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**Research Article** 

# Local Wisdom Values of the Pulo Traditional Village Community in Environmental Management

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## **ABSTRACT**

Local wisdom is the lives values that enables people to live in harmony with other individual and their environment. An example of a place that still maintains this value is a traditional village. West Java has eight Traditional Villages, one of which is the Pulo, located in Garut Regency, where the environment is still very well preserved because the values of local wisdom are applied in environmental management. This study aims to analyzes the values of local wisdom related to environmental management in Pulo Traditional Village community. Data were collected through observation, interviews, literature studies and documentation, then were analyzed descriptively using a qualitative ethnomethodology approach. The results showed that the community retains the value of local wisdom in maintaining their relationship with the environment by 1) preserving the prohibitions in the form of *pamali*, 2) prohibiting livestock rearing that pollutes the environment, 3) using certain plants wisely, as well as limiting the number of buildings and their occupants, and 4) constructing buildings with eco-friendly architecture. Therefore, these values need to be maintained to serve as a model or example for society in general.

Keywords: Local wisdom values; environmental management

#### 1. Introduction

Local wisdom in the Pulo Traditional Village is part of the local culture as a result of all human activities. Culture is generated based on human experience in the environment and related to creativity, taste and intention (Ratih, 2019). The people in Pulo Traditional Village adapt to environmental conditions to capture natural phenomena and respond to them, and the culture in the Pulo Traditional Village was not found in other locations (Indrawardana, 2013; Dahliani, 2015; Qodariah & Armiyati, 2015).

Local wisdom in Pulo Traditional Village could be interpreted as a socio-cultural order in the form of knowledge, regulations, norms, values, and skills of the community in an area to meet the life necessities without destroying the surrounding environmental conditions (Hidayati, 2016). Local wisdom is very important to be preserved in a society in order to maintain environmental balance and it could be encouraged to become a tourism destination (Widodo., 2012; Herman et al., 2021). Setyaningrum & Naomi (2018) stated that the loss of local wisdom values that exist in the community has caused several problems related to conservation and knowledge about the environment. Gunawan

et al (2014) stated that humans have the ability to change the environment even under various conditions. Therefore, local wisdom plays an important role in maintaining harmony between nature and humans.

Environmental damage is caused by the loss of the value of local wisdom and increasing economic needs (Rahayu et al., 2014; Hidayati., 2016). Wyly (2021) found that changes in livelihoods and urban development cause people to change their lifestyle. The Pulo tradtional village is able to survive the times and the increasing needs of the community (Hidayati, 2016). Suarsa & Verawaty (2019) examined the Pulo Traditional Village using a phenomenological approach, it was found that the Pulo Traditional Village was unique compared to other traditional villages, for example the condition of the lake was still maintained. Previous research related to local wisdom including the relationship between the environment and disaster through an ethnographic approach (Dietrich, 2021; Renfrew & Pearson, 2021), environmental pollution (Mascarenhas et al., 2021), and local wisdom of fishing communities (Naing et al., 2009).

Local wisdom values of the Pulo Traditional Village are also in accordance with forest conservation. Griscom et al. (2020) stated that Tropical countries have an important role related to forest conservation. Local wisdom could be an alternative to solving global environmental problems that have been studied previously, therefore the study of local wisdom in Pulo traditional village is interesting to study empirically as a solution. Based on what has been described previously, this study analyzes the local wisdom values of the Pulo Traditional Village community regarding environmental management. This research also complements previous studies on local wisdom in preserving the environment in Pulo Traditional Village.

## 2. Methods

## 2.1 Research Subject and Data Collection Techniques

This research was conducted using a qualitative approach based on research subjects, namely the values of local wisdom in the Pulo traditional village. The instruments were developed according to the data, including a) observation instruments to directly observe the condition of the Pulo Traditional Village and the values of local wisdom; b) an open interview instrument to conduct interviews with traditional elders and local communities using random sampling techniques to further explore the values of local wisdom in environmental conservation efforts; c) literacy study instruments to carry out theoretical data; and d) documentation study instruments to collect documentation data from relevant agencies that cannot be obtained through certain statistical equations, therefore there is no sample term in this study, however is referred to as the research subject in accordance with the part of qualitative research. This study emphasizes subject observation to obtain results, the qualitative approach used emphasizes an ethnomethodological approach that related to understanding about how people or society see, explain and describe the rules of the world based on the researcher's point of view objectively (Rahmat et al., 2020).

