

# Enhancing natural Values in vernacular settlements of Tenganan Pegringsingan, Bali, Indonesia

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## Abstract

Vernacular settlement in Indonesia is closely related to the historical background of people settling down their livelihood in the wilderness. The people of Tenganan Pegringsingan in Bali pay attention to natural elements in finding a place to settle and follow natural phenomena in arranging the layout of houses. Hereafter, a row of houses is arranged linearly following the course of rivers flanking the settlement. The study investigates legends and mythologies that residents refer to, surveys physical arrangements and observes daily activities of the people in space. The result of the study confirms that the hill as the highest area is defined as the most sacred area and protected against intruders by placing the entry gate at the opposite end of the hill. The main axis for linearity is reinforced by conducting social and ritual activities and placing impressive buildings in the middle of the settlement. The natural elements are intertwined with social and ritual activities and then marked by physical objects that always remind people that human life is part of the universe. The built environment is created to enhance natural values and not the other way around.

**Keywords:** Vernacular Settlement, Tenganan Pegringsingan, Natural Elements, Sacred Area

## 1. Introduction

Tenganan Pegringsingan is one of the traditional Bali Aga villages located in the Tenganan Village area, Manggis District, Karangasem Regency, Bali, Indonesia (Figure 1). This village is an example of a traditional village known as *Bali Aga*, also known as Early Balinese. Each *Bali Aga* village has its traditions, which cannot be generalized.

The fundamental difference between *Bali Aga* society and mainstream Balinese society, known as Balinese Majapahit, is burial practices. The Bali Aga people do not burn the deceased bodies (*ngaben*) as mainstream Balinese society does. Instead, they buried their bodies; alternatively, the bodies were placed on the ground under trees.

Apart from that, another distinctive characteristic of the *Bali Aga* people is that they have a social structure different from the castes generally known in Bali. *Bali Aga* society recognizes social hierarchy, but not in the form of caste. Traditional leaders consist of many people, not just one leader.

The settlement pattern in *Bali Aga* village is linear and does not follow the *Pemempatan Agung* pattern, which is generally found in mainstream Balinese society. Apart from that, their houses have an ancient, simple appearance and are devoid of flashy ornaments. Meanwhile, in the religious aspect, the people of Tenganan Pegringsingan village do not celebrate *Nyepi*, which is the *Saka* New Year for mainstream Balinese society. The Tenganan people have different calendars, which show differences in the number of days in certain months (*sasih*) and different types of years from the *Saka* calendar (Rusjyanthi, 2017).

Historically, there is little evidence explaining the origins of the Tenganan people. However, there are two versions of the story about the beginning of Tenganan society. The first version claims that the Tenganan people came from Beulu, Gianyar. In contrast, the second version states that they came from India, especially the Orisa area in Bengali, as stated by George Breguet.

Settlement in Tenganan Pegringsingan village follows a linear pattern stretching from north to south, with the orientation of the settlement being in the middle part of the settlement in the form of linear open space, and this is the core of the village settlement. This type of settlement pattern is typical of the *Bali Aga* village settlement pattern in general. This pattern has a very ancient character, following an orientation towards mountains, hills, sea, or rivers, and includes open spaces that stretch along the central courtyard of the village. Because this pattern pays attention to sacred and profane aspects, all sacred activities and buildings are usually placed on high land contours, often facing toward the mountains.

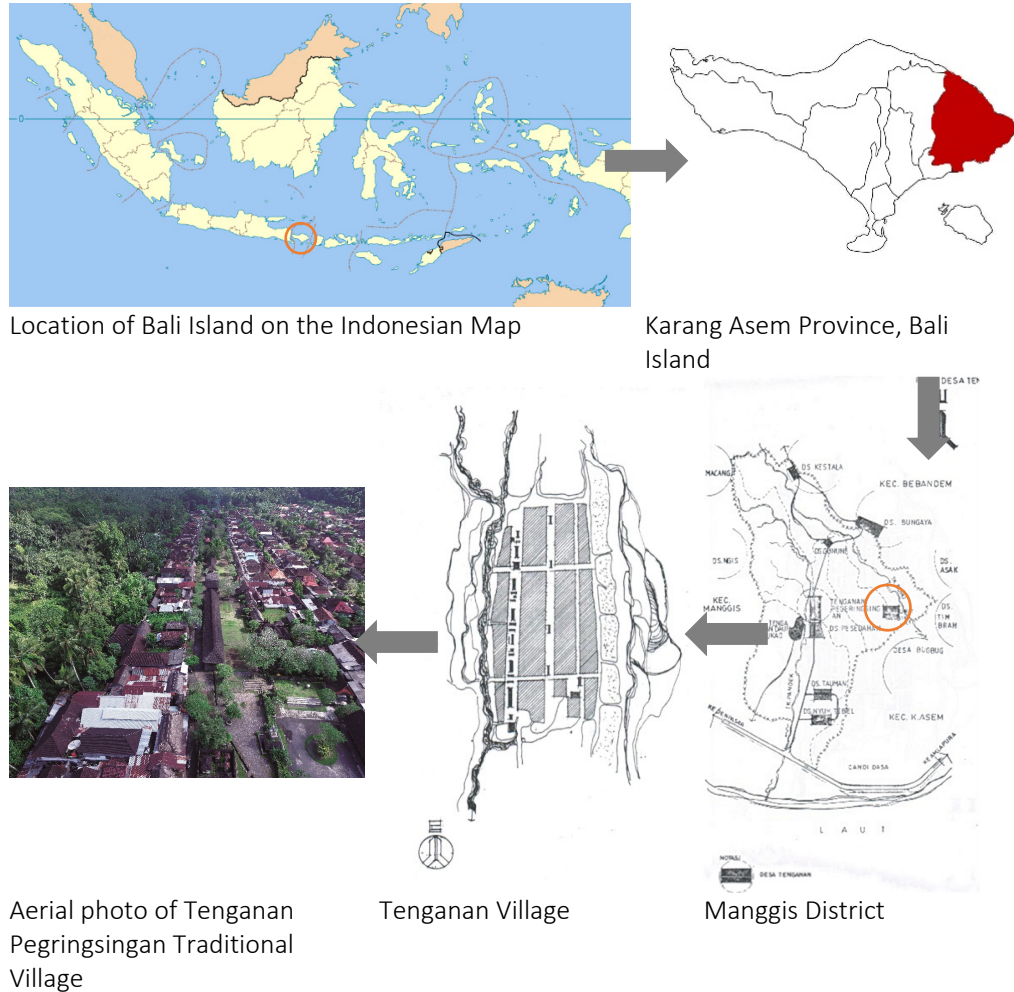
Apart from that, burial practices also reflect the concept of settlement, which considers the differences between high and low, sacred and profane, in *Bali Aga* society. This concept is known as "*Hulu-Teben*." Thus, settlement patterns and cultural aspects such as origins and burial practices are important elements in understanding the history and culture of the Tenganan Pegringsingan people, as well as the *Bali Aga* people in general. It reflects the rich and precious heritage of this ethnic group, which continues to maintain its traditions to this day.

