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Spatial Conservation of Settlements In Bayung Gede Customary Village, Kintamani, Bali

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ABSTRACT
This research chooses BayungGede, a customary village in Kintamani District, Bangli, to be the research site for its uniqueness. First, BayungGede Customary Village is one of Bali's ancient villages with a distinctive residential building pattern and architecture. Second, BayungGede is an ancient village in Kintamani District, Bangli. Third, BayungGede shares a similarity with Kintamani's other villages in agricultural products, e.g., oranges, coffee, vegetables, corn, and gaga rice. Among all products, oranges are the favorite. Lately, the village also produces tangerines. This paper is an applied research dedicated to studying leading areas of work, specifically the Conservation of Residential Spatial Layout in BayungGede Customary Village in Kintamani, Bali, to preserve cultural heritage in architecture. This research is expected to solve the issue rural communities have been facing for a long period of time: the preservation of residential architecture, specifically residential houses, as rural settlements are always following the latest developments in culture and technology. In the second year, this research is expected to produce an international publication/journal on the conservation of settlement areas (villages and residential houses) in BayungGedeKintamani Traditional Village, Bali. This paper is expected to solve the issue rural communities have been facing for a long period of time: the preservation of residential architecture, specifically residential houses, as rural settlements are always following the latest developments in culture and technology. The method used to achieve the objectives is a qualitative method with an emphasis on observation that is closely related to unique contextual factors, so each context is studied on its own. Following the characteristics of the study object (research problem), the paradigm used for this research is phenomenology. In this study, the research unit/observation area is the preservation of the pattern of BayungGede Village. These values then could be developed into a model for the preservation of houses that get modern influence or become a tourist spot. The "variable" observed at the village scale is the pattern and appearance of traditional houses. The typology of the village settlement's spatial design follows a linear pattern typical of mountainous villages, showing the dominant hulu-teben concept. The residential pattern, the village's local wisdom, applies the concept of hulu-teben as well. The prototype for the spatial development of settlements, which emphasizes local wisdom values in serving tourists, also highlights a linear pattern and applies the tri mandala value system. There is no written manual for the preservation of residential houses in BayungGede Traditional Village, only customary rules.

Keywords: linear, *tri mandala*, customary law.

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I. Background of the Study

All living beings, from humans and animals to plants, are interdependent. More importantly, not only do they depend on each other, but also on inanimate objects created by God. Over time, trade grows to be a significant aspect of people's lives, and the appearance of their buildings becomes more modern. Many changes happen to their traditional houses. The preservation of residential buildings becomes a matter of great importance, for residential buildings give a region its identity. Traditional houses are not merely buildings. More than that, they reflect people's philosophy. This philosophy shapes various aspects of their life.

Since ancient times and the copper inscription era, countless autonomous villages and village unions had been established in Bali. Many of these villages had a charter listing the privileges of

the village community, which were regularly updated at the inauguration of the new king. Any update must be acknowledged by the village community. After the Kingdom of Majapahit took control of Bali, the charters were investigated to decide which privileges to retain. Villages without charters or inscriptions were placed under domestic government (*apanage*). For a village that commits an offense, its charter would be revoked or discarded to the sea as punishment. As a result, the village community would no longer have written evidence of their privileges (Lienfrick, 1890).

Korn (1932) stated that Bali has two types of villages: mountainous villages (*Bali Aga*) and lowland villages. The mountainous villages are ancient, mostly established in mountainous areas. Only a few of this type of village exist, but these villages have a greater amount of physical variations than the lowland villages. These mountainous villages also show many characteristics of pre-Hinduism (Balinese Hinduism). Lowland Balinese villages are relatively recent and commonly found in southern Bali. They receive heavy Javanese Hindu influence, especially from the Kingdom of Majapahit.

Mountainous villages prominently feature acommunal open space stretching from *kaja* to *kelod* (from mountain to sea), dividing the village into two sections. Using river stones for its pavement, this open space inclines towards a mountain or hill. Meanwhile, lowland villages are characterized by crossroads and public facilities, e.g., meeting halls and places of worship, and sometimes noble residences near the crossroads (Parimin, 1986).

