

Local Wisdom-Based Disaster Mitigation Efforts in *Grebeg Suran Sedekah Laut* for Coastal Communities (A Folkloric Study in Mirit Sub-District, Kebumen District)

Rini Utari^{1*}, Annisa Gilang Fitriah², Rike Damayanti³, & Rudi Adi Nugroho⁴

¹²³⁴ Universitas Pendidikan Indonesia

*Corresponding Author: riniu@upi.edu

This research aims to analyse local wisdom on disaster mitigation in grebeg suran sedekah laut. The research was conducted to find disaster mitigation efforts that can be carried out by coastal communities based on local wisdom. This research used a qualitative approach with descriptive data type. The study used in this research is folklore studies. The participants in this research were community leaders who became key informants, fishing communities, and the general public in Mirit Subdistrict, Kebumen Regency. The data collection technique in this research is by conducting interviews. The results showed that grebeg suran sedekah laut consists of several series of processions and prayer poems that have fundamental meanings, functions, and roles for people's lives. The ritual structure of grebeg suran sedekah laut has a meaning that contains a form or effort of disaster mitigation based on local wisdom that can be utilised by the community to reduce the risk of disasters at sea. Disaster mitigation in the grebeg suran sedekah laut tradition is in the form of local knowledge about titen science and actions taken by the community. This research can be used as a means of educating the current generation about disaster mitigation efforts in grebeg suran sedekah laut and as cultural revitalisation.

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Introduction

Coastal areas are classified as vulnerable areas with the highest risk of disasters at sea. Marine casualties in coastal areas occur almost every year, whether caused by natural or human factors. Reporting from Detik.com (2019), in the sea waters of Miritpetikusan, Mirit District, Kebumen Regency, a boat carrying three fishermen capsized due to large waves and one person died (Heksantoro, 2019). Victims in marine accidents are not only fishermen, but also the general public or visitors who are travelling

in the sea are often victims because they are not careful when playing in the sea and do not understand sea conditions. As an area with high disaster risk, coastal communities must have the ability and readiness to deal with disasters at sea.

Disasters that occur are often associated with moral deviations committed by the community so that people still believe in various local wisdom-based efforts to reduce disaster risk (Findayani et al., 2020). Coastal areas have a high risk of disaster so that people must have the knowledge to prevent and deal with disasters at sea. To reduce disaster risk, it can be done by utilising local wisdom in the community. Indonesia has a diversity of cultures and traditions that are still believed and carried out by the community on a regular basis. The values contained in culture or local wisdom can be used by the community as an effort to reduce disaster risk.

Local wisdom or local knowledge that emerges from community traditions has a role to be the foundation used by the community in improving community preparedness in reducing disasters. Local wisdom in Indonesian culture is an important aspect in disaster risk reduction (Rijanta et al., 2018). One example of local wisdom that is still believed and implemented by the community is the *grebeg suran sedekah laut* traditional ceremony. Coastal communities still believe in the *grebeg suran sedekah laut* traditional ceremony which is carried out in the month of *Sura* based on the Javanese calendar. The community considers *grebeg suran sedekah laut* to have a fundamental role that can be used as a guide to life for coastal communities.

The *grebeg suran sedekah laut* tradition is a conceptualisation of community gratitude through an action that has manifest and latent meaning (Nuraini & Asriandhini, 2023). Coastal communities in Mirit Subdistrict believe that *grebeg suran sedekah laut* has a message and power to ask God for safety. *Grebeg suran sedekah laut* is used as a momentum to express gratitude and ask God for safety while making a living at sea. The effort to ask God for safety is also done in the form of actions manifested in sea alms. Therefore, the tradition of *grebeg suran sedekah laut* is often associated with conventional efforts based on local wisdom to prevent disaster risk or disaster mitigation efforts.

Disaster mitigation is a number of actions taken to reduce disaster risk, both through physical development, socialisation to raise awareness, and increasing community preparedness (Sandhyavitri et al., 2015). The study of local wisdom-based disaster mitigation in fishing communities is related to human resources and natural resources because disaster prevention is not only done with physical development, but also through cultural manifestations that have a fundamental role as a guide to life. Local wisdom-based disaster mitigation is an effort made by the community that is associated with the understanding of local knowledge about natural signs and conventional efforts to prevent disasters (Findayani et al., 2020). The people of Mirit Sub-district consider natural and non-natural phenomena to be interrelated and supportive. The community still believes in the existence of traditions and their meanings so that it helps in increasing community awareness and capacity in dealing with disasters. Each series of processions has a meaning that can be used as disaster mitigation by coastal communities. The form of disaster mitigation efforts contained in this tradition, namely knowledge of natural signs and warnings to be vigilant. In the *grebeg suran* ceremony, one of the forms of requests made is by performing prayer verses during the ceremony, prayer verses are performed with the aim of asking for the safety and welfare of coastal communities. In Mirit Sub-district, the prayer verses recited are in the form of mantras and Islamic prayers.

Grebeg suran sedekah laut as an ancestral cultural heritage includes partially oral folklore inherent to Javanese society. According to Rokhmawan (2019), folklore is part of culture and all folklore is included in culture. Folklore is a branch of science that discusses culture that is spread and passed down from generation to generation. *Sedekah laut* as a form of Javanese culture has philosophical functions and meanings containing norms and messages that can be utilised by the community as a guide to life. Based on its function, *sedekah laut* is used as a ritual and ceremony to ask for safety from disasters at sea so that it is related to disaster mitigation at sea which is attached to local wisdom. The community utilises the local wisdom values contained in the *sedekah laut* as a form of conventional disaster mitigation adapted to the conditions. In this case, folklore studies are important as a means of educating the current generation about local wisdom in the realm of disaster mitigation.