In terms of topography and geography, the Tenganan Pegringsingan traditional village settlement has a unique position. This village is surrounded by three hills filled with forests, plantations, and rice fields, as well as two rivers. These hills have an important role in the lives of the indigenous people of Tenganan village because they are their main source of life and livelihood. The hills surrounding this village have very high ecological value for the community. The forests that grow there provide natural resources that are important for everyday life. These forests provide wood, medicinal plants, and foodstuffs. Therefore, these hills are a very meaningful source of livelihood for village communities. The river in the Tenganan village area is divided into two parts. The river in the western part of the village is used as a source of clean water for the community's daily needs, while the river in the eastern part is used for irrigation of rice fields. It reflects the importance of water in agriculture and everyday life.

It is interesting to note that these rivers are not only used to fulfill physical needs but also have deep symbolic meaning in the ritual and spiritual lives of the Tenganan Pegringsingan people. It shows how close the relationship between humans and nature is in their lives. Thus, the topography and geography of Tenganan Pegringsingan village play a central role in the lives and culture of its people, who are highly dependent on the natural resources around them and have a deep respect for the ritual and spiritual aspects of their environment.

The survey results reveal that vernacular settlements for the Tenganan Traditional Village Community have several main characteristics that reflect the close relationship between humans and their natural environment. Following are the three main characteristics of these vernacular settlements:

- 1) **Influence of the Natural Environment:** The physical aspects of the residential environment are greatly influenced by natural conditions, such as topography, geography, and climate. It indicates that natural factors significantly influenced the structure and layout of their settlements. For example, the slope of the land, geographic location, and local climate played an important role in how these settlements were built and organized.
1. **Social and Cultural Aspects:** The social and cultural characteristics of the Tenganan Traditional Village community are reflected in the practices of their traditional ceremonies and rituals. These rituals become a tangible manifestation of their values, beliefs, and cultural identity. Thus, vernacular settlements not only function as physical residences but also as stages for the community's cultural and spiritual expression.
2. **Settlement Patterns that Reflect Relationships with Nature:** Village settlement patterns depict nature and togetherness as fundamental aspects of the cultural landscape in Tenganan Pegringsingan Village. It shows that the way this village is built and managed reflects a balance between human needs and the preservation of the surrounding nature. The people understand the importance of maintaining a harmonious relationship with nature in their lives.



Location of Bali Island on the Indonesian Map

Karang Asem Province, Bali Island

Aerial photo of Tenganan Pegringsingan Traditional Village

Tenganan Village

Manggis District

**Figure 1:** Tenganan community, Manggis District, Karangsem Province, Bali  
**Source:** <https://commons.wikimedia.org>, Bali Provincial Government, Public Works Department, Traditional Village Environmental Conservation Planning Project, 1988–1989, Artanagara, 2021.

## 2. Theoretical Background Vernacular Architecture

Vernacular architecture can be defined as unpretentious, simple, indigenous, and traditional structures constructed from local materials and adhering to well-established forms and types (Curl JS, 2006). Within the realm of vernacular architecture, each tradition is closely intertwined with social and economic imperatives, evolving to fulfill specific requirements within distinct cultural contexts (Oliver P., 1998). According to Al Sayyad (2006) and F. Vegas (2002), vernacular architecture is a particularly distinct style of architecture that originates with consideration for its surroundings and serves as a direct representation of the culture of the people who produced it.

The characteristics of vernacular architecture are built by considering factors such as climate, topography, and the geography of the context. The use of local materials and local construction techniques became the main principle while still respecting the natural and cultural environment of the place (Rudofsky, 1964; Rapoport, 1969). The study conducted by Rudofsky and Rapoport focuses on the relationship between humans and nature. Therefore, the study carried out by Jones in 2033 regarding the relationship between cultural landscapes and the built environment becomes very important to study. In his 2003 study, Jones argued that the cultural landscape has two dimensions. First is the physical dimension, which includes the results of human activities in changing nature over time. The second is the cognitive dimension, which relates to cultural meaning because of human conversations regarding the landscape in which they live. Jones also notes that humans have emotional ties to the physical environment around them, including natural and human-made environments, which are part of the intangible or cognitive dimensions of the cultural landscape.