# 2. 2 Data Analysis Techniques

The next step is to analyze the data descriptively, namely the research results are described comprehensively, so that the findings in the field become the main source of research. (Prabowo et al., 2016). Descriptive method as part of qualitative research aims to maintain the shape of human behavior and analyze quality, nor turn it into a quantitative entity (Prasanti, 2018). The steps in the research are in accordance with the local wisdom values of Pulo Traditional Village related to environmental preservation which consist of determining and formulating data collection techniques, developing research instruments and then conducting descriptive analysis (Kamarusdiana, 2019).

#### 3. Results and Discussion

# 3.1 About The Traditional Village of Pulo Generating Local Wisdom Values

Based on the survey and census of the Central Statistics Agency (2018) with a combination method, Pulo Village is located in Cangkuang Village, Leles District, Garut Regency. Astronomically, Pulo Traditional Village is located on a small island that extends from west to east with an area of 16.5 hectares, approximately 2 km from Leles sub-district and 17 km from Garut City. Administratively, Cangkuang Village in the north is bordered by Negrlasari Village, Kadungora District; in the south it is bordered by Margaluyu Village and Sukarame Village, Leles District; in the west it is bordered by Talagasari Village, Kadungora District and Leles Village, Leles District; and in the east bordering the village of Karang Anyar. Furthermore, the Central Statistics Agency (2018) with the same census method explained that the environmental conditions in the Pulo Traditional Village Area have very good environmental quality, are clean and well maintained (Figure 1).





Figure 1. The general condition of the Pulo Traditional Village

This area is also an area that has a low noise level with a very limited population, which consists of only 6 families with a male population of 12 and 11 female residents. Pulo Traditional Village residents are on average aged 6 to 90. years by adopting Islam. The education level of the people of Pulo Traditional Village is the People's School (SR) which is equivalent to elementary school (SD). As for their descendants, they already have a higher level of work at the high school level and some are up to university. Their low level of education greatly affects their level of employment.

The results of the literacy study from Central Statistics Agency (2018) with the combined method show that almost the majority of their family heads make a living as farmers, there is also a status as a Civil Servant (PNS) because he has a position as a representative of the kuncen who was officially appointed as an employee of the Banten Cultural Heritage Preservation Center (BPCB) under the Ministry of Education and Culture (Kemdikbud), while the kuncen has the status as an honorary at the Garut Regency Tourism Office. Education and work of the community in Pulo Traditional Village affect land use conditions, the use of agricultural land belonging to the village government is planted with rice and gardens with secondary crops such as corn, cassava, long beans, tomatoes, vegetables and fruits such as papaya, banana and avocado. Agricultural products from the land in Pulo Traditional Village are used by the community for daily consumption, while commercial agricultural activities are carried out on arable land outside Pulo Traditional Village. Agricultural activities carried out by the people of Pulo Traditional Village still use traditional tools in general. However, along with the development of agricultural knowledge and technology, some farmers in

Pulo Village are already using tractors. In this area, there are still many types of traditional plants for food, shelter, traditional ceremonies and for medicinal purposes.

Agricultural activities in the Pulo Traditional Village are also based on local wisdom, as a control so that these activities do not have a negative impact on the environment. For example, agricultural activities without local wisdom, such as research by Hannah et al. (2020) on climate-driven agricultural activities using crop suitability models, climate data, agricultural constraint ensembles, water quality impacts, soil organic carbon impacts and biodiversity impacts showed that uncontrolled agricultural activities can also have adverse environmental impacts, for example northward expansion of agriculture in temperate and boreal ecosystems. can make an additional 18.4 GtC vulnerable and irreversible, while Pulo Traditional Village has local wisdom that controls humans in using land for agriculture, especially also for its forest area. Other examples include: Climate change risks to irreversible carbon may including warming temperatures increasing tree mortality (Sullivan, 2020), hence An alternative approach to assessing risk of future land use conversion could include gradients of human modification (Kennedy et al., 2019).



Figure 2. The livelihoods of Pulo Traditional Village

Based on the results of the study, the people of Pulo Traditional Village and their descendants who live outside the village, but are still in one area of Cangkuang Village are given the opportunity to have a livelihood from tourism activities in Situ Cangkuang and Pulo Traditional Village (Figure 2). They were given the opportunity to trade on booths built by the Garut Regency Tourism Office, as towing rafts to cross tourists from the entrance gate of the Cangkuang cultural and natural tourist attraction area to Pulo village. As for the agricultural activities of the Pulo Traditional Village community, it is carried out on rice fields and garden land, both on village government land and own land, and arable land belonging to others with a rental system, as well as profit sharing called the local community with the term maparo or middle. The land area of Pulo Traditional Village is about 5 hectares and belongs to the village government, which includes residential land, agricultural land, land containing the Cangkuang Temple building and the Cangkuang Site museum.

