

The Settlement Pattern of Tenganan Pegringsingan Village as an Embodiment of a Sustainable Village

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ABSTRACT

Tenganan Pegringsingan Village is one of the Bali Aga villages in Manggis District, Karangasem Regency, Bali, Indonesia. This village has a linear settlement pattern with the surrounding nature in the form of hills and rivers. The people in this village still uphold the traditions passed down from generation to generation by their ancestors. This village pattern is still maintained today from generation to generation. The existence of customary regulations is one of the factors in maintaining the sustainability of this village so that it can still survive under the influence of globalization. This study discusses the settlement pattern of this village as a form of sustainable village. The approach used in this study is a qualitative approach by collecting data through interviews and documentation. Data collection was carried out using tape recorders and notebooks as voice recorders, image recorders, and recording of interview results. The results of this study indicate that Tenganan Pegringsingan Village has patterns and meanings as the embodiment of a sustainable village.

Keywords: Tenganan Pegringsingan Village; nature; settlement pattern; sustainable village; meaning.

INTRODUCTION

Globalization is a phenomenon that occurs in human life today. The presence of technology can accelerate access to information in the form of modern architectural manifestations so several areas in Bali have started to follow this architectural model. Even though this is a form of adaptation to the times, the identity or culture of a region will slowly shift and then disappear. This identity change did not occur in Tenganan Pegringsingan Village, which is located in Manggis District, Karangasem. This village is a Bali Aga village which has a settlement pattern surrounded by hills and forests and the behavior of the people who adhere to their traditions (Sumunar et al., 2017).

Tradition is an activity that is carried out continuously and is hereditary from one generation to the next. In addition, tradition is the similarity of ideas and material objects from the past, that still exists today, so it can be interpreted that tradition is a legacy that can give birth to culture in society (Sudradjat, 2020). One form of tradition that can be inherited is a settlement pattern or architectural form (Suharjanto, 2011). In the formation of a settlement, there are five basic elements, namely: nature (nature), humans (man), society (society), houses (shells), and infrastructure networks (Doxiadis, 1968). Settlement patterns are the coverage of the distribution of residential areas according to geographic conditions such as streams, beaches, and linear roads (Jayadinata, 1986).

Tenganan Pegringsingan Village is a nature-based village where the village is linear in shape and surrounded by hills and rivers. In their daily activities, people in this village depend on nature. This can be seen in the materials used both for facilities and infrastructure from forest and river products in the village area. The majority of the population earn a living as farmers and craftsmen so that the environment also supports the economy of this village. The villagers have their own dwellings where the land is a usufructuary, which means that the land belongs to the village and is not privately owned (Kristiono, 2017). In the middle of the village, there is an open or open area that is used by villagers for their daily activities such as socializing, village meetings, religious ceremonies, carrying out traditions, and so on (Maghfira et al., 2016).

Most community activities in this village are regulated by the *wig-a wig* which contains guidelines for protecting the village environment, including in terms of the use of building materials, the use of building land, and the preservation of the forest. The concept of sustainability is an effort to meet

the needs of the present without compromising the quality of life of the next generation (Sassi, 2006). The settlement pattern of Tenganan Pegringsingan Village has a good impact on the environment and the village community. This pattern still persists today, so it can be said that this village has a sustainable settlement pattern (Mahabella & Riyani, 2013).

RESEARCH METHODS

This research was conducted in 2023 by discussing a Bali Aga village, namely Tenganan Pegringsingan Village which is located in Manggis District, Karangasem Regency, namely Tenganan Pegringsingan Village. Conducted with a qualitative approach, this research involved the indigenous people of Tenganan Pegringsingan Village as informants. This research method is by in-depth interviews and documentation, while the techniques used are recording and recording techniques. The research instrument used was a recorder to record the voices of the sources and a picture taker to collect documentation, as well as notebooks to record the results of the discussion. Data from informants will be analyzed and presented in an informal way in the form of narrative analysis. The benefit of this research is to provide insight into settlement patterns in Tenganan Pegringsingan Village.