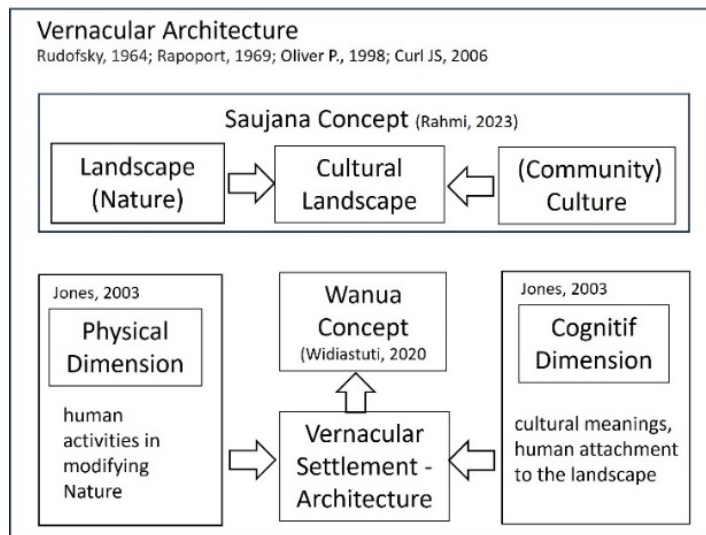
Vernacular architecture in Indonesia has its roots in the local wisdom of people in rural areas. Most research on vernacular architecture in Indonesia has focused on certain aspects, such as the relationship between vernacular residential homes and building materials, the tectonics of house construction, interiors, and building elements, and how all of this is related to the availability of natural materials and climate. However, it should be noted that there is still little research that discusses the relationship between indigenous community settlements and nature and culture. Several vernacular architectural studies that explore the relationship between settlement, nature, and culture and have a context close to the research area have been carried out and can be identified in the following studies.

The study on Traditional Domestic Architecture in the Rural Cultural Landscape of Borobudur, Indonesia (Rahmi, 2023) discusses the vernacular architecture and its relationship to the cultural landscape in Indonesia through a concept called "Saujana." Saujana in Indonesian reflects the interaction between landscape and community culture, which involves cultural processes and products in the unity of space and time. This kind of interaction has been going on for a long time in Indonesia, from the past to the present generation, creating a harmonious balance of life between nature and humans. The relationship between culture and landscape manifested in the term "cultural landscape" has many meanings and deep understanding. However, this research emphasizes change and continuity in traditional houses as an element in the cultural landscape of Borobudur rather than specifically discussing how the landscape and culture influence existing settlements. This study found that traditional houses, as an element in the cultural landscape of Borobudur, experience two conditions in their existence, namely change and continuity.

The study entitled "Between Mountain and River: A Vernacular Settlement-Architectural Concept in the Indonesian Archipelago" (Widiastuti, 2020) discusses the concept of typical vernacular settlements in Indonesia as a representation of the architectural character of settlements in the Southeast Asia region, which consists of islands. At the beginning of the study, it was stated that the architecture between mountains and rivers discusses the local vernacular village concept in Indonesia, which is a characteristic of residential architecture in the archipelagic Southeast Asian region. Typically, this concept describes a cultural landscape formed by villages with rows of houses standing on poles with striking roof designs and shade,

having a volcanic orientation, and faced by rice fields stretching from the foot of the mountain towards the river. Hilly terrain, volcanoes, branching rivers, and a maritime backdrop generally characterize the ecology of islands in tropical climates. An important concept that is the main focus of this study is the concept of "Wanua." In this study, it is explained that Wanua is a conceptual model of settlement in Indonesia that is identified as an ancient concept of settlement (Santoso 2008, p. 9; Ahmad 2010, pp. 207-209). Wanua, meaning "inhabited world," land, country, place, or village—wanua/banua/manua/bonua (Fox 2006, p. 9).

The following figure will illustrate the relationship between various literature reviews and their relationship to research.



**Figure2:** Conceptual Framework of the Theory

**Source:** Rudofsky, 1964; Rapoport, 1969; Oliver P., 1998; Jones, 2003; Curl JS, 2006; Widiastuti, 2020; Rahmi, 2023

From the literature review and articles presented above, the study of indigenous community settlements is very closely related to natural and cultural aspects. It indicates that there are characteristics and relationships between vernacular settlements and three main aspects. First, vernacular settlements are closely related to physical aspects and the natural environment, especially hills and rivers. Second, vernacular settlements are also connected to the social aspects and traditions of local communities. Finally, vernacular settlement patterns are strongly influenced by natural conditions, such as topography, geography, and climate appropriate to the local context, as well as cultural conditions, including human attachment to nature and traditional patterns.

### 3. Research Methodology

This research began by studying the history, topography, geography, society, and settlements in the Tenganan Pegringsingan area, Karangasem, Bali. Data such as geography, topography, and the natural environment are carried out simultaneously with surveys in settlement areas.

A survey was carried out in the Tenganan Pegringsingan community, and it was found that the settlement area is unique because it is located between three hills and flanked by two rivers. The context of a forest landscape like this is a place where various plants that the population can eat grow, such as corn, beans, and rice. River water is a source of irrigation for rice fields and plantations, as well as a source of drinking water. These two water sources use two water sources from different rivers.

The research began by investigating a few important aspects, including history, topography, geography, society, and settlements in the Tenganan Pegringsingan area, Karangasem, Bali. Data such as geography, topography, and the natural environment are collected simultaneously by conducting surveys in settlement areas. The location of Tenganan Pegringsingan has unique location characteristics, namely that this settlement is located between three hills and surrounded by two rivers.

This research aims to explore the landscape characteristics of vernacular settlements in the traditional Balinese village community of Tenganan Pegringsingan. This approach involves understanding the physical and socio-cultural criteria to be studied. In this research, a methodology is used that includes the following steps to understand a vernacular settlement located between three hills and two rivers:

- 1) Data Collection: Data regarding vernacular settlements is collected through surveys, photography, and the use of maps produced from secondary data.
- 2) Physical Aspect Analysis: Data related to physical aspects, such as forests, hills, rivers, topography, and geography, are analyzed to understand their contribution to the characteristics of vernacular settlements.
- 3) Cognitive Aspect Analysis: Data regarding cognitive aspects, such as ritual and spiritual activities that occur in public open spaces in the middle of settlements (which also reflect community culture), are analyzed in depth.
- 4) Conclusion of Results and Criticism of Theory: The research results are then concluded and evaluated critically by considering relevant theories, especially regarding the relationship between vernacular settlements and landscape and community culture.

## **4. Findings and Discussion**

### **4.1 History of Tenganan Village**

Initially, complete information regarding the origins of the Tenganan Pegringsingan traditional village community was very limited. It was caused by a fire that occurred in 1840 which resulted in the burning of all village documents. There are at least two versions explaining the existence of the indigenous people of Tenganan Pegringsingan Village (Artanegara, 2021).