The Javanese belief system in *grebeg suran sedekah laut* is accompanied by actions that form traditional perceptions to reduce disasters. The utilisation of local wisdom values in culture or tradition by the community is inseparable from the value of science. All cultural contexts that arise from ancestors become the basis for the community to carry out disaster preparedness. The values of local wisdom that have been obtained from culture provide knowledge to the community to always be alert and anticipate. Local wisdom that applies in the community for generations has gone through the stage of observing what the ancestors did and conveying the results of observations through developing stories (Findayani et al., 2020).

Studies on the benefits and functions of *sedekah laut* for the community have been conducted with various techniques and approaches, such as research conducted by Abdurrohman (2016). However, the research that has been done only focuses on the mixing of culture and Islam which causes the existence of *Kejawen Islam* and as a form of gratitude for sustenance and safety given by God. This research will focus on discussing how local wisdom efforts on disaster mitigation in *grebeg suran sedekah laut* based on folkloric studies in Mirit District, Kebumen Regency. This research discusses the series of processions in the *grebeg suran sedekah laut* ceremony, the structure of rituals and prayer verses, the meaning and function, and the form of disaster mitigation efforts based on local wisdom in *sedekah laut* folklore. Thus, the focus of this research is to investigate the utilization of culture for disaster mitigation for fishing communities in local wisdom-based *sedekah laut* folklore that is tailored to the needs of the community so that it can be used as education for the current generation.

Methods

This research used folklore studies. Folklore studies are used because the research conducted is related to culture and sea alms are included in partially oral folklore. The approach in this research is a qualitative approach with descriptive methods. Research in the humanities uses a lot of qualitative methods that produce descriptive data (Anggito and Setiawan, 2018). The qualitative approach was chosen because the problems studied in this research require actual and contextual data, namely about the series of sea alms processions and prayer verses used by fishing communities during the implementation of the traditional *grebeg suran sedekah laut* ceremony and its benefits as an effort to reduce disaster risk at sea.

The participants in this study were two community leaders who became key informants, six community leaders from Lembupurwo, Rowo, and Miritpetikusan villages, three fishing communities, namely the fishing communities of Rowo Village,

Mina Bahari, and *Mina Utama*, and 40 general public in Mirit Sub-district, Kebumen Regency. The researcher took several sample places to obtain data from informants, namely Miritpetikusan, Rowo, Lembupurwo, Tlogodepok, Wiromartan, and Mirit villages. The reason the researcher chose the place is because the people in the village are coastal communities and most of the people work as fishermen.

The data collection technique in this research is by conducting interviews with predetermined sources, namely key informants from community leaders, community leaders, fishing communities, and the general public in Mirit Sub-district. Interviews were conducted using interview instruments containing interview questions related to the history of *grebeg suran sedekah laut*, the series of processions, the meaning of each ritual and prayer verse, the purpose of *grebeg suran sedekah laut*, the values contained in each ritual, the types of sea accidents, disaster mitigation efforts that have been carried out by the local community, and people's views on the *grebeg suran sedekah laut* ceremony. Interview questions were tailored to the interviewees. In addition, the researcher also conducted direct observation by observing the ritual process of *grebeg suran sedekah laut* ceremony from the beginning to the end at Rowo Village River on 28 July 2023, Miritpetikusan Beach on 29 July 2023, and Lembupurwo Beach on 30 July 2023. Observation is done by observing each series of processions and rituals performed to find out the ritual structure from beginning to end and the prayer verses used in each ritual in the *grebeg suran sedekah laut* ceremony. Data processing techniques were carried out using the Miles, Huberman, and Saldana (2014) model. The first stage of data processing or analysis is the reduction stage. At this stage, researchers conducted a transcript process to see the physical text structure. Furthermore, presenting data to facilitate researchers in conducting data analysis and making conclusions more precise, fast, accurate, and neatly arranged. The last stage is verification by making conclusions supported by primary and secondary data.

Results and Discussion

Grebeg suran sedekah laut is a tradition of Javanese coastal communities that has been carried out for generations (Nuraini & Asriandhini, 2023). *Grebeg suran sedekah laut* comes from the words 'grebeg' which means celebration, 'suran' which means the first month of the Javanese calendar, and 'sedekah laut' which means giving away some of what we have. Thus, *grebeg suran sedekah laut* is a celebration held in the month of *Sura* or the first month of the Javanese calendar to give away some of what we have. *Grebeg suran sedekah laut* is a form of gratitude for all the blessings, prosperity and safety obtained in the previous year. In addition, the *grebeg suran sedekah laut* tradition has the purpose of asking for protection so that in the coming year it will be given safety and kept away from all dangers while at sea. The people of Mirit sub-district still carry out this tradition regularly every year as a form of conceptualisation and momentum of expression of gratitude and efforts to preserve culture.

