents governing community preparedness for disasters (Christopher et al., 2001; Newport & Jawahar, 2001; Wahyuningtyas et al., 2019).

Kastolani & Mainaki (2018) point out that responsive attitudes and disaster mitigation are essential for every segment of the society as part of the education for all the layers on disaster preparedness. Mitigation includes protection that can be achieved by preparing oneself and other essentials before a disaster occurs, analyzing and measuring the potential hazards of disasters, and prevention and disaster response, including rescue, rehabilitation, counseling, and relocation (El-Masri & Tipple, 2002; Oe & Kawakami, 2021; Weichselgartner, 2001).

Efforts in disaster mitigation through local wisdom take the form of a strong social system and bond within a group, folklore, and engineering of natural physical conditions, mythology, and belief systems, or in the form of songs (Arendt, 1961; Dikul & Kiting, 2019). These forms are generally passed down and disseminated intergenerationally (Finnegan, 1991). Local wisdom and the culture embraced by the community influence a community's perspective on fellow beings, the environment, and disaster mitigation.

Therefore, in relation to disaster mitigation, it is important to pay attention to these aspects to support the effectiveness of prevention programs, emergency response attitudes, or post-disaster efforts (Torani et al., 2019). However, local wisdom and cultural aspects are not infrequently viewed as something static, whereas if understood more deeply, both are dynamic (Rao, 2018; Trihadmono et al., 2018). Local wisdom and culture are not single variables in disaster mitigation efforts. The emergence and role of technology and the existence of policies are other variables that are equally important in understanding and implementing disaster mitigation (Rahiem & Rahim, 2020; Rai & Khawas, 2020).

### Literature Review

Research on folklore has been carried out using various methods and connecting it with other fields of science in interdisciplinary research. This allows new findings to emerge in folklore studies. For example, Sutopo (2015), explores how folklore in certain societies can provide insights and knowledge related to disaster mitigation. He investigates how traditional narrative values are reflected in folklore and to what extent these stories can be effective tools in enhancing community awareness of mitigation. Similarly, Utomo (2016) evaluates the impact of folklore in the context of community-based disaster planning. Through interviews and narrative analysis, he has identified how folklore can be an effective tool in increasing community participation in disaster mitigation efforts.

According to Garcia (2019), folklore serves as a communication tool, allowing communities to feel engaged in the disaster mitigation process and play an active role in protecting themselves and their environment. Folklore often reflects the values and norms of a society's culture. In the context of disaster mitigation, understanding how these stories relate to traditional practices and cultural values can help design approaches that are appropriate and acceptable to the local community (Brown, 2017).

Smith (2017) says that folklore can also be used as a communication tool in campaigns for environmental change adaptation in local communities. Moreover, folklore serves as a means of conveying understanding to the community through narratives about preparing for natural disasters (Wong, 2020; Chen, 2016; Kim, 2018). These findings show that folklore is a significant component of everyday life of the communities with the power to influence their understanding about the world around them and provide guidelines and lessons to deal with difficult situations.

### Research Methods

This study employs a qualitative research approach in order to obtain in-depth and naturalistic insights (Cresswell, 2009). An ethnographic strategy is utilized with an emic approach, meaning the analysis of Nyi Roro Kidul folklore is based on the perspective of the storytellers and believers. Understanding through an emic perspective enriches the researcher's insights into the existence of the oral tradition under investigation (Endraswara, 2013). This study is descriptive qualitative research detailing and illustrating the essential elements in the oral literature of Nyi Roro Kidul.

Data in this research are obtained through the following techniques:

#### a. Interviews

Interviews were conducted using a structured technique, where the researcher prepared a list of questions to obtain the data (Ryan and Bernard, 2012; Miles and Huberman, 2014). The main instruments included interview guidelines and audio recording equipment. Data were obtained from in-depth interviews with informants consisting of two historians from Bantul Regency, one Indonesian Red Cross (PMI) officer, a scientist, and a Javanese cultural expert from Kretek

Subdistrict, also serving as a custodian. In-depth interviews were conducted with practitioners who have direct full immersion in the local culture (Barnes et al., 2013; Wiles, 2020). The research was carried out in Parangtritis and Parangkusumo, in the Kretek Subdistrict, Bantul Regency, Special Region of Yogyakarta.