The first version says that the people of Tenganan Pegringsingan Village originally came from Peneges-Bedahulu Village, Gianyar Regency, in Bali. This information comes from records at Samuan Tiga Temple. In the 10<sup>th</sup> and 11<sup>th</sup> centuries, there were various religious sects in Bali, which often caused conflict. King Sri Kesari Warmadewa, who ruled Bali from Bedahulu village, invited a priest from Java named Mpu Kuturan to find a solution to the conflict. The result of the Samuan Tiga meeting in Bedahulu village was that Mpu Kuturan introduced the

Shiva sect. Some of the native people of Tenganan Pegriingsingan Village who originally lived in Bedahulu Village accepted the Shiva sect, but they felt they were more adherents of the Indra sect. Therefore, they decided to leave their original village and head to a new location by sea. In this story, there is some corroborating evidence, such as a relic in the form of wood called *pahwat*, which is a boat, as well as the existence of a traditional ceremony in the 7<sup>th</sup> month called *Meperahuperahuan*. Other evidence is the large rocks in the Tenganan Pegriingsingan Village area and on Candidasa beach, which are called *Batu Manggar* (*Batu* = rock, *Manggar* = anchor), which is related to the story of the move of the Tenganan Pegriingsingan people from Bedahulu.

The second version describes the people of Tenganan Pegriingsingan Village as *wong peneges* who adhere to Hinduism with the Indra sect. This community claims that their ancestors came from India, not Javanese descendants from Majapahit, who moved to the island of Bali. The findings of a Swiss scientist named George Breguet in 1995 support this claim. Genetic research shows similarities between the people of Tenganan Village and the people of Calcutta, India, especially in the Orisa region of Bengali.

Both the first and second versions confirm that the origin of this settlement area was the result of the migration of a group of people from the Indra sect in Bali. They then founded a new settlement, which is currently known as Tenganan Village. This village is built between three hills and flanked by two rivers on the west and east sides of the village.

The origin of the name "Tenganan" has an interesting history. Goris in Astika (1988: 27) notes that the word "Tenganan" has been found in one of the Balinese inscriptions with the spelling "Tranganan," which probably changed to "Tenganan" over time. The geographical position faced by Tenganan village influences the pattern of settlement placement. This pattern follows a linear pattern that extends from north to south, with an orientation towards the hills. The northern part of the village has a higher contour than the southern part. Therefore, important buildings that have sacred value are placed in the north, while the village entrance is in the south (profane).

It is important to note that the Balinese, especially the Tenganan people, pay great attention to values that are considered sacred, such as mountains and hills, as sacred orientations. It is a form of village community resilience that involves maintaining and passing on sustainable values from the past to the present generation.

#### **4.2 Vernacular Settlement-Architecture**

Geographically, Tenganan Village has unique characteristics. Terraces, with a lower elevation towards the south, characterize this village. This village is located between and surrounded by three hill areas, which border 1) *Kangin Hill* to the east, 2) *Kaja Hill* to the north, and 3) *Kauh Hill* to the west. The landscape context of hills, forests, and rice fields like this is a place where various plants that the population can eat grow, such as corn, beans, and rice.

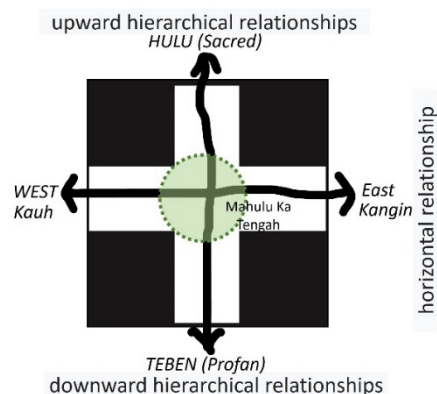
Tenganan Village has two rivers (*tukad*) that flow throughout the year. 1) *Tukad Buhu* to the east of Kangin Hill, which functions as the main source of irrigation for the rice fields of residents in the *Subak Nagasungang* and *Subak Sengkawang* areas; 2) *Tukad Pandek* to the



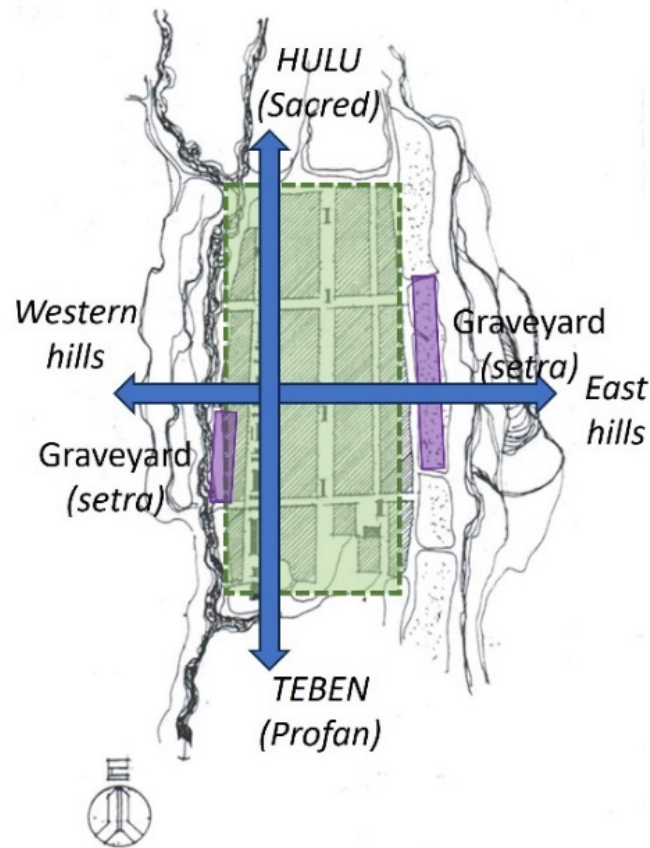
west of the settlement area, which is the main source for meeting the clean water needs of the Tenganan population.