Grebeg suran sedekah laut as a form of local wisdom that develops in the community contains values that can be used as a guide to life for the community. The implementation of the *grebeg suran sedekah laut* tradition in each region is different, but has the same meaning and purpose (Alamsyah, 2013). The series of processions of *grebeg suran sedekah laut* consists of *tirakatan* night, *jolen* procession, *jolen* fights, distributing crops, fishermen's *selamatan*, and entertainment. Each procession has a structural series that contains meanings, functions, and purposes that can be utilised by the community. In the implementation of the *grebeg suran sedekah laut* traditional ceremony, the form of

requests made in each series of processions is done through prayer verses that have certain meanings based on beliefs.

Grebeg suran sedekah laut as a form of local wisdom that emerges from community traditions has a role to be a foundation that can be used by the community in increasing community readiness in facing and reducing disaster risk (Rijanta et al., 2018). As an area that has a high risk of disaster, coastal communities must have knowledge and readiness in preventing and dealing with disasters at sea. One way that can be done is by utilising local wisdom that exists in the community and integrating it with existing science.

The tradition of *grebeg suran sedekah laut* as a form of conceptualisation of gratitude through an action has manifest and latent meanings. Philosophically, *grebeg suran sedekah laut* is a symbolic relationship between humans and God as an expression of gratitude and asking for safety and humans with humans who create social relationships. However, when analysed *grebeg suran sedekah laut* contains meanings that arise from each series in the form of actions that can be utilised by the community. In terms of disaster mitigation, the structure of the *grebeg suran sedekah laut* procession series turns out to contain disaster mitigation messages, both in the form of local knowledge and actions that can be applied by the community to reduce disaster risk based on local wisdom and as a form of disaster preparedness. Efforts to ask God for safety are also carried out in the form of actions manifested in *sedekah laut*, such as local knowledge about the good time to go to sea so that no disaster will occur. Basically, *sedekah laut* is only a momentum to celebrate and give thanks for safety while working at sea in the previous year and efforts to maintain safety are always carried out every day by the community. This is similar to the statement of Mr Darsino as the head of the fishing community of Rowo Village as one of the interviewees that "from the fishermen's point of view *grebeg suran sedekah laut* is considered as an expression of gratitude because for one year making a living at sea and taking fish in the sea has been given safety by God. This ceremony is a form of gratitude and thanks that we manifest in an action."

In Mirit Sub-district, the procession begins with a night of *tirakatan* or *selametan*. The *tirakatan* night is an acculturation between local traditions and religion (Muhammad, 2016). The *tirakatan* night is a Javanese tradition to welcome a big day that is carried out on the night before the implementation of *sedekah laut* by praying together, distributing food, and keeping watch until morning (Selamet, interview, 25 July 2023). According to a statement from key informant Mr Selamet, "The night before the ceremony, religious leaders are invited, then *tahlilan* is held by the river or beach and food is distributed. After performing *tahlilan*, the community performs *tirakatan* by keeping watch until morning". On that night, the community gathers on the beach to perform *selametan*, *tahlilan*, and pray together as an expression of gratitude to God for being given safety and sustenance. *Selametan* and *tahlilan* is a Javanese traditional ceremony performed by praying together as an expression of gratitude (Amin, 2017). On the night of *selametan*, people share *berkat*. *Berkat* comes from the Javanese language which means the food that the invitees get when attending the *selametan* as a form of mutual care and gratitude.

On the night of *tirakatan*, there are some areas that throw *jolen* from the beach. *Jolen* is a place for offerings and the shape of *jolen* in each region is different. According to key informants, the *jolen* is rectangular in shape and has been around since the ancestors (Paino, Interview, 01 August 2023). There are also *jolen* shaped like *Joglo* houses (Selamet, Interview, 25 July 2023). *Jolen* comes from the Javanese "ojo klalen" which means don't forget. According to key informants, the naming of *jolen* has meaning as a form of advice from ancestors through signs so that humans always remember God who

has provided sustenance and safety. In addition, it is also a reminder not to do bad things outside the norm (Paino, interview, 01 August 2023). Before the *larungan*, the community and elders perform a prayer together led by religious leaders and elders on the seashore, followed by throwing *jolen* from the seashore. The offerings in the *jolen* that are floated on the *tirakatan* night are simpler when compared to the float on the day of the tradition, the offerings floated are flowers, market snacks, and fruits (Paino, interview, 01 August 2023). The *tirakatan* night procession contains various purposes and meanings, including during the islamic prayer together before the barging has the aim that the hopes that the community asks for are granted.

Picture 1

Jolen that is thrown on the night of tirakatan



The *larungan* process on the night of *tirakatan* is carried out from the edge because the dark night conditions and the lack of light in the ocean can endanger people if they have to float from the middle of the sea using a boat. According to key informants, in the implementation of *larungan*, safety must be considered. Before conducting the *larungan*, one must ensure that the waves and wind remain safe. In addition to utilising prayer as an effort to ask for safety, the community also takes measures to prevent sea accidents by conducting *larungan* from the seashore because the dark night conditions make the sea dangerous. In addition, at night the waves or currents will rise and be dangerous (Paino, Interview, 01 August 2023). This can be knowledge for the general public that sea conditions at night are more dangerous because the waves rise.