#### **b. Document Analysis**

Data were also obtained through literature surveys, specifically documents on the history and geological events of the past. Documents included records containing the history of Parangtritis and Parangkusumo, as well as documents on natural disasters during the same period as the historical duration. Historical records were obtained from the Yogyakarta City library.

#### **c. Field Observation**

Observations, note-taking, and documentation of locations were conducted to gain a clearer picture of the site conditions. Direct observation aimed to obtain an overview of the current conditions of the main research locations, namely Parangtritis and Parangkusumo. Note-taking was performed to record key points in an effort to gather information about the research object. Documentation was carried out to provide a realistic depiction of the conditions at the location.

The analysis technique used is interactive. Activities in qualitative data analysis are conducted interactively and continuously until the final stage so that the data becomes saturated. The level of data saturation is indicated when no new data or information is found (Spradley, 2007; Creswell, 2009; Yin, 2009). Data analysis is conducted inductively. Interview transcripts are analyzed to identify themes, motifs, and narrative structures that emerge in the oral literature. Thematic and narrative approaches are used to gain a deep understanding of the meaning and context of folklore. This technique is chosen to obtain the accuracy of the folklore versions obtained for integration with historical document data (Seliger and Shohamy, 2012).

Data validity is ensured through triangulation of data and sources (Yin, 2009; Fusch, Fusch, and Ness, 2018). Source triangulation is done by comparing interview results with several informants. Interviewed folklore versions may differ in some parts from historical documents about folklore in Yogyakarta, thus requiring a process of integration between interview results and historical documents (Yin, 2009).

## **Findings and the Discussion**

### **1. Disaster Mitigation in the Folklore of Nyi Roro Kidul**

The tale of Nyi Roro Kidul is well-known among the people of Yogyakarta and the majority of Indonesians. The story is set on the southern coast of Java Island. The legend of Nyi Roro Kidul has evolved and taken various forms in different regions in the southern part of Java, ranging from Pelabuhan Ratu in West Java to Parangkusumo and Parangtritis in Yogyakarta.

Data in this research were obtained through interviews with two historians, BAW and MIB, from Bantul Regency, identified as BH, a member of the Indonesian Red Cross (PMI), BP, a scholar from Gadjah Mada University, and WSJ, a Javanese cultural expert from the Kretek Subdistrict and also a custodian. The interviews were conducted in September 2023. Subsequently, the research findings were correlated with historical documents in the form of "Tembang" and "Serat" or records in the form of poems. These "Serat" and "Tembang" were extracted from historical books such as "Babad Tanah Jawi" and "Babad Ing Sangkala." Additionally, direct field observations were carried out to understand the real situation on the ground, conducted in September 2023.

The research findings indicate that Nyi Roro Kidul in Yogyakarta is believed to be a figure with a realm of influence covering the entire southern coast of Yogyakarta, specifically in Parangkusumo and Parangtritis. The local communities, particularly those along the coast and within the palace (keraton) area still perform various rituals and traditions related to Nyi Roro Kidul. Myths surrounding the presence of Nyi Roro Kidul continue to color the lives of the people and serve as advice for newcomers or tourists visiting Yogyakarta, especially at Parangkusumo and Parangtritis Beaches. These myths are prevalent across the entire southern coast of Yogyakarta in the regions of Bantul, Kulon Progo, and Gunung Kidul.

This statement is supported by the opinion of one of the interviewees.

"Most of the communities along the southern coast still highly respect the presence of Nyi Roro Kidul as a figure considered to be the ruler of the southern seas of Java. Various rituals are still conducted, ranging from offerings, seeking blessings, ceremonial baths, and many more."