The settlement pattern in Tenganan Village is linear, with buildings regularly lined up from the north end of the village to the south end. This area is characterized by terraces and terraces, with elevations decreasing towards the south. The residential structure of this village is divided into four rows. The westernmost row faces east, while the second row from the west faces west. Each row is further divided into plots or yards occupied by one family (*kuren*).

In the Tenganan village settlement, there are three spatial pattern concepts (Permana, 2010; Adnyana, 2021; Handara, 2022). The first concept is the *Tapak Dara* Concept, which is based on the meeting between *Hulu-Teben*, a symbol of high-low, sacred-profane, north-south (*kaja-kelod*) orientation, and east-west orientation (*kangin-kauh*), which refers to the direction of the sun's rising and setting. These two meeting axes form the concept of *Tapak Dara*. The second concept is the *Mahulu Ka Tengah* concept. This concept considers the meeting of the orientations of the *Tapak Dara* axes as a rotation like a bracelet, with the axis in the middle. It shows that the middle direction is the center of spatial orientation, with the village open space (*awangan*) as the center. This concept is reflected in the procession of traditional activities and traditional ceremonies that take place in the open space area of the village, which are spread along the linear open spaces of the village settlements. The third concept in the Tenganan Pegringsingan village settlement is known as *Jaga Satru*, which describes a settlement pattern resembling a natural fort between three hills on the north side, east side, and west side. This concept comes from the history of the village, which worships Dewa Indra, or the God of War, as the highest god according to the Tenganan Pegringsingan Traditional Village Community. This concept has meaning as a form of protection from enemy attacks. The form of the village defense mechanism can be seen through the representation that walls like a defensive fortress surround the village settlement, and there are entrances (*lawangan*) located at the four cardinal points. It allows villagers to access and leave the village easily while at the same time protecting against potential attacks from various directions (Figure 3 and Figure 4).



**Figure 3:** The Concept of the Tapak Dara, Mahulu Ka Tengah, and Jaga Satru  
**Source:** author, 2023

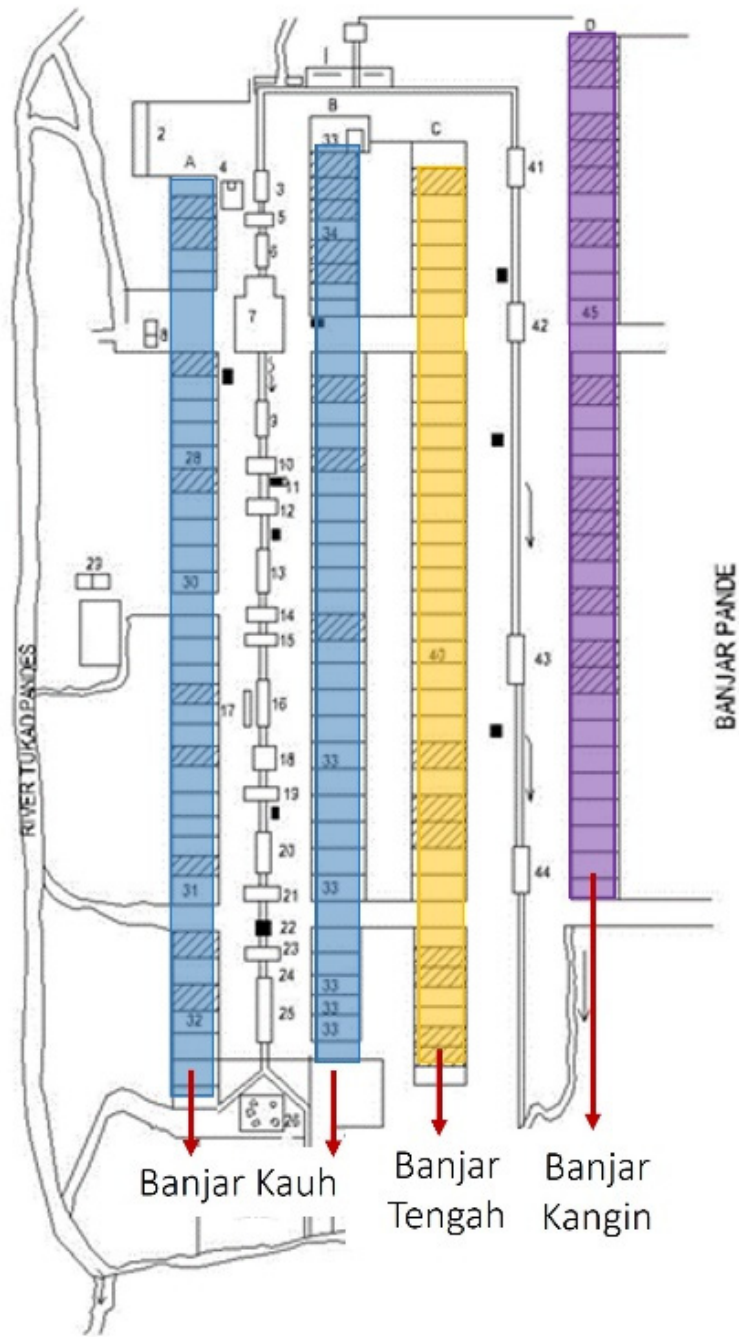


**Figure 4:** Implementation of the concepts of Tapak Dara, Mahulu Ka Tengah, and Jaga Satru in Tenganan Pegringsingan village settlements

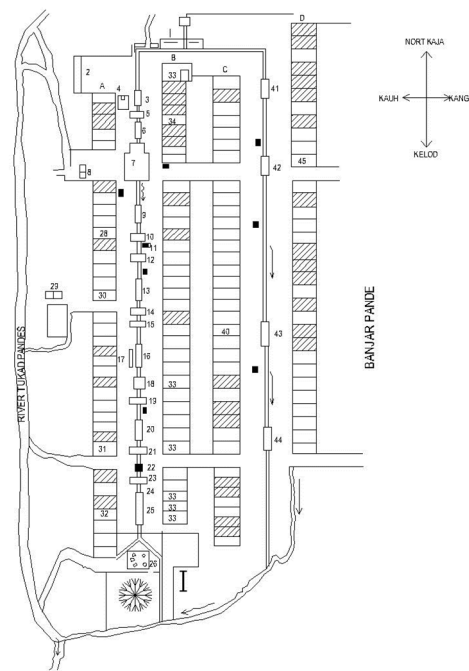
**Source:** author, 2023

The Tenganan Pegringsingan traditional village settlement is a community consisting of several smaller community groups called "Banjar." *Banjar* is a form of social community that is important in the life of this traditional village, both in good times and bad. The concept of *Banjar* is based on local living associations or regional unity, as explained in research by Covarrubias in 1986 (pages 39–70). *Banjar* is not just a group of people living in a geographical area; it is also a social community that shares many aspects of daily life. *Banjar* is a symbol of social unity and relationships between communities in this village community.