Figure 1. Location of Tenganan Pegringsingan Village. Source: Google Maps, 2023

RESULTS AND DISCUSSION

Settlement Pattern of Tenganan Pegringsingan Village

The settlement pattern in this village is linear, which means that the pattern forms a straight line which forms a row of spaces following the direction of the line. This village also has the concept of Hulu-teen (kaja-keloid) where Kaja means towards the mountain and keloid means towards the sea. This philosophy is believed to be able to maintain village balance by positioning sacred areas on a higher level (kaja) and non-sacred areas on a lower level (keloid). On the north side of the village, it is only used as a temple area, on the middle side as a public open area, and on the south side, there is parking, a place to trade, and public toilets (Adnyana et al., 2021).

Tenganan Pegringsingan Village is surrounded by Kangin Hill to the east, Kauh Hill to the west, and Kaja Hill to the north. These hills flank three hamlets, namely Banjar Kauh, Banjar Tengah and Banjar Kangin. On the west side close to Banjar Kauh there is a river that flows along the village which has the potential to flow to the angan or central part of Banjar Kauh. This proves that Banjar Kauh is the first residential settlement in Tenganan Pegringsingan Village. As time went on, the village community developed their village to the east by maintaining the same settlement pattern, which meant that there were rules that had been set in Banjar Kauh / first banjar. Even though it is called linear, there are small road branches that connect each banjar.

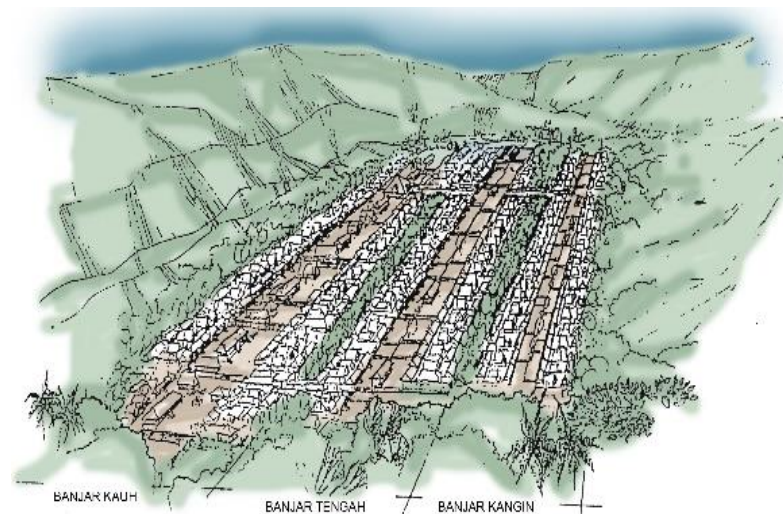


Figure 2. The linear pattern of Tenganan Pegringsingan Village. Source: Modification from Breguet, 1980

Apart from the river, the forest is also an important natural component that surrounds this village. The forest in this village has an area of 583,035 Ha which is 66.41% of the total area of Tenganan Pegringsingan Village. Other parts of the area include rice fields, settlements, and cemeteries. In this village, the forest is used by the community for farming and gardening. There are various types of vegetation such as lamtoro trees, but, durian, pandanus, corn, rice, bananas, and others (Suryadarma, 2008). However, this forest is dominated by trees, with the largest number of trees being jaka trees. This is the reason why this village is often referred to as Alas Jaka / Jaka Forest (Yogantara et al., t.t.). The forest in Tenganan Pegringsingan Village is a useful area for the people of this village. Most of the people are active in the forest, especially for work, as well as for farming activities. After carrying out activities in the forest, the people of this village usually gather in the cloud area. Awangan is a road that extends to a row of houses in the Tenganan Pegringsingan Traditional Village. The area of the cloud is terraced where the steps are lined with river stones. The further north, the position of the cloud is getting higher and in the middle, there is a water ditch that becomes the boundary between one cloud and another. This ditch provides a boundary between the roof and includes the houses facing each other. Above the ditch, there are buildings that the village can use for certain activities. Buildings that can be utilized include Bale Agung, Jineng, Bale Petemu, and Wantilan (Maysuranti, 2018).