BAW, a historian from Bantul Regency, interview, Sept. 21, 2023



**Fig. 1:** The Labuhan Ceremony at Parangkusumo Beach  
Source: Author

Utomo and Silvie (2012) show that in the Javanese beliefs, Nyi Roro Kidul is considered a subordinate to Gusti Kanjeng Ratu Kidul. Use of the terms such as Nyi, Gusti, and Kanjeng is a form of politeness in Javanese customs and traditions. Some communities also refer to her as Nyi Loro Kidul, where "Loro" has a dual meaning, signifying both two and, when pronounced differently, can mean sickness or suffering. Meanwhile, "Rara" or "Roro" in Javanese means a young girl. According to Jordaan (1997), as mentioned in his paper in *Asian Folklore Studies*, such linguistic shifts from ancient Javanese "Roro" to modern Javanese "Loro" signify a change in meaning. Originally, it has referred to a beautiful girl but eventually evolved to denote someone who is unwell.

Moreover, the Javanese and Sundanese communities have their own stories regarding the origin of Nyi Roro Kidul. One of these stories, written by a Dutch author, Meijboom (1924), in the book titled "Javaansche Sagen Mythen en Legendes," recounts the tale of a beautiful princess from the Kingdom of Pajajaran named Dewi Kandita. The princess has fled to the southern sea after being enchanted (bewitched), resulting in a skin ailment that had made her undesirable. Upon leaping into the southern sea, her appearance has reverted to its original beauty. It is also told that the princess was elevated to become the Queen of the Southern Sea.



**Fig. 2.** Visualization of Nyi Roro Kidul

Source: Gunawan Kartapranata (2013) at wikimedia.com

There are several versions of the Nyi Roro Kidul story as a ruler on the southern coast of Java, but they all share a similarity: a princess who goes to the southern sea of Java and then disappears. Nyi Roro Kidul is believed to be the leader of the army of supernatural beings in the South Sea who could spread a plague to people who behave badly. People of Yogyakarta associate Nyi Roro Kidul with the Parangkusumo and Parangtritis beaches as one of the areas ruled by Nyi Roro Kidul (Bayan, 1967).

One of the most popular legends in Parangkusumo and Parangtritis is the prohibition of wearing green clothing in the vicinity of the southern coast of Java. This is mentioned because green is Nyi Roro Kidul's favorite color. The prohibition of wearing green clothing can be interpreted as one form of mitigation value. This value is packaged in the form of mythology passed down from generation to generation through the folk tales of Nyi Roro Kidul. This is expressed by an informant:

"...about wearing green clothes or green clothes' myth will become a sacrifice to Nyi Roro Kidul. Even though logically, wearing green clothes is prohibited because the color is the same as the sea base, so if swept away by the waves, it's a bit difficult to find."

MIB, a historian of Bantul Regency, in an interview on September 21, 2023

In addition, another informant, Mr. BH, a member of the Indonesian Red Cross and the Bantul Regency Disaster Management Agency, states that the prohibition of wearing green clothing is actually a form of disaster mitigation conveyed by our ancestors through folk tales or myths.

"That (prohibition of wearing green clothes) is a form of mitigation, prevention, prevention is within the realm of disaster mitigation. It's just that, in the past, our ancestors cleverly packaged it because people back then still had semi-animism, many believed in myths, so the prohibitions were packaged in those myths."

Nyi Roro Kidul, in the view of Javanese and Sundanese communities, is known as the legend of a spiritual ruler in the southern sea area, a beautiful woman. Many cultural and anthropological studies related to Javanese and Sundanese societies state that the legend of Nyi Roro Kidul originates from animistic beliefs associated with the nature of the South Sea region of

Java. The waves in the South Sea of Java evoke fear and respect for Nature, considered the realm of the army of supernatural beings led by their queen, Nyi Roro Kidul.

The fear and respect arise because people believe that the existence of such myths or stories is an effort to avoid dangers that may have occurred in the past. This statement is supported by an informant from BP on September 22, 2023, who is a scholar from Gadjah Mada University, stating that:

"When talking about the southern sea and Nyi Roro Kidul, it's not just about the myth or belief, but it should already be moving towards empirical experiences about the tremendous phenomenon of the southern sea."