In the Tenganan Pegringsingan traditional village settlement, three *banjars* play an important role in the lives of the people, namely: 1) *Banjar Kauh* (western part): This is the core settlement in Tenganan village, and almost all the core traditional buildings and public facilities are placed in this banjar. 2) *Banjar Tengah* (central part): This is the residence of traditional villages (*krama*). 3) *Banjar Kangin* or *Banjar Pande* (eastern part), which is divided into *Banjar Pande Kaja* and *Banjar Pande Kelod* (Figure5 and Figure6).



**Figure 5:** Pattern and layout of *Banjars* in the Tenganan Pegringsingan traditional village settlement.  
Source: Author, 2023



**MAP OF TENGANAN PEGRINGSINGAN**  
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**Figure 6:** Map of Tenganan Pegringsingan Village

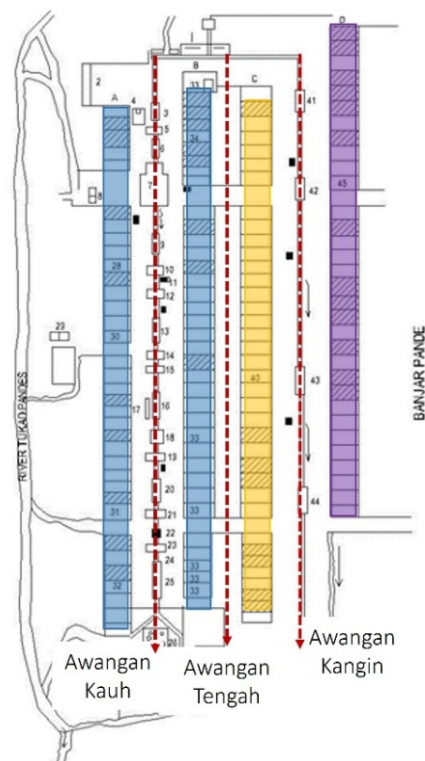
**Source:** Kertonegoro, 1986; Tenganan Village Office, 2021

**KEY TO MAP OF TENGANAN**

1. Public bath
2. Public playing field
3. *Bale Banjar Kauh I*: Meeting pavilion for members of *Banjar Kauh I*
4. *Pura Jero*: Jero Temple
5. *Ayung (lumbang)*: Storage place for rice owned by the village.
6. *Bale lantang*: Place to make offerings for *odalan* (temple ceremony) at Jero Temple
7. *Wantilan*: Tenganan people public meeting place
8. Public toilet
9. *Petemu Kaja*: Meeting pavillion for *teruna* (young men) from the north
10. *Jineng Temu Kaja*: Rice granary for rice owned by *teruna* from the north.
11. *Pura Sanghyang*: Temple for Sanghyang Raja Purana
12. *Jineng Sanghyang*: Rice granary for *Pura Sanghyang*
13. *Bale Petemu Tengah*: Meeting pavilion for *teruna* from the central area
14. *Jineng Temu Tengah*: Rice granary for *teruna* from the central area
15. *Jineng Desa*: Rice granary for village-owned rice.
16. *Bale Banjar Kauh II*: Meeting Pavilion for members of *Banjar Kauh II*
17. *Laapan*: Offering place.
18. *Pura Dalem Swarga*: *Swarga* Death Temple used by Tenganan Pegringsingan villagers.
19. *Bale Gambang*: Place for *gambang* music during the *Odalan* at the *Swarga* Temple of Death; also used to store rice.
20. *Petemu Kelod*: Meeting pavillion for *teruna* from the south
21. *Jineng Temu Kelod*: Rice granary for *teruna* from the south
22. *Bale Kukul*: Pavillion where *kukul* (alarm from wood materials) is kept.
23. *Bale Kencan*: Pavillion where legal cases are heard.
24. *Sanggar Uduan*: *Uduan* shrine
25. *Bale Agung*: Central meeting place for people of Tenganan Pegringsingan, also used for *adat* ceremonies.
26. *Pura Dadia Batu Guling* Temple for Batu Guling lineage

27. *Pura Batan Tlaji*: *Batan Tlaji* Temple with 11 seats for the ancestors of 10 lineages and one for “*Mulanda*” (*Betara Indra*)
28. *Dapur Temu Kaja*: Kitchen for events at *Temu Kaja*
29. *Pura Dalem Kauh*: *Kauh Dalem* Temple
30. *Dapur Temu Tengah*: Kitchen for events at *Temu Tengah*
31. *Dapur Temu Kelod*: Kitchen for events at *Temu Kelod*

The survey results for the Tenganan residential area show a linear settlement pattern consisting of four rows. Rows one and two, also known as *Banjar Kauh*, constitute the core of the old settlement. In the middle of rows one and two is an open space known as *awangan kauh*, which is used as the main location for erecting important buildings in village ceremonies and rituals. Some of the significant public buildings located in the middle of this open space include the *Pura* (place of worship), *Bale Lantang* (a place for village deliberations and meetings), *Jineng Village* (a place for rice granary villages), and the Village Kitchen (a place for community cooking during rituals and ceremonies). The third row is the *Banjar Tengah*, and the open area between the second and third rows is known as the *awangan tengah*. The fourth rows constitute *Banjar Kauh* also known as *Banjar Pande*, while the open space between the third and fourth rows is referred to as *awangan kangin* (Figure7).