Figure 3. Village clouds. Source: concluded Dwitanto, 2023

The Meaning of Settlement Patterns in Tenganan Pegringsingan Village

The settlement pattern in Tenganan Pegringsingan Village generally follows the geographical structure that forms the village as a whole. This settlement pattern includes the pattern of residential houses in the form of plots of land in the yard. Since the past, the size and location of these plots have never changed, namely they have remained longitudinal from north to south with a total of six sequences facing each other. In the middle, there is a traditional building which is located in the middle of the courtyard. These traditional buildings include Bale Panjang, Bale Patemon, Village Barn, Bale Desa, and Bale Bengong. Each lot has an area of about 200 m² plus a backyard which is known as *guess*. Each plot has building components that are mostly the same, namely the flower bale, middle bale, paon, *uma meten*, denial of kemulan, junctional denial, *guess*, and *natah* (I Ketut, 2010).

Community activities are mostly carried out in the *patemon bale*, long bale, and community bale. Therefore, all the houses face the street area, with the backyard of each house being the opposite of the backyard of its neighbor. The settlements in this village consist of four rows which, when sorted, it appears that there are six rows. In the middle, there are two rows whose backs touch each other, so that there is an open courtyard that extends from north to south. This pattern has a good impact on the people of this village because the front yard of the house will always look clean because the trash will be disposed of in the back area or *guess*. Apart from that, another positive impact is the creation of good and unhindered air circulation which originates from the blowing of the northern mountains and also the sea breeze from the south coast. This condition keeps Tenganan Pegringsingan Village cool and fresh even during the long dry season (Maharani, 2019).

Floods never hit Tenganan Pegringsingan Village because the land in this village is in the form of terraces, that is, it is highest in the north and the further south it gets lower. Apart from that, in the southern area, there are also large rivers which serve as rainwater storage containers. Apart from flooding, damp conditions can also be prevented with a settlement pattern like this village. This is because the wind will blow with more frequent frequency, thus impacting on the durability of buildings made of wood and leaf materials. Even though they are made with these materials, the buildings and houses in this village can last for decades (Kristiono, 2017).

The settlement of Tenganan Pegringsingan Village is linear in shape and is surrounded by three hills which mean protection. This protection is in line with the philosophy that the community believes in, namely *Jaga Satru* which likens these hills to a protective fortress. This philosophy of protection is also reflected in human activities that protect their villages by conserving forests. As a result of maintaining a harmonious relationship with the forest, the villagers believe that nature will protect them as well, such as the absence of landslides, forest fires, drought, and so on. In addition, the linear pattern creates no obstacles to air circulation from the sea. This makes the condition of the village beautiful because it guarantees fresh air and creates comfort for the local community. Besides being surrounded by forest, there is a river to the west of Banjar Kauh. Settlements adjacent to the river area mean the community's dependence on the river. The river is an abundant source of water and is needed by villagers for their needs, such as washing, bathing, and so on. The river stones are also used by the community in building houses, such as for the pavement of houses and roads in the clouds as footpaths and terraced soil supports. Most of the water sources used by the residents of Tenganan Pegringsingan Village come from the river. The river flow is still used because it is clean and not polluted. Water from this river is channeled by pipes to each head of the family for their daily activities (TENANGAN, n.t.).

The pattern of houses in this village facing each other creates a public open space in the middle of the village. The village community believes in *Mahulu Ka Tengah*, which means a public open area, as the center of spatial orientation because it is located in the middle of a settlement. This makes it easier for people to gather and socialize. Therefore the local community uses the area not only for customary activities but also for daily activities, such as chatting, holding village meetings, and so on (Pratama et al., 2016). Traditions in this village such as *pandan war* are also carried out in this area which attracts tourists to visit. This situation has made the local community use the private area for other activities such as trading and displaying works of art.