The distinctiveness and diversity of village settlements offer a charm that potentially gives added value or economic value to the village, especially to its ecotourism. The village's many unique points deserve further research to learn more about its potentials. Residential buildings in mountainous villages have more variations than the ones in lowland villages. Residential buildings in lowland villages are sometimes considered Bali's "national houses."

The Bali Provincial Government, through the Tourism and Culture Office, launched a tourism village development program in 2012. Bangli Regency has neither sea nor sea borders, making it Bali's only landlocked regency. Bangli shares borders with Buleleng Regency to the north, Klungkung Regency and Karangasem Regency to the east, Klungkung Regency and Gianyar Regency to the south, and Badung Regency to the west. The 2021 data shows that Bangli covers a land area of 519.00 km², with a population of 254,738. Bangli is widely known for its Batur Lake, a famous tourist spot.

This research chooses BayungGede, a customary village in Kintamani District, Bangli, to be the research site for its uniqueness. First, BayungGedeCustomary Village is one of Bali's ancient villages with a distinctive residential building pattern and architecture. Second, BayungGede is an ancient village in Kintamani District, Bangli. Third, BayungGede shares a similarity with Kintamani's other villages in agricultural products, e.g., oranges, coffee, vegetables, corn, and *gaga* rice. Among all, oranges are the favorite. Lately, the village also produces tangerines.

The village is approximately 55 kilometers northeast of Denpasar and 35 kilometers north of Bangli. There are two routes to reach BayungGede: the Payangan-Kintamani route or the Bangli-Kintamani route. The village is at an altitude of about 800-900 meters above sea level. It makes the temperature in BayungGede cool throughout the year. With such a temperature, the villagers rely on dryland farming.

II. Methodology

This research encompasses an observation of the value system, concept, perception, diversity, distinctiveness, local wisdom, and people's beliefs about something other than their selves. Additionally, this research involves transcendental matters or multiple realities that the local community feels and believes in yet is unable to explain. Considering the characteristics of the study object (research problem), the paradigm used for this research is phenomenology.



Figure 1: Location of BayungGede Village, Kintamani.

Lincoln and Guba (1985) stated that phenomenology (naturalistic phenomenology) places an emphasis on the "natural" context: a whole, full context that is impossible to understand if isolated or separated from its context. The meaning of a phenomenon can only be grasped in its totality. It emerges from a reciprocal (interactive) relationship and not merely from a causal, linear relationship.

The qualitative method (phenomenology) operates in a general, flexible design and evolves throughout the research process. This method aims to understand meanings, develop theories, and describe complex realities. Instruments needed for this research are human instruments (the researchers), notebooks, and voice recorders. No research assistant required. Qualitative data were collected from participatory observation, individual documents, and unstructured in-depth interviews. A small sample is selected purposively. The analysis is continuous and inductive, seeking patterns, models, or themes. The design proposal is short and general, containing relevant problems and no hypothesis. The focus of research is usually written after collecting data from the field.

III. Results and Discussion

BayungGede Village is one of Bali's ancient villages that maintains its customs. For instance, the village has a tradition to put a baby's placenta in a coconut shell and then hang it on a tree in the *setraari-ari* (placenta burial ground). BayungGede Village also forbids polygamy. The village punishes polygamous couples by sending them to *KarangMemadu*, a remote area of the village, where they live facing ostracism. Additionally, this village is where the ancestors of Penglipuran Village originated.

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BayungGede Village was established in prehistoric times (Anonymous, 2003). The name "BayungGede" comes from the word "*bayu*," meaning strength, and "*gede*," meaning big. BayungGede means great strength that can tear down a forest. Jero Kebayan Muncuk, a prominent figure in BayungGede Village, explained that the name BayungGede originated from two Balinese words: *"bayu"* and *"gede."Bayu* means strength, while *gede* means big. Another interpretation is that BayungGede comes from the word "ayung," which means protection, as in protection from God from the phrase "*pengayungjagat*" (God as the world's protector). The name reflects the nature of the BayungGede people: a strong and hard-working community. Initially, BayungGede Village was a dense forest. Then indigenous people from the mountains came. They worked together to turn the forest into a village. The villagers decided to call the place they lived BayungGede Village.