**Figure7:** Position of village open space (*awangan*) in the Tenganan Pegringsingan traditional village settlement

**Source:** Author, 2023

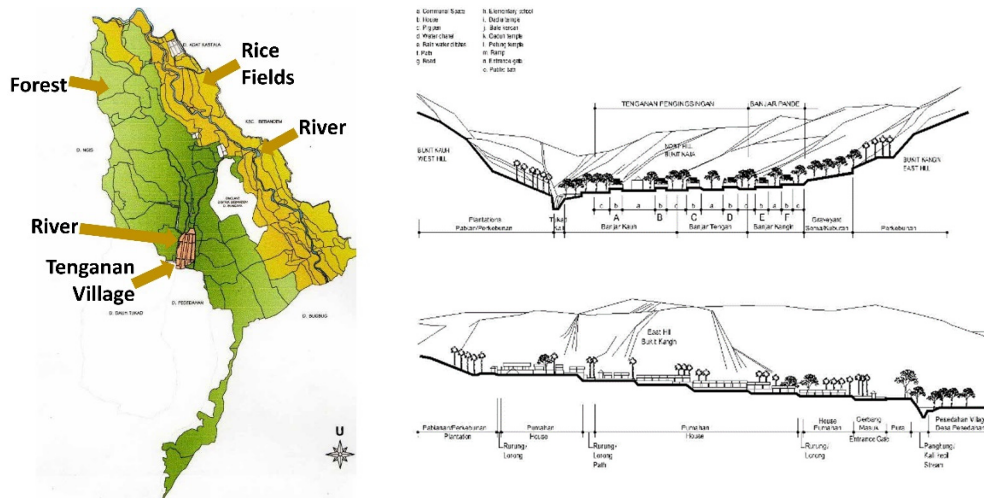
The Wanua concept from Widiastuti's research in 2020 illustrates that settlements for the Tenganan Indigenous People are not just physical spatiality but also social spaces. It is in line with Jones' view, which shows that the physical and cognitive dimensions are reflected in the work of the Tenganan community in building with existing linearity patterns. The construction of new buildings is placed in the fourth row (the western part of the village) without changing the linear pattern of the village.

The *natah* village or *awangan* (open public space) pattern shows the construction of important public buildings, which have deep cultural meaning for the Tenganan Village Community. It reflects the strong ties between people and the places they live. Apart from that, the spatial village *natah* also acts as an important residential center for the entire community, where various ritual and ceremonial activities of the entire village community are held.

#### **Hills and Rivers in Village Settlements**

The area of the Tenganan Pegringsingan traditional village is 917.2 hectares, stretching from north to south, covering a rice field area of 255,840 hectares, a forest and plantation area of 583,035 hectares, and a residential area and social facilities of 78,325 hectares (Artanegara, 2021).

The Tenganan Pegringsingan traditional village has rules (*awig-awig*) to maintain the sustainability of existing forests. This forest is located outside the settlement (Figure8), in the hilly area around the village. Forests may not be sold or transferred to people outside the village, and the felling of trees is only permitted if the trees are old or dead and with the permission of traditional village leaders (Artanegara, 2021). The forest in Tenganan Pegringsingan Village has a large area and is in a hilly area. This forest is used as plantation land (moorland) by village farmers and sharecroppers from outside the village. Meanwhile, village communities only receive processed products from land managed by immigrants (Kristiono, 2017). Apart from that, forests play a role in protecting villages from potential landslides (Karidewi, 2012).



**Figure 8:** Settlement position between hills (forest, plantation, rice fields) and rivers  
**Source:** Artanagara, 2021; Kertonegoro, 1986.

Rivers, located to the east and west of village settlements, have an important role in village life. The river in the east is used to irrigate rice fields, while the river in the west provides clean water for the residents' needs. Water has important meaning in the lives of the Balinese people, such as fertility, healing, purification, and environmental preservation. Therefore, the river in Tenganan Pegriingsingan village has a symbolic and important meaning in the rituals of village life (Nyoman Rema, 2013; Sudaryati, 2018).

The survey results found that the characteristics of the residential landscape, which is surrounded by three hills and two rivers, create harmony and balance between nature and the settlement. With a high residential position and being surrounded by hills, this village has a good resilience pattern as a source of food and water for the Tenganan village community. If in the past forests and hills also functioned as a defense against external threats, now hills and forests protect villages from the danger of landslides.

#### 4.4 Rituals and Ceremonies

Rituals and ceremonies in the Tenganan Pegriingsingan traditional village have a busy calendar of traditional activities throughout the year. Considering the difficulty of manually calculating the traditional calendar of the Tenganan Pegriingsingan Community, which follows the orbit of the sun, which is different from the mainstream Balinese calendar, which follows the orbit of the moon, research from Rusjyanthi (2017) created a web-based Tenganan Pegriingsingan calendar application. In Abioso's research (2017), it was stated that ritual activities in Tenganan village used public open spaces in the middle of village settlements and were used as communal spaces.

In Karangasem Province, the term for religious rituals and ceremonies is better known as *usaba* or *ngusaba*. Several villages in Karangasem still preserve this *usaba* event, for example, *usaba dangsil* in Bungaya Village, *usaba guling* in Timrah Village, *usaba gumang* in Bugbug

Village, *usaba sumbu* in Asak Village, and *usaba sambah* in several places: Tenganan Pegringsingan Village, Pasedahan Village, Sengkidu Village, and Tenganan Dauh Tukad Traditional Village (Ngurah, 2020).

There are many *Usaba* activities in Tenganan Pegringsingan village, one of which is the Pandan War Ceremony (*Mekare-kare* or *Mageret Pandan*). This ceremony is one of the largest offering ceremonies and is full of meaning and tradition. This ceremony is held for a whole month in Tenganan Pegringsingan Village. The *mekare-kare* ceremony is carried out using weapons made from *pandan* plants, which have thorns on the leaves. This ceremony is an offering to honor the god Indra, the god of war, who is worshipped and respected by the Tenganan Bali Aga Community. In carrying out the *Mekare-kare* ritual, it is believed that getting drops of blood from the body of the Bali Aga warrior is very feasible. The following is the example schedule for the *Mekare-kare* ceremony, which is held every year (Figure9).