Coastal communities, especially fishing communities, utilise *titen* science to read natural signs. *Titen* science is a traditional knowledge of the Javanese community in the form of sensitivity to natural characteristics or signs. People use *titen* science to determine the weather so that it is beneficial for life. Javanese people call *titen* science as *pranata mangsa* or seasonal determination to see the season or the right time to do something based on Javanese understanding, such as the right season or time for fishermen to fish or people to do activities at sea. According to the key informant, the science of *titen* or *niteni* or meticulous is the actualisation of one of the Javanese philosophies "eling lan waspada" which means remember and be vigilant. This philosophy means that Javanese people are required to always remember God and always be careful in doing something. Javanese people are vigilant by *niteni* or observing everything that happens, such as natural phenomena that occur because they can be observed directly using human senses. Signs of nature include physical things that can be

observed by humans. From the results of *niteni* or researching by making observations, people can formulate a calendar related to the season that is usually used by fishermen. The result of *titen* science is often called *pranata mangsa* or determining the right season for fishermen and people to make a living at sea (Paino, Interview, 01 August 2023).

The tradition of *grebeg suran sedekah laut* is a tradition that develops in the lives of coastal communities. As a coastal community, they must understand the signs of nature because it will affect the sustainability of their livelihoods. The implementation of the *grebeg suran sedekah laut* tradition is carried out on the beach, even some processions require fishermen to use boats to the middle of the sea so that in all series of processions the community must pay attention to natural signs so that the procession can run smoothly. According to key informants, there are certain phases that make the sea have different conditions than usual. During the *dadari* moon or the initial phase of the moon's appearance around the 8th to 12th based on the Hijri calendar, the waves will usually be high. During the *dadari* moon, the sea water will swell, which means that the sea water rises or tides so that the waves are quite high and dangerous. In addition, at the time of the *surup* moon or the moon approaching its final phase around the 18th to 21st the waves are also high (Paino, Interview, 1 August 2023). Despite the high waves, some people are still allowed to do activities at sea while remaining vigilant. The natural signs of *titen* science used by the community are not only used during the implementation of the *grebeg suran sedekah laut* tradition, but are also applied in everyday life as instructions or guidelines to be safe in making a living at sea.

After the *tirakatan* night, in the morning the community prepares the *jolen* that will be thrown into the sea. At the core event, *jolen* is sailed in the middle of the sea using a boat by fishermen. *Jolen* is in the form of a traditional Central Javanese house that contains various types of offerings, in the form of food or objects that have philosophical meaning as a form of gift from the community. In other words, the objects presented are the best crops for the community to offer to the creator (Selamet, Interview, 25 July 2023). Each offering in the *jolen* has a meaning and function that interprets the local wisdom of the *grebeg suran sedekah laut* tradition and is related to local wisdom-based disaster mitigation efforts. One of the most important offerings is the *kendit* goat. According to key informants, a *kendit* goat is a goat that has black fur, but its abdomen is surrounded by white fur. The *kendit* goat is considered by Javanese people as a symbol of privilege and sacredness (Selamet, Interview, 25 July 2023). The *kendit* goat is slaughtered for its head and bladder. In the tradition of *grebeg suran sedekah laut*, the head of the goat has a meaning as the principal of knowledge, while the bag of the goat is considered as ignorance so that when it is slaughtered it aims to eliminate ignorance among fishermen. In this case, it is associated with the basic knowledge that must be possessed by fishermen before going to sea, such as things that must be prepared before going to sea and knowledge of various natural signs. In this case, there is local knowledge of disaster mitigation efforts in the form of the importance of having an understanding of natural signs, *titen* science, and things that must be prepared for going to sea. According to key informants, there are several things that must be prepared before sailing to sea, namely a boat that meets the standards, adequate fishing gear, boat engines, fuel reserves, buoys, lighting devices, raincoats, and communication tools (Darsino, Interview, 25 July 2023). Local knowledge is one of the efforts to reduce disasters through vigilance. Basically, knowledge of disaster mitigation efforts is as important as direct action in mitigating disasters.

Picture 2

Jolen in the shape of a traditional Javanese house



The next offering contained in the contents of the *jolen* is *tumpeng*. *Tumpeng* stands for "tumapaking penguripan tumindak lempeng tumuju Pangeran" which means that it is orientated towards the thought that humans must go to the path of God (Krisnadi, 2020). Javanese people believe that *tumpeng* symbolises that their relationship with God is maintained by asking God for safety and blessings. According to key informants, before going to sea, either to make a living or to carry out the traditional ceremony of *grebeg suran sedekah laut*, it always begins with a prayer to be given safety (Marsono, Interview, 26 July 2023). By praying before going to sea, fishermen believe that God will protect them. In this case, efforts to reduce sea accidents based on local wisdom are carried out through a symbolic relationship approach between God and humans. According to the people in Mirit Sub-district, efforts to reduce disasters at sea must be balanced between action and belief in the power of prayer to God.

The offerings are chicken *ingkung*. According to key informants, *ingkung* chicken comes from the Old Javanese language, namely "jinakun" and "manekung" which means nurturing and praying (Paino, interview, 01 August 2023). Chicken *ingkung* is a rooster that is cooked whole and has a savoury taste after cooking (Suryanti, 2017). Chicken *ingkung* has a meaning, namely when fishermen go to sea they must bring complete equipment. In preparation for going to sea, fishermen prepare complete safety equipment, such as life jackets, communication devices, and other equipment (Darsino, Interview, 25 July 2023). In addition, during fishing, fishermen must protect each other in order to avoid danger at sea. According to the key informant, there are six members in one boat and all must help each other (Sugito, Interview, 26 July 2023). Thus, to avoid sea accidents, there must be cooperation between the *tekong* or the person who runs the boat, the *togok* or the person who pushes the boat, and the crew members who go to sea.