Figure 2: Photo of BayungGede Village's *Kaja-Kelod* Linear Pattern (Austin, 2026).

Gambar 2: Foto Pola Linier Kaja-Kelod Desa Bayung Gede (Austin, 2025)

Jero Bahu (65 years old) revealed a different version of BayungGede Village's origin story. At first, BayungGede Village consisted of a hamlet inhabited by one *dukuh*, which then grew into 35 family units. The villagers felt that their current place of dwelling is no longer proper. Then, they decided to move to 41 other places, which are dense forests. They cleared the forest to establish a settlement and a farm. Turning the forest into a decent settlement and farm where they can cultivate required great efforts and spirits. The villagers then agreed to name their village BayungGede, from the words "*bayu*" and "*gede*," to represent their great strength. Another version from Jero Kebayan Muncuk's account is that the name BayungGede refers to the origin of the first human: a big wood or a big tree. Others said BayungGede refers to BetaraBayu, whose son gives life to the first human of the village. The human was said to have *bayugede*, or great strength, and was thus called BayungGede.

The population growth of BayungGede Village averages 3.04% per year, or about 92 people/year. The total population in 2012 is 2,128 people, with 1,098 males and 1,030 females. The data of the same year also reported 560 family units in the village. In 2016, there were 1,003 males and 934 females in the village, with a sex ratio of 107 (Anonymous, 2019).



Figure 3: Photo of BayungGede Village's *Kaja-Kelod* Linear Pattern (Austin, 2026).

BayungGede Village is situated at an altitude of 1,100 meters above sea level, with a rainfall of 125 mm/year. The daily average temperature in BayungGede is 18-25 degrees Celsius, but it might change depending on climate change in Bali. The altitude and average temperature of BayungGede provide great support to the villagers' main livelihood: farming. Every day, the people of BayungGede Village grow their crops in the farm or field. 929,7 ha of 1.443 ha of BayungGede Village total area is cultivated by the villagers, with 512 ha of the land constitute of dryland fields.

The people of BayungGede start their activities on the farm in the morning after completing housework and return home after dusk. They usually spend their midday break in a hut on their farm. The hut is equipped with everything they need, such as cutlery, cleaning tools, and mats. Some people even bring a television to their huts for something to watch on their break time. The distance between the farm and the settlement area is quite far, about 2-10 kilometers from the village. BayungGede people practice rudimentary sedentary farming, i.e., cultivating land without permanent irrigation, for they already use horticultural tools and establish permanent farming. Orange is their top source of earnings. In total, 865 of the BayungGede people are farmers. 545 of them are males, while the other 320 are females.

Both men and women work on the farm, but some types of labor see a division of labor by gender. Men tend to take cultivation work that requires manual labor, commonly done by 43 men, while women usually plant the crops and take care of them as well as harvest the crops (Danandjaya, 1980:200)

Table II.1 The Livelihoods of BayungGede People in 2012.

Number	Jobs	Total of Persons	Percentage (%)
1	Farmer	865	60.3
2	Public servant	8	0.6
3	Home Crafter	3	0.2
4	Stock Farmer	536	37.4
5	Mechanic	1	0.1
6	Retired civil servant/national army/police officer	4	0.3
7	Small and Medium Enterprises	16	1.1
8	Private Lecturer	1	0.1
QTY		**1434**	**100 %**

Source: Monograph of BayungGede Village in 2012.

Crops in 2012 were dominated by oranges, producing 17.430 tons/ha. The total land area was 498 ha. BayungGede's geographical characteristics provide a major advantage. Situated in a mountain, the village boasts regosol volcanic soil, which is fertile yet cannot absorb and retain water

effectively. The soil and the village's average temperature of 18-25 degrees Celsius create the perfect environment for orange plantations. BayungGede is low on water due to low rainfall, only 125 mm/year, but rich in sunlight for its location on an open plateau. These conditions are suitable for growing oranges, for they do not require much water to grow but need optimal sunlight.