## 3.2 History of Pulo Traditional Village Regarding the Emergence of Local Wisdom Values

Based on the results of literacy studies and interviews, several historical facts about the Pulo Traditional Village are obtained, it is known that historically Pulo Traditional Village was a village founded by Arif Muhammad who was a soldier from the Mataram Kingdom who was assigned by Sultan Agung to attack. Batavia in the XVII century is confirmed by the results of the research by Suarsa & Verawaty (2019) which examined the same thing with a qualitative approach and an interpretive paradigm as well as a phenomenological approach to reveal this, the same one. However because of his defeat, he was afraid to return to Mataram and looked for a hiding place until one day

he found a lake that had land. Arif Muhammad took his wife with him and gave birth to 7 children, consisting of a son and 6 daughters. The number of descendants is symbolized by the number of buildings in Pulo Traditional Village, namely one mosque which symbolizes 1 boy and 6 houses which symbolizes 6 girls.



Figure 3. Historical site in Pulo Traditional Village

When Arif Muhammad came to Cangkuang Village, the local community had embraced Hinduism, but with a cultural approach, Arif Muhammad then succeeded in spreading Islam. Patterns characterized by Islam and Hinduism can still be found in various activities carried out by the people of Pulo Traditional Village. The evidence of Hindu heritage can be seen from the existence of a temple located on Pulo Panjang Land (Figure 3). This Hindu temple is thought to have been built in the 8th century.

The stone ruins of the temple building were discovered by an archaeologist named Uka Tjandrasasmita on December 12, 1966. After being found, this temple was then excavated and studied in 1967 - 1968, then restored in the range 1974 - 1976. The discovery of the ruins of the temple building was also accompanied by the discovery of a statue of the Gods Shiva is one of the gods worshiped by Hindus. The actual shape of the Cangkuang Temple building is unknown, while the Cangkuang Temple as seen today is actually the result of reconstruction engineering because the original heritage building only shows 40%. After undergoing the reconstruction of the temple building in 1976, Situ Cangkuang and Pulo Traditional Village were inaugurated as tourist attractions and began to be visited by many since 1990 after promotional efforts from the local government.

# 3.3 The Values of Local Wisdom of the Pulo Traditional Village in Environmental Management

Local wisdom in Pulo Traditional Village is defined as a written or unwritten custom that is still adhered to by the local community. Local wisdom is believed to be closely related between residents and the natural environment, in line with results of research by Roesmanto (2018), how local wisdom is more abstract and unwritten but is obeyed by the local community. The results of the study show that the form of local wisdom adopted by the indigenous people of Pulo Traditional Village is to hold fast to Islam as a belief to maintain their welfare. They have the hope that by always obeying Islamic teachings, their life expectancy will be achieved and there will be harmony with social life and the natural environment in line with results of research by Suarsa & Verawaty (2019) which examined the same thing with a qualitative approach and interpretive paradigm and phenomenological approach methods revealing this.

The results of interviews and observations show that local wisdom is a form of their love for the environment, they have a prohibition called Pamali, which if one or several residents violate will get sanctions. The sanctions given do not lead to formal sanctions but rather with customary sanctions that focus on social sanctions. People are taught to love the environment in which they live. They are not allowed to keep four-legged animals such as cows, goats or sheep, buffalo and others with the aim that the natural environment and the environment where they live are not polluted. In addition, it aims to maintain the aesthetics of their home.

Ramdianti et al. (2013) stated that in Pulo Traditional Village with the method used are surveys and exploratory data collection, with interviews and direct observation with descriptive analysis, the results of the research show the diversity of plants, uses, parts used and how to use them. the traditional community of Pulo Traditional Village. There are 93 species of plants belonging to 42 families used by the indigenous people of Pulo Traditional Village. The diversity of plant species in Pulo Traditional Village is still high because the environment is still beautiful and awake. For example, cocos nucifera is widely used because it has many benefits from the roots to the leaves. They believe that the relationship between nature and humans are equal as creatures of God Almighty so that there will be benefits and balance for both of them to take care of each other. In the yard they are also required to plant plants so that the house looks beautiful and its aesthetic value is maintained, it is not allowed to keep 4-legged livestock such as goats, cows and buffalo.

This is intended to maintain the cleanliness of the home page so that it remains beautiful and looks beautiful. Then, apart from being beautiful, the noise level is relatively well maintained. In this regard, there is a prohibition against hitting a large gong, which is the same as when EmbahDalemArif Muhammad's son was paraded by hitting a large gong, when a typhoon suddenly came, causing the child his son was injured and died. The results of research by Ramdianti (2013) which examined ethnobotany with regard to environmental management in Pulo Traditional Village are in line with this research, the study found that there are 42 types of cultivated plants that are used by the people of Pulo Traditional Village as food ingredients, medicinal ingredients, cosmetic ingredients and certain rituals.