The *godong towo* or dadap leaf offerings have the meaning of "kalis saka sambikala rubeda" which means being kept away from danger (Paino, Interview, 01 August 2023). In addition, in *grebeg suran sedekah laut* there are offerings of *jenang abang putih* or red and white porridge. According to key informants, *jenang abang putih* symbolises the origin of human beings and is therefore associated with "sedulur tua sedulur enom, kakang sawah adi ari-ari getih puser pancer", the philosophy of human birth in ancient Java (Paino, interview, 1 August 2023). *Jenang abang putih* is a form of request to always get safety from parents so that this offering symbolises that every child has an obligation to appreciate and respect parents. In addition to symbolising human origins, *jenang*

abang putih is also known as *jenang sengkolo* which comes from the Javanese "sengkolo" which means disaster so that *jenang sengkolo* as a symbol of disaster also has a meaning that humans are always close to God and pray to be kept away from all disasters (Paino, Interview, 1 August 2023). The *setaman* flower offerings consist of several types of flowers that symbolise beauty and are interpreted as broad knowledge. Basically, the offerings of *godong towo*, *jenang abang putih*, and *kembang setaman* are efforts to reduce disasters at sea through warnings or signals. The offerings have a symbolic meaning as a form of advice to the community to always be aware of disasters at sea by always praying to God and expanding knowledge related to efforts to reduce and deal with disasters at sea.

Inside *jolen* is a complete *ageman*. *Ageman* comes from the Javanese language which means clothes. The *ageman* in question is lurik cloth, kawung cloth, and complete with a bun (Selamet, Interview, 25 August 2023). According to key informants, *ageman* has a symbolic meaning as a protector from any danger that comes. In this case, there are efforts to prevent sea accidents associated with the meaning of one of the offerings used in the *grebeg suran sedekah laut* procession. Efforts that can be made by the community based on the meaning of the offerings, namely fishermen are required to wear complete clothes specifically for going to sea as an effort to protect from danger at sea, such as carrying raincoats specially designed for fishermen. Based on the results of interviews conducted, fishermen said that they use complete clothing for safety. The fishermen bring buoys, anchors, coats, and raincoats that have been made in such a way specifically for going to sea (Cokro, Interview, 26 July 2023).

On the *jolen* there is also yellow *pring* or yellow bamboo. According to the key informant, yellow *pring* has a meaning and symbolises that what is done and run straight only for good can achieve glory (Darsino, interview, 25 July 2023). Javanese people believe that yellow bamboo can neutralise negative energy so it is placed outside the *jolen* as a symbol for self-defence from negativity. This is associated with disaster mitigation carried out by fishermen when at sea, namely to keep defending themselves against situations and conditions that occur while at sea. This is related to the attitude of fishermen when facing big waves at sea. According to the key informant, in facing the waves before taking action we must survive by stopping then starting to look at the conditions by trying to count the waves to see the height of the waves when the waves are in a calmer condition then the boat can move again (Darsino, Interview, 25 July 2023).

Melarung *jolen* is the core procession in the *grebeg suran sedekah laut* tradition. Coastal communities, especially fishermen communities, throw *jolen* because they believe that what they get comes from the sea and God so they want to thank and express gratitude for it. The community has a concept that when they receive something, at least they should also give according to their ability. People believe that the offerings are for God, but because coastal communities get their sustenance from the sea, they are thrown into the sea (Darsino, Interview, 25 July 2023). According to key informants, what the community does is not necessarily polytheistic because *sedekah laut* are a tradition from the ancestors and the beliefs of the local community. In this case, the practice or implementation of *sedekah laut* has been modified so that in terms of prayer, many islamic prayers have been used. Coastal communities say that culture is born from habits and is attached to the community. Although culture and religion have a relationship and influence each other, they should not overlap (Paino, Interview, 01 August 2023).

Picture 3
Parading jolen



The procession of throwing *jolen* is carried out by parading *jolen* from the river to the estuary by coastal communities then from the estuary to the middle of the sea carried out by experienced fishermen. Before throwing *jolen* there are several things that must be prepared, namely ensuring the condition of the boat, boat engine, and other safety equipment (Darsino, Interview, 25 July 2023). The preparations made are an effort to be vigilant so as to reduce the risk of sea accidents. *Pelarungan* which is carried out in the middle of the sea requires careful preparation, the selection of the people involved is also very important for the smooth running of the throwing process. When going to sea, there is the term *tekong* or the person who runs the boat, *togok* or the person who helps push the boat to the shore, and the crew (Marsono, Interview, 26 July 2023). There is one boat that carries the *jolen* to the middle of the sea, which is boarded by three experienced people at sea, there is one *tekong* and two crew members whose job is to help condition the boat so that it remains safe, such as keeping the *jolen* in position, removing water that enters the boat so that the boat does not sink. To become *tekong* and crew members requires special abilities because they must be responsive, dexterous, and sensitive to sea conditions.