The locals mostly grow tangerines for their sweet and pleasant taste. Other than oranges, they also grow medicinal plants such as ginger (17.15 tons/ha), turmeric (9.93 tons/ha), and aromatic ginger (3.8 tons/ha). BayungGede Village is surrounded by bamboo forest. The locals often use the bamboo in construction works, especially for roofs and fences.

Surrounded by bamboo forest and grassland, BayungGede Village has orange plantations that require organic fertilizer. The villagers accordingly work as stock farmers to support that. There were 536 stock farmers in the village, mostly farming cattle. According to the 2012 Profile of BayungGede Village, the locals reared 994 cattle, 800 pigs, and 3,700 chickens. The open space in the vicinity of the plantation is a strategic location for livestock pens. The villagers can immediately use the excrement from their livestock to fertilize their plants. They usually feed their cattle leaves from the village forest, especially bamboo leaves, and grass that grows around their plantation. The abundance of animal feed helps the village's stock farms survive. The people of BayungGede keep their livestock in an enclosure outside the border of their house yard. Two reasons for that: insufficient space within their house yard and the lack of space at the back of their house.

Visitors can see the beauty of BayungGede Village the moment they step inside. The village's main gate, temples, community hall, and facilities as well as open space, gardens, and cool temperature amplify the village's rural landscape. This customary village has a distinct traditional village structure, which allows the village's beautiful nature and unique culture to shine. The village's physical layout and structure are closely related to its people's culture, which has prevailed for generations. BayungGede Village has unique and captivating tourist spots. One spot, however, is underdeveloped: the placenta grave (*semaari-ari*), with a total area of 0.15 hectares. Balinese people have a tradition of burying a baby's placenta. Before burial, they wrap the placenta with a white cloth and then put it inside a coconut shell. They will also put stationery, e.g., books, pens, and pencils, inside in hope their babies will love to study as they grow up and therefore have a strong foundation to make a living in the future. The placenta is buried in the front of *rumahmeten* (the main house in the north). A baby boy's placenta is buried on the right side of the house, while a baby girl's placenta is on the left side. This tradition is slightly different in BayungGede Village. The villagers put the placenta inside a coconut shell and then mark the shell with a plus sign (*tapakdara*). Afterward, they take the placenta to the placenta grave at the southern end of the village. Instead of burying the placenta, they hang it on the branch of a bungkak tree. The village's prominent figures explained that the placenta grave is created because the people of BayungGede are not keen to migrate far and prefer to stay together in the village. Tourist visits to BayungGede Village, however, remain low. To solve that, this research explores the application of science and technology to promote BayungGede as a tourist village. The result is expected to increase future tourist visits and turn the village into one of Bangli's beautiful tourist destinations.

The combination of unique customs and beautiful, lush panoramas makes BayungGede Village a great tourist destination in Bangli. In reality, however, the village is not widely known by the public. Consequently, tourist visits to the village remain low.

A factor that makes BayungGede Village a promising tourist spot is its spatial planning that applies the concept of *Tri Mandala*. Using this concept, the village divides its space into three areas: the *utama mandala* area for places of worship, e.g., temples; the *madyamandala* area for village settlements; and the *nista mandala* area for graves. Of the threeareas, the *utama mandala* area is positioned in the highest place of the village. It is located in the northeast of BayungGede, the village's sacred area. The *utama mandala* area houses Bale Agung Temple and KahyanganTiga Temple. These temples mostly use rocks for the buildings and bamboo for the roofs. Bale Agung Temple is a place to worship God Brahma, the God who creates in Hinduism.

The *madya mandala* area is split by the village's main road that divides BayungGede Village into two parts: the east and the west. The *madya mandala* area is the area where the villagers reside. They always remember Ida Sang HyangWidhiWasa (God), who created the universe and everything it contains. Their belief shows in their place of worship at home, called sanggah or merajan. Every single house in the village has this place of worship. A house in the village typically consists of two or three buildings in traditional style that use rocks for foundation, *bedeg* (woven bamboo) for walls, and bamboo for roofs. These buildings serve as bedrooms and kitchens. A house also has another building that functions as a

*lumbung*or *klumpu* (granary) to store crops. Some villagers choose to adopt modern styles for their houses, e.g., using tile roofs and brick walls. Considering this shift, an *awig-awig,* or rules, is required to encourage villagers to keep their houses in traditional styles. If the villagers commit to doing so, they can develop their village into a tourist village known for its strong traditional characteristics. The village settlement is well-kept. The villagers are not allowed to keep their livestock in the houseyard. They usually keep their livestock in a field about 2-5 kilometers from the settlement. Each alley leading to the houses is well-cared for, with each path covered with pavers. Every house on the main road has a green stripe where villagers grow decorative plants, adding to the village's rural beauty. To enter a house yard, a person has to pass through an *angkul-angkul* (gate).