**Figure 9:** Calendar of ceremonies and rituals of Usaba activities installed at the Main Entrance of the Tenganan Pegringsingan settlement.

**Source:** Author, 2013.



*Usaba Sambah* ceremonies and rituals are an important phase in the lives of the people in Tenganan Pegringsingan. As a cultural activity, the meaning of the *Usaba Sambah* ceremony is a rite of passage from teenage to adulthood (Aryandi, 2013).

The village men, along with children and older people, gathered to partake in the ceremonial event. Despite its brevity, lasting only a minute, the ritual held the potential for participants to endure injuries from the thorns of the pandan tree trunk over its three-hour duration. The commencement of the ceremony involved a sequence of actions aimed at dispelling malevolent spirits and ensuring a safe and tranquil atmosphere. This crucial undertaking was spearheaded by the *Banjar Pande* community, residing in the western reaches of the settlement. Their paramount duty lay in safeguarding and preserving the gamelan gong, an integral musical instrument employed in the Pandan war ceremonies.

The first day of the *Usaba Sambah* ceremony took place at *Pure Puseh* (Figure10), which aims to ask for safety and smooth implementation of this activity. A few days later, the *ombo sanghyang* death ritual, or the process of impaling a purified black buffalo, was held. This buffalo stabbing is usually done when the sun is above the head during the day. The purpose of this dead black buffalo ritual tradition is to clean the village and ask for safety so that the village community can avoid natural disasters. Before the black buffalo was stabbed, it was surrounded by the entire village and then brought to the side of the *Bale Agung* yard (Figure11) to be stabbed. The buffalo meat is then distributed to residents according to their positions, while the rest is eaten together.

Interpreting large ritual activities such as *Usaba Sambah* requires a deep understanding of the community's background, including history, culture, and the context of the activity, which is determined by spatial, cultural, and social aspects. In a spatial context, *Mekare-Kare* activities reached their peak by taking place for two consecutive days in different locations. The first day was held at *Bale Patemu Kaja* (Figure12), while the second day was at the front yard of *Bale Agung*. The open space in the core zone has an important role in various ritual activities and religious ceremonies, including *Usaba Sambah*. Culturally, this activity is a form of respect for the god Indra. Socially, this ritual is part of a communal tradition that is carried out every year, continuously from the past to the present generation.



**Figure 10:** *Puseh* Temple at Tenganan Pegriingsingan Village  
**Source:** Author, 2013



**Figure 11:** Black buffalo stabbing ceremony in *Bale Agung* yard.  
**Source:** Author, 2013



**Figure 12:** *Bale Patemu Kaja*

**Source:** Artanagara, 2021

## 5. Conclusion

Overall, Tenganan Pegringsingan Village in Bali, Indonesia, is an extraordinary example of the harmony that exists between humans and their natural environment. In this article, we have explored some of the aspects that make this village so special.

Its unique settlement pattern, with its focus on revered distinctions between high and low, sacred and profane, suggests a deep understanding of the surrounding landscape. Vernacular settlements in the Tenganan Traditional Village highlight three important characteristics. First, adaptation to natural conditions, which allows villages to coexist in harmony with their natural environment. Second, social and cultural practices are reflected in traditional ceremonies and rituals, which strengthen the village's identity based on its cultural heritage. Third, settlement patterns reflect the importance of nature and togetherness in the cultural landscape, as well as the village's commitment to maintaining a balance between human needs and environmental conservation.

The linear settlement pattern, consisting of four rows, reveals a meticulous design that aligns with the *Tapak Dara*, *Mahulu Ka Tengah*, and *Jaga Satru* concepts. These concepts not only dictate the village's layout but also bear deep-rooted cultural and spiritual significance, emphasizing direction, unity, and protection. In the northern area of the village, respect for sacred values such as mountains and hills reflect the resilience and sustainability of the community in preserving their traditions from the past to the present. It is reflected in the terraced landscape and the concept of *Banjar*, which emphasizes the importance of social cohesion in village life. Widiastuti's *Wanua* concept and Jones' perspective underscore the idea that Tenganan's settlements are not just physical spaces but also social hubs, emphasizing the bond between people and their environment. The relationship between humans and the environment is increasingly demonstrated by the construction of new buildings that are in harmony with the existing linear pattern, thereby maintaining the unique character of the village.

The village's community commitment to preserving the surrounding forests and rivers through the *awig-awig* rule shows their seriousness in preserving the environment. Tenganan Pegringsingan traditional village showcases an exemplary model of sustainable coexistence with nature, where thoughtful land use practices, forest preservation, and the

sacredness of rivers converge to create a resilient and balanced ecosystem for the community. This unique blend of culture and geography is a testament to the village's wisdom in harnessing the benefits of its environment while safeguarding its natural treasures for future generations.

Finally, the *Usaba Sambah* rituals and ceremonies are a dynamic expression of the community's cultural identity. With a location involving the core residential zone and open spaces that cross the village, this emphasizes the important role of this area in religious activities and village ceremonies. Tenganan Pegringsingan traditional village's rituals and ceremonies are not just cultural events but are vital threads in the tapestry of community life. They reflect a unique way of life deeply intertwined with history, culture, and the natural environment, serving as a testament to the enduring spirit of the village and its commitment to preserving its rich cultural heritage.

Tenganan Pegringsingan Village offers a compelling showcase of how humans and nature can coexist harmoniously. It stands as an inspirational exemplar of society's growth and development while maintaining a deep respect for the preservation of its natural surroundings and cultural legacy. This living example is a testament to the interplay of culture, architecture, and geography in shaping a unique and resilient community. It embodies a profound reverence for nature, a sense of unity, and a rich cultural heritage that thrives in the modern world, setting an inspiring model for sustainable living and cultural preservation.

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