Picture 4
Throwing jolen



When about to sail *jolen* to the sea, one must pay attention to natural signs and conditions using the science of *titen*. At least people have an understanding of tides and wind conditions because wind conditions affect the condition of the waves (Darsino, Interview, 25 July 2023). According to key informants, there is a *sekalor* wind or wind blowing from the North that lasts from December to February, usually the waves have not dropped or are still high so it will be risky when forcing to go to sea, but some

fishermen still go down because the wind is not too strong, but it will be difficult to get fish because the cold blows towards the sea causing fish to be reluctant to eat bait. As for the West wind, it blows from the west very strongly, which usually lasts from September to November, so usually fishermen do not go out to sea to the open sea because it is quite dangerous and there is a fear of tornadoes at sea. During the month of the West wind and North wind, rain continues to fall and is accompanied by strong winds so that the weather is sometimes erratic, causing large waves and making it difficult for fishermen to go to sea. The East wind blows from the East and is hot, so the wind blows slowly from March to May or the dry season. During this month, the wind is calm and there are many fish so fishermen can go to sea during the day or night. The South Wind blows from the South from June to August and is strong so that people cannot go out to sea (Darsino, Interview, 25 July 2023).

According to key informants, to prevent marine accidents, the community needs to understand natural signs that can be observed through the science of *titen*. Local knowledge about tides and winds can be used by the community to determine the best time to go to sea and determine the direction to go (Paino, Interview, 01 August 2023). In *titen* science, coastal communities, especially fishing communities, learn the count of the waves. According to fishermen's calculations, most of the time after two high waves are usually followed by lower waves that can be travelled. It is important not to miscalculate the waves or go against the current because it will have a bad impact, such as causing the boat to be difficult to control and the boat to capsize. According to key informants, waves that can be passed by small boats are waves that are less than two metres high because waves that have reached two metres or more are considered high waves (Marsono, Interview 26 July 2023). Based on the results of the analysis of ocean wave energy calculations, waves are said to be high when they reach two metres (Royyana et al., 2015).

According to key informants, the implementation of the *grebeg suran sedekah laut* tradition is routinely carried out on the beach so that one of the preparations made by coastal communities is by planting fir and mangrove trees (Marsono, Interview, 26 July 2023). Planting mangrove and fir trees as a form of preparation turns out to contain disaster mitigation efforts because mangroves have a function to keep the coastline stable, protect the beach from abrasion, and withstand strong winds (Majid et al., 2016). Thus, planting mangroves on the beach is a conservation effort of fishermen in disaster mitigation and tsunami prevention.

The last series of processions is the fishermen's *selametan* and is closed with entertainment in the form of traditional dance performances. During the *selametan*, there is a joint prayer. The prayers have the meaning of asking for protection. During the *selametan*, the elders give a lecture in the form of advice on what the community should do when going to sea and what should not be done for safety. The joint prayer and lectures given by the elders are reminders for the community to always be vigilant when doing activities at sea because of the uncertain sea conditions, the community is expected to be more sensitive to natural conditions and the slightest strange things to avoid serious problems.

Most of the *grebeg suran sedekah laut* processions are related to disaster mitigation, both in terms of the meaning of the series structure and the verses of prayers offered. Regarding the prayer verses used in each series, currently the prayers used are islamic, but there are some prayers that use Javanese. Prayers in Javanese are mostly sacred so that they cannot be known by the general public, there is one prayer in Javanese that used to be used by elders when they wanted to lead prayers in the sea alms tradition called

mantra. The mantra reads, “Ne ne pasang kembang nanum bakar dupa, niat ingsun adhu dupa diri anane geni kalih ko jati sejatine menyan sing siro kongkonono daheng dewi murni dhanyang merkhayangan kang manggon ana ing mriki mangga kula aturi dhahar sekul pethak gondho arum sak sampunipun dhahar kula nyuwun kalis sing rubeda nir ing sambikala” which means asking for a long life, blessings, safety while at sea, and good fortune (Paino, Interview, 01 August 2023). In the Javanese mantra, there is an effort to mitigate local wisdom-based disasters through a symbolic relationship between God and humans. This mantra intends that the community will not be afflicted with misfortune or bad luck (Paino, Interview, 01 August 2023).

Based on the results of the research, researchers found local wisdom-based disaster mitigation efforts in *grebeg suran sedekah laut* for coastal communities. Conventional methods can be used as disaster mitigation efforts and can be used as new knowledge for the general public and the current generation, such as planting mangrove plants by the sea, learning the science of *titen*, estimating wave calculations, and others. In essence, *grebeg suran sedekah laut* is not just a tradition carried out by fishing communities, but can be used as a form of local wisdom-based disaster mitigation because each procession contains local knowledge related to efforts or forms of reducing disaster risk and preventing disasters at sea.

Discussion

Grebeg suran sedekah laut is a tradition of Javanese coastal communities that is carried out regularly in the first month of the Javanese calendar. Based on the findings, *grebeg suran sedekah laut* as an ancestral cultural heritage that has been attached to the Javanese community is a form of conceptualisation of gratitude for the sustenance and safety that has been given by God. *Grebeg suran sedekah laut* is believed to be a ritual and ceremony to ask for safety from disasters at sea based on local wisdom. Each region has local wisdom as a disaster mitigation effort and if local wisdom is combined with a disaster mitigation system, it can be an alternative to reduce losses caused by disasters (Kurniawan & Soeparno, 2021). Based on the results of the analysis, there are local wisdom-based disaster mitigation efforts that can be carried out by the community through the implementation of the *grebeg suran sedekah laut* tradition because each series contains local knowledge related to natural signs that can be used to improve disaster preparedness and reduce disaster risk. Not only do coastal communities in Mirit Subdistrict believe that *grebeg suran sedekah laut* contains meanings that can be used by the community in improving community readiness in facing and reducing disaster risk, but coastal communities in Cilacap and other Javanese coastal communities also have the same belief (Findayani et al., 2020).

Based on the findings, *grebeg suran sedekah laut* consists of several sequences. Each sequence has meaning and local knowledge that can be utilised by the community for disaster mitigation. The local knowledge used as an effort to prevent disasters is called *titen* science by coastal communities in Mirit Sub-district. *Titen* science is a traditional knowledge of the Javanese community in the form of sensitivity to natural characteristics or signs. Based on the results of the analysis, *titen* science emerged because Indonesian people have always lived side by side with natural disasters so that Javanese people have efforts to request and express gratitude through cultural manifestations. The use of rituals and traditional ceremonies to resist and deal with natural disasters has often been carried out by Javanese people through *titen* science by understanding natural signs and phenomena that indicate a disaster will occur (Kurniawan & Soeparno, 2021). Therefore,

it can be said that the science of *titen* is knowledge related to the signs of a coming disaster obtained from the experience of previous generations and passed down to the current generation.

Based on the observation, the first series in *grebeg suran sedekah laut* is *tirakatan* night. The *tirakatan* night is the initial series in the *grebeg suran sedekah laut* tradition which is carried out on the beach. In this activity, the community performs a prayer together led by religious leaders or community leaders and continues by doing *larungan* or throwing offerings from the beach. After throwing the offerings, the community eats together and stays up until morning. The joint prayer held on *tirakatan* night is a form of gratitude for the sustenance that has been obtained from the sea and an effort to ask for safety while at sea. The *tirakatan* night is one of a series of processions in which there are efforts to ask for safety and also as an expression of gratitude packaged in a joint prayer (Suryani, 2017).

On the night of *tirakatan* the community also throws *jolen* which is held on the beach. The purpose of the *jolen* on *tirakatan* night is as a form of material gratitude of the community through the contents of the *jolen*. *Jolen* is an offering in the form of crops that must be present in the sea alms tradition (Rohmah, 2021). Throwing offerings is done from the seashore to avoid or reduce risks when compared to doing *larungan* in the middle of the sea. This is because sea conditions at night are difficult to predict or read the signs due to very minimal light conditions. At night the sea will be even more dangerous because of the rising waves. In the science of *titen*, sea water will experience tides at night which can be seen from the high waves that are influenced by the direction of the wind. This is also relevant to the observations that have been made, the results of observations show that for each phase of the moon, single daily tides are obtained because in a day they experience one tide at night and recede once during the day (Ihsan, 2021).

During the *tirakatan* night, people apply the science of *titen* to predict various possibilities that occur on the beach. When throwing *jolen*, people pay attention to the signs shown by the surrounding nature, such as wind and waves on the shoreline. Every tide in the sea is influenced by the moon (Wijaya et al., 2019). In *titen* science there are various phases of the moon that are thought to affect the condition of sea water, for example the *dadari* moon phase or the initial phase of the moon's appearance and the *surup* moon or the moon phase near the end which causes sea water to tide or rise so that waves are high. The moon phase at night affects the condition of sea water into double tides, while single daily tides are usually influenced by solar declination conditions during the day (Wijaya et al., 2019). Javanese people use the knowledge of moon phase *titen* by recognising the shape of the moon and the position of the moon to see the high and low tides. The high and low sea level around the coast has a relationship with the moon phase, including the dead moon phase, quarter moon phase, full moon phase, and three-quarter moon phase (Ihsan, 2021). Therefore, the science of moon phase *titen* can help to predict the condition of the beach when carrying out *tirakatan* night because it is still relevant and significant to be used today.

Some regions have their own ways of organising the *tirakatan* night. In the Cilacap area, people choose to avoid around the beach in carrying out *tirakatan* night to reduce risks and choose to carry out *tirakatan* night in the pavilion (Suryanti, 2017). Despite the differences, coastal communities conduct *tirakatan* night with the same purpose by praying together as a form of gratitude and asking for safety.

The next series of processions, namely throwing offerings or *jolen*. Throwing offerings is a special event for fishermen and the community who attend because it expresses symbols from the aspect of sacred value which is an important momentum for fishermen (Nurdin, R., 2017). In this core procession, coastal communities in Kebumen Regency will throw *Jolen*. *Jolen* is a traditional Central Javanese house that contains various types of offerings, in the form of food or objects that have philosophical meaning as a form of gift from the community. In other words, the objects presented are the best crops for the community to offer to the creator (Selamet, Interview, 25 July 2023). *Jolen* that is floated has the meaning of *ojo kelalen* which means that fishermen should not forget the creator and provider of sustenance, namely God, so that they are given safety in finding fish in the sea (Azis & Firdausi, 2021).

Jolen containing offerings has a meaning and function that interprets the local wisdom of the *grebeg suran sedekah laut* tradition and has a link to local wisdom-based disaster mitigation efforts. Based on the findings, one of the most important offerings is the *kendit* goat. The *kendit* goat is a black-furred goat that has white fur that coils from the abdomen to the back and *kendit* comes from the Javanese language which means belt (Setiawan, 2016). According to key informants, *kendit* goats are goats that have black fur, but the abdomen is surrounded by white fur. Based on the findings, *kendit* goats are considered by Javanese people as a symbol of specialness and sacredness. The meaning of the *kendit* goat is interpreted as a special animal, the unique colour found in the white colour that is circular on its stomach is interpreted as *nepung* which means to unite (Halisa et al., 2023). The link with disaster mitigation efforts is that every fisherman must unite his mind to know the condition of the sea. Fishermen's knowledge of safety at sea is very important to master so that fishermen are ready to face an accident at sea that could risk drowning (Andesfi & Prasetyawan, 2019). This shows that every part of the ritual has meaning and advice that can be used as a foundation by the community to have preparedness in preventing disasters.