Gambar 3: Sketsa Denah Pekarangan Rumah Tinggal (Made Budiana, 2025).

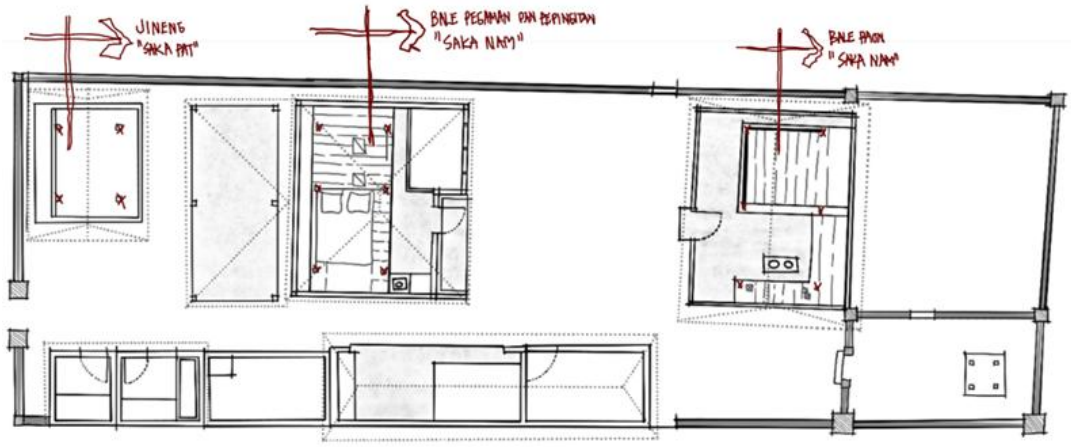


Figure 4: Sketch of Residential Yard Plan (Made Budiana, 2026).

Houses in BayungGede Village also apply the *Tri Mandala* Concept. Each house has a *utama*, *madya*, and *nista mandala* area. The buildings in each mandala area and their functions follow the layout of a traditional Balinese house: the *utama mandala* area in the northeast of the house has the *sanggah*, a place of worship that every family has to have. The *madya mandala* area is for residential areas and kitchens, while the *nista mandala* area is for sanitation purposes, e.g., bathing, washing clothes, and toilets. The*nista mandala* area is situated at the lowest position of the house, in the southern part. This location also has graves and the Dalem Temple. The Dalem Temple is a place to worship Lord Shiva, the manifestation of God who destroys and eradicates. Lord Brahma, worshiped at the

Bale Agung Temple, creates humans. Then, Lord Vishnu, worshiped at the Puseh Temple, preserves lives. People believe that the human life cycle is birth, life, and death.



Figure 5: Atmosphere/Perspective of Traditional Houses in BayungGede Village from the *utama mandala* area/the back (Made Budiana, 2025).

A place unique to BayungGede Village, the placenta grave (*semaari-ari*), is also located in this area.The grave has a total area of 0.15 hectares. Balinese people commonly wrap a placenta with a white cloth and place it inside a coconut shell along with stationery such as books, pens, and pencils. They do so with the hope that their children will love to learn new knowledge to help them make a living in the future. A baby boy's placenta is buried in front of *rumahmeten* (the building in the north of the house), on the right side, while a baby girl's placenta is buried on the left side.

Common characteristics of the Bali Aga village in BayungGede Village are evident in its linear village layout and the dominant use of bamboo for its traditional houses. The charm of BayungGede Village lies in its nature, especially the vast expanse of rice fields and orange trees lining up on both sides of the road. Additionally, BayungGede Village has a cool temperature, much like other regions in Kintamani.

In other places in Bali, people usually bury a newborn baby's placenta underground or take it to water bodies. The people of BayungGede Village in Kintamani, however, put the placenta in a coconut shell and then hang it on a tree in a special grave for the placenta.

The village also has a wedding tradition in which the bride's family requires the groom to present a horned bull to be handed over to the village. Later, the bull will be put up for auction to all villagers except the bride's family.Newly married residents are required to do *tapa brata* (self-control practice), known as *penyekeban*. They also have to stay in a hut at the end of the village.

Polygamy is forbidden in BayungGede Village. Villagers violating this rule will be dismissed from *desangarep* and have their special rights revoked. For example, they no longer have the right to the land under the village's management. Fear of punishment from unseen spirits is another reason that makes polygamy forbidden. The villagers believe a calamity will befall the village if a polygamous couple lives in the village.

People practicing polygamy in BayungGede are expected to live in the *tebenan* area (downstream) in the west or south of the village. A cottage for a polygamous couple is usually located in Peludu, which is still within BayungGede. This method teaches men to be faithful to one spouse only.

The village also forbidscousin marriage. However, if such a marriage occurs, the ceremony has to be held before the village apparatus. During the ceremony, the couple are required to do an uncommon rite: eating food from a trough with their mouths, without using their hands. Furthermore, their descendants are banned from participating in religious ceremonies.

In a funeral, bodies are usually buried according to their sex. A female body is laid up facing the sky to represent mother or motherland. Contrarily, a male body lay face down to represent *akasa* (sky).People who died of unnatural causes, e.g., suicide, are treated differently from those who died of natural causes. Their bodies are not allowed to be washed in the funeral home. Additionally, they are buried in a separate grave with no elaborate ceremony.

Bali is widely known for its *ngaben* tradition, a funeral ritual in which the body of a deceased person is cremated. BayungGede Village, however, has a different funeral ritual. The villagers only need to give cattle to the village to show their respect. Then, the cattle are processed to be included

in the offerings. The remaining meat will be taken care of by the family.

BayungGede Village also knows neither *caturkasta* nor *caturwarna* (social stratification system). The villagers do not add a caste marker (e.g., Ida Bagus, Anak Agung, I Gusti, I Dewa, or Cokorda) to their names. It is another characteristic of ancient Balinese, for they existed long before the influence of *ksatria* or *warna* came to Bali.

Additionally, BayungGede Village uses a special wooden calendar to determine auspicious days for religious ceremonies or agricultural works such as cultivating the land or harvesting the crops.

The architecture of BayungGede Village's traditional house also shows unique characteristics. The settlement is accessed via a main road that splits the village. At a glance, the layout resembles that of Penglipuran Village in Bangli. The main road branched off into many 1-meter-wide alleys that lead into the villagers' houses. The village's buildings mostly use bamboo materials.

BayungGede Village has a unique tradition called Perang Suren, a ritualistic "war" involving young men from the village. Before the ritual, there is another ceremony called *NgusabaLampuan* in which these young people are put in quarantine. The "war" is actually held in reverence to Indra, the God of War.

BayungGede Village uses a unique government system called "*uluapad*," which details the village's unique structure. The customary village is led by two Kubayans: JroKubayanNyoman and JroKubayanPucuk. Both are assisted by SaihNembelas or *prajuruadat*(customary village apparatus). Members of SaihNembelas must have no physical disabilities. They also have the rights to manage tanahlabapura, lands utilized for temple-related matters, during their tenure.

The layout of village settlement makes the north, or*kaja* (towards Mount Batur), the utama area, while the south, or*kelod*, is the nista area. The concept of *hulu-teben*(upstream-downstream) is evident in the village's main road, which is right in the middle of the village. The village follows a linear layout. The village faces Mount Batur, while the settlement faces the road (the road is considered *teben*), so the *sanggah* is always positioned away or in the opposite direction from the road. The following is the real-life application of the village's *hulu-teben* concept: (1) the *hulu* is for temples; (2) the middle is for settlement; and (3) the *teben* is for graves (*setra*). The strong pull from upstream to downstream along the main road is a clear indicator of