Robson et al. (2003) state that no one should wear green along the southern coast of Java. According to the myth, when someone wears green, they will be turned into one of Nyi Roro Kidul's forces or slaves. In line with this, according to Harris et al. (2019), folk tales are packaged in such a way as to convey messages and/or historical notes to the next generation to be more easily accepted and implemented. Another statement from Ricklefs (2008) states that Panembahan Senopati, the first leader of the Mataram Kingdom, depended on Sunan Kalijaga and Nyi Roro Kidul, reflecting the Mataram Kingdom's relationship with Islamic teachings and Javanese beliefs. Panembahan Senopati sought the support of the goddess from the South Ocean to become the special protector of the noble Mataram family.

## 2. Historical Notes on Natural Disasters in the Folklore of Nyi Roro Kidul

The relationship between natural phenomena and historical narratives on the southern coast of Java is documented in research on the discovery of sand layers in the Pangandaran region, indicating evidence of an ancient tsunami approximately 400 years ago. Folklore and historical records are employed as tools for analyzing and tracing the ancient tsunami's traces. The emerging narrative revolves around the myth of Nyi Roro Kidul, believed by the community to be the ruler of the coastal areas in southern Java. The myth tells the story of Panembahan Senopati, who has undertaken meditation on the southern coast of Java to seek assistance from Nyi Roro Kidul in building the Mataram Kingdom, despite not being a direct descendant of a king by lineage. After completing the meditation, a high wave has emerged from the southern sea of Java.

This event aligns with the description in the Babad Tanah Jawi book, where it says that the Mataram Kingdom was established by the Muslim community at that time, with Panembahan Senopati as its first king. Moreover, the Tembang Serat Sri Nata mentions a disaster involving a high wave with hot water, causing the death of many living beings. Serat Sri Nata also notes that the sky emitted thunderous sounds, darkened, and had lightning during that time. Panembahan Senopati has been able to leverage these conditions as a sign, as if Nyi Roro Kidul had given him approval to become the King. Panembahan Senopati has framed this disaster as an enduring myth for the sake of his political legitimacy. Following is an excerpt from Serat Sri Nata as written in the Babad Tanah Jawi.

### Serat Sri Nata

*Kilat thathit abarungan*  
*Panjunegur swara kagiri-giri*  
*Narka yen kiyamat iku*  
*Toya minggah ngawiyat*  
*Apan kadya amor mina toyanipun*  
*Semana datan winarna*  
*Ratu kidul duk miyarsi*  
*Lagya sare kanthi denta*  
*Kagegeran manehe Sang Sung Dewi*  
*Dene naga samya mlayu*  
*Arsa minggah perdata*  
*Ratu Kidul alon denira amuwus*  
*Selawas sun durung mulat*  
*Samodra pan dadi kisik*

*Dene panase kang toya  
 Anglir agni klangkung panasing warih  
 Mina sedaya pan lampus  
 Baya ari kiyamat.  
 (Babad Tanah Jawi, 2013)*

**Table 1:** Translation of Serat Sri Nata  
 Source: Author

Poem stanza-	Serat Sri Nata	Translation
1	<i>Kilat thathit abarungan</i>	Lightning and thunder simultaneously
2	<i>Panjunegur swara kagiri-giri</i>	Its roar is frightening
3	<i>Narka yen kiyamat iku</i>	Thinking it might be doomsday
4	<i>Toya minggah ngawiyat</i>	Water rises to the sky
5	<i>Apan kadya amor mina toyanipun</i>	Even, as if mixed with the fish in the water
6	<i>Semana datan winarna</i>	At that time, it is not told
7	<i>Ratu kidul duk miyarsi</i>	Queen Kidul, upon hearing it
8	<i>Lagya sare kanthi denta</i>	Was sleeping on an ivory bed
9	<i>Kagegeran manehe Sang Sung Dewi</i>	The Goddess's heart is disturbed
10	<i>Dene naga samya mlayu</i>	Even the dragons all flee
11	<i>Arsa minggah perdata</i>	Wanting to rise to fight(?)
12	<i>Ratu Kidul alon denira amuwus</i>	Queen Kidul slowly says:
13	<i>Selawas sun durung mulat</i>	"All this time I have never witnessed,
14	<i>Samodra pan dadi kisik</i>	The ocean turning into a shore [beach].
15	<i>Dene panase kang toya</i>	Even the heat of the water,
16	<i>Anglir agni klangkung panasing warih</i>	like fire, the water is extremely hot
17	<i>Mina sedaya pan lampus</i>	All the fish die
18	<i>Baya ari kiyamat.</i>	Perhaps this is the day of judgment.