Larungan or throwing offerings is done by professional people, such as fishermen who are experts and traditional leaders who understand how to sail in the middle of the sea. The *titen* science applied to the throwing of offerings is the counting of the waves and the vision of the wind direction. The wave count has a pattern that must be understood, every high wave that appears twice in a row will be followed by a lower wave that can be passed. In addition, when the *jolen* is about to be thrown into the sea, the science of *titen* is used to see the wind. The direction of the wind greatly affects the height of the waves. In the Cilacap area, the barging is done in the middle of the sea which is surrounded by islands so the wave count will not interfere too much with the barging process, but the fishermen still do the count to prevent risks (Suryanti, 2017).

Coastal communities in Mirit sub-district throw *jolen* in the middle of the sea. In the process, the elders chant prayer verses in Javanese until the *jolen* is successfully sailed. The prayer verses used in each ritual of the *grebeg suran sedekah laut* tradition vary from region to region, but have the same purpose. Prayer verses are usually chanted by traditional leaders or religious leaders. These prayer verses contain meanings that aim as a form of gratitude for the sustenance they have received during fishing and a form of request to avoid disasters, some prayer verses are also addressed to their ancestors. In the coastal area of Demak, one of the purposes of prayer poems is for ancestors and previous people who have had services to the region (Andesfi & Prasetyawan, 2019). Thus, prayer poems become one of the disaster mitigation efforts carried out through a symbolic relationship with God to ask for safety from disasters.

The last series of processions in the *grebeg suran sedekah laut* tradition in Mirit Sub-district, Kebumen Regency, is the Fishermen's *selamatan*. During the *selamatan*, there is a collective prayer that aims to ask for protection and a reminder for the community to always be aware of the uncertain weather and sea conditions. Based on the findings, the community considers that this tradition is not polytheistic because sea alms is a tradition passed down from ancestors and has become the belief of the local community because in the practice and implementation of this tradition has been modified into Islamic prayers. Prayer is a form of human communication with God to beg, ask, and express all that is desired and expected in order to get closer to God, serve God, eliminate polytheism, and as a sign that humans really need God (Jannati & Hamandia, 2022). In essence, the prayers offered at *selamatan* signify that the fishing community needs help from God to be given safety and asks to be given a lot of sustenance while at sea.

Selamatan in *grebeg suran sedekah laut* is led by elders to give lectures in the form of advice to the community to know the things that should be done and not done for safety while at sea. This is a reminder for the local community to be more vigilant when doing activities at sea. In some aspects, the community has the assumption that the sea is a source of life, but in other aspects the community must also be aware because the sea is also a source of disaster in the form of death, crime, natural disasters, and even disease outbreaks (Findayani et.al, 2020). Therefore, to prevent the source of disasters that occur in the sea, coastal communities in Kebumen Regency conduct joint prayers during the fishermen's *selamatan*. The *grebeg suran sedekah laut* tradition is closed with entertainment in the form of traditional dance performances. Based on the results of the analysis, traditional dance performances in the form of *kuda lumping* or dance art played with properties in the form of artificial horses tell about the struggle and ways to survive and prevent disasters.

Based on the results of the analysis, researchers found local wisdom-based disaster mitigation efforts contained in each series of *grebeg suran sedekah laut*. Each sequence has a meaning that can be utilised by the community as a guide to life for generations. *Grebeg suran sedekah laut* contains local knowledge related to disaster mitigation called *titen* science. *Titen* science has existed since the ancestors and has been passed down from generation to generation, but based on the results of the analysis, *titen* science related to sensitivity to natural signs is still relevant to life today. Thus, coastal communities can utilise *titen* science as a conventional effort to reduce the risk of disasters at sea.

Conclusion

Grebeg suran sedekah laut is a celebration held in the month of *Sura* or the first month of the Javanese calendar to donate some of what is owned. This tradition has the purpose of asking for protection so that in the coming year will always be given safety and kept away from all dangers while at sea. The *grebeg suran sedekah laut* tradition contains local knowledge about disaster mitigation based on local wisdom that can be utilised by the community as a form of disaster preparedness. In Mirit Sub-district, Kebumen Regency, the procession begins with a night of *tirakatan* or *selamatan*, sailing *jolen*, fishermen's *selamatan*, and entertainment. From the series of *grebeg suran sedekah laut* processions, there are conventional disaster risk reduction efforts. Based on the results of the research, the community uses the science of *titen* to read natural signs, such as the season or the right time for fishermen or people to do activities at sea. Furthermore, in the *jolen* there are various kinds of offerings that have meanings and

functions that interpret the local wisdom of the *grebeg suran sedekah laut* tradition and have links to local wisdom-based disaster mitigation efforts. Most of the processions of *grebeg suran sedekah laut* have a connection with disaster mitigation, both in terms of the meaning of the structure of the series and prayer verses. This tradition uses conventional methods used as disaster mitigation efforts, such as planting mangrove plants by the sea, learning the science of tides, estimating wave calculations, preparing preparations for going to sea, and others.

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