Figure 4. Pandan war. Source: Nyoman Hendra Wibowo, 2022

Sustainable Settlement Patterns in Tenganan Pegringsingan Village

Settlement patterns and house-building structures in Tenganan Pegringsingan Village do not seem to have changed significantly, even amidst the rapidly growing influence of technology and science. The people of this village do not feel like changing their environmental conditions because so far it has been considered that the surrounding natural environment can always meet their needs. Apart from that, the natural and environmental conditions in this village also did not display any very visible changes. Therefore, people think that they do not have to change their way of life, attitudes and behavior to change the environment that survives. The existing and determined patterns are ultimately held and upheld based on traditional knowledge that can adapt to the surrounding natural conditions. The characteristics of this pattern are still maintained by the community until now because the community has the perception that conditions like this have been able to meet the needs of people's lives. In this village, people openly accept changes in technology and science, but these two components are considered only as a complement, but not as a factor to change the environment. This is what causes the consistency of natural conditions, settlement conditions, and housing conditions to be constant and there are no significant changes (Rafika & Samsu, 2013).

The people of Tenganan Pegringsingan Village also carry out their activities based on village rules known as awig-awig. This regulation also has a role in the sustainability of settlement patterns in this village. Awig-awig is an ancestral heritage that is believed to be the foundation of the life of the people of Tenganan Pegringsingan Village (Wirantari, 2018). The existence of a wig-a wig has existed since the 11th century and is still respected by the village community. Despite the rapid growth of tourism, the existence of awig-awig is important to maintain their identity which is believed to have a positive impact on various aspects of people's lives (Landrawan & Juliawan, 2022).

Awig-awig is one of the factors that make Tenganan Pegringsingan Village a sustainable village. There are several rules in preserving the environment, especially forests, one of which is not being allowed to pick fruit and cut certain trees carelessly, without asking or obtaining permission from the customary government. Some strict sanctions and fines will be imposed if there are people who are proven to have violated the regulations that have been set, even though the tree is located in the forest in the area of a private house (Interview with Villagers, 2022).

The sustainability of this village is also exposed to settlement patterns which are still regulated in awig-awig (Landrawan & Juliawan, 2022). Every community is obliged to follow the pattern of houses that have been determined so that the pattern of settlement in this village still survives to this day. This village has the Jaga Satru concept, where the Jaga Satru concept also influences the sustainability of this village pattern. This can be seen in the belief in protecting the village, including in terms of protection from influences originating from outside the village, including in scientific

and technological developments that are not in line with the values in Tenganan Pegringsingan Village (Interview with Villagers, 2022). Some other influences include modern building forms, the use of materials that are not environmentally friendly, building height, house tiers, and ineffective land use. The impact of this influence is very large and can result in changes in the values and patterns of settlement in Tenganan Pegringsingan Village. Even though there are many outside influences, until now, the people of this village still adhere to tradition and still use natural materials from the forest for development purposes. The materials they get from their environment are materials such as wood from the forest for house structures and coconut leaves or thatch for roofing purposes. In addition, river stones taken from rivers around the village are also used for pavements to resist landslides, and so on (Aritama, 2023).

CONCLUSION

The settlement pattern in this village is linear and is formed from its geographical location, which is surrounded by hills. This condition affects several aspects such as environmental, economic, and social. With this pattern, this village gets cool air circulation and makes people feel comfortable in this village area. This good natural condition is also influenced by village awig-awig which obliges the community to protect their natural environment. This awig-awig also requires the community to maintain the pattern of their houses so that the settlement pattern in this village continues. The linear pattern makes the people's homes in the village face each other and form a public space in the middle so as to improve social relations between communities and provide a place for their cultural/religious activities. This helps increase tourists to visit this village. The increase in the standard of living of the people also occurs due to the influence of tourism which ultimately increases the incomes of the people because they can carry out activities as traders in addition to farming activities. Therefore, it can be indicated that Tenganan Pegringsingan Village is a form of village with a sustainable settlement pattern.

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