The text "Serat Sri Nata" in the Babad Tanah Jawi describes a major disaster that occurred in the past on the southern coast of Java. Another piece of evidence supporting the historical record of a significant tsunami on the southern coast of Java can be found in the excerpt from "Tembang Dhandanggulo" in Babad Ing Sangkala (2019) as follows.

*...nir buta iku  
 bumi kala wong Pajang kendhah  
 lungo tilar nagara  
 Adipatinipun  
 angungsi ing Giri Liman  
 ing Mataram angalih mring Karta singgih  
 nir tasik buta tunggal  
 (Babad Ing Sangkala, 2019)*

**Table 2:** Translation of Tembang Dhandanggulo  
 Source: Author

Poem stanza-	Tembang Dhandanggulo	Translation
1	<i>...nir buta iku</i>	Ketika lenyap, berubah menjadi laut
2	<i>bumi kala wong Pajang kendhah</i>	buminya orang-orang Pajang dikalahkan
3	<i>lungo tilar nagara</i>	mereka meninggalkan tanahnya
4	<i>Adipatinipun</i>	Adipati mereka
5	<i>angungsi ing Giri Liman</i>	mengungsi ke Giri Liman
6	<i>ing Mataram angalih mring Karta singgih</i>	di Mataram, mereka berpindah ke Karta, memang
7	<i>nir tasik buta Tunggal</i>	ketika 'menghilang semua kembali ke laut'

The 26<sup>th</sup> stanza of Babad Ing Sangkala uses the phrases "nir buta iku bumi" and "nir tasik buta tunggal" to signify the defeat of the Pajang forces in the year 1619. The Javanese society at that time had associated this event with the legend of Nyi Roro Kidul, the ruler of the southern coast, whose arrival has been marked by the roaring of waves reaching the mainland. In line with this, based on an interview with an informant from MIB on September 22, 2023, a historian and history lecturer in Yogyakarta stated that:

“The connection between the geological facts along the southern coast of Java and various historical sources, including several songs and manuscripts in historical documents, proves the existence of past natural phenomena that are written and recorded in folk stories or myths.”

Historian Reid (2012) asserts that the sentence in this babad is similar to the occurrence of a sea wave surging inland during a Tsunami. Babad Ing Sangkala strengthens the possibility of a significant natural event, a Tsunami, in 1618 along the southern coast of Java (Mataram), which is notably the central region in the development of the Nyi Roro Kidul folklore. Reid also links the potential disaster in that year to the findings of researchers from the Indonesian Institute of Sciences (LIPI), Yulianto et al. (2010), regarding a major Tsunami in southern Java in the past. Through excavations in Pangandaran (West Java) and Cilacap (Central Java), they have discovered deposits of a giant Tsunami that had hit the southern coast of Java approximately 400 years ago.

## Conclusions

This paper concludes that it is evident that there are findings to support the presence of natural events in the Nyi Roro Kidul folklore. Geologically, past events on the south coast of Java are substantiated by the discovery of sand deposits on the South coast of Java that are 400 years old. This corresponds with historical records of past natural events documented in Serat Sri Nata in Babad Tanah Jawi and Tembang Dhandanggulo in Babad Ing Sangkala. Moreover, the existence of myths in society about Nyi Roro Kidul and her connection with the rulers of Mataram in the past proves the interrelation between folklore, history, and geological phenomena.

Therefore, it can be concluded every event that has occurred in the past, including geological phenomena, may have been recorded and passed down in the form of literary works. These literary works referred to here are folktales in the form of myths, legends, and the like. This has been done because people have found it easier to understand and implement their understanding through storytelling.

It is concluded that these folktales serve as a means to prevent similar events from occurring again, which could lead to more severe consequences. Through historical records, myths, and other literary works, they can serve as guidelines and reminders to the next generation on how to mitigate potential disasters that may occur in the future.

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