Figure 4. The shape of the building in Pulo Traditional Village

In addition, as a form of their love for the environment, they limit the number of buildings and residents in the Pulo Traditional Village (Sriwardani & Savitri, 2019). The shape of the traditional houses of Pulo Traditional Village is elongated and has similarities to each other, the only difference being the shape of their interior. In building houses, they already have knowledge about the strength of buildings that can with stand weather, time and even disasters such as floods and earthquakes. The main materials they use also come from nature, such as wood and bamboo (Figure 4). Aprita & Anisa (2020) explained that the architectural pattern of buildings in community settlements in Pulo Traditional Village is a form of tropical architecture in a spatial layout that is in accordance with

environmental conditions, also in accordance with the materials available in the location without excessive exploitation and destroying nature surrounding.

Research by Lorne (2016) related to with physical and social interactions between humans and their environment in producing buildings (architects) by conducting interviews with 16 academic and practitioner architects, most of whom were interviewed related to the Spatial Planning Agency book, by expanding the interviews using snowball sampling, interviews were conducted in a structured and loose manner, not only trained architects but also architects and two of them were students of geography. The results of the study showed that there was a relationship between geographical conditions and the resulting building. Geographers also think about how the building should be made as part of spatial production, while the research of Petersen (2018) used an empirical study in Denmark with 2500 km² of urban, suburban, suburban and rural land with almost 2 million inhabitants, this study shows how the influence of the landscape garden in their residence, essentially the interaction of the physical and social environment affects the garden or yard in their residence. In line with the conditions in Pulo Traditional Village where the buildings and conditions of the landscape of the yard or park or open land there are also the effects of the interaction between the physical and social environmental conditions of the community and the various philosophies of local wisdom values contained therein.

While the number of residents living in Pulo Traditional Village cannot be more than 6 heads of families, consisting of 23 people and 6 houses. This means that in each house is only inhabited by 3-4 people so that making this area is very ideal and minimal will be the occurrence of environmental pollution, should not reduce or increase the number of houses and heads of families more than 6 households. After two weeks of marriage, the couple is required to leave Pulo Traditional Village and settle in another area. They can return to Pulo Traditional Village when their parents die or are referred to as ngaplus (replacing); women and children were given the right to inherit customary houses, while married boys had to leave the village. Research on the quality of the physical environment and human social activities in sub-urban areas in Australia with a study in Australia with area-based qualitative analysis through observations and interviews showed the relationship between the quality of the physical environment and the social activities of its people, namely a sense of community among its people (Farahani et al., 2022). This is related to the value of local wisdom of the togetherness of the Pulo Traditional Village community with the value of community togetherness.

Each house is required to have good air circulation and between one resident's house and another is required to have a distance so as to allow each of their house buildings to have windows, one of which is because the shape of the roof, namely the building of their house must be elongated (jolopong), is not allowed to be prismatic because there relationship with Embah Dalem's son Arif Muhammad who was injured and died while being paraded using a prismatic stretcher, even though there are other values regarding relatively clean and good air circulation. The results of research by Alamsyah (2011) who examined the structure of the building, the settlements of the Pulo Traditional Village community explained that the structure of community buildings used certain materials, where settlements were also built with certain shapes and sizes which as a whole had techniques and values. The value of local construction that makes it harmonious and compatible with environmental conditions, this research emphasizes and clarifies how settlements adapt without damaging the surrounding environmental conditions. Sriwardani & Savitri (2019) explained that the settlement or house in Pulo Traditional Village is a form of community housing today, because it has an elegant concept even though it is traditional, each room has a special function according to the needs of the community. Nurhamzah et al. (2018) and Ramdianti et al. (2013) explained that the values and norms that become character education, character education is carried out from parents to children. This

research complements that in character education there are environmental management values to maintain a beautiful and sustainable environment.

## 4. Conclusion

Based on the results of research with the subject of the Pulo Indigenous Village Community, it can be concluded that the community still adheres to the values of local wisdom, especially with regard to environmental management, which has made the Pulo Traditional Village have a harmonious relationship between the community and its environment. This is reflected in the environmental condition of the Pulo Traditional Village which is relatively clean and beautiful, and its sustainability is still maintained. Local wisdom values in environmental management includes several things, namely the prohibition of polluting and destroying the environment as stated in the word *pamali*, the prohibition if violated will provide customary sanctions, in the form of social sanctions to violators who make them ashamed and deterrent, so that people tend not to violate the prohibition. These values are essentially positive forms of culture that maintain human existence and maintain harmonious human-environment interactions.

#### **Conflict of Interest**

The author declares that there is no conflict of interest with any financial, personal or other relationship with any other person or organization related to the material discussed in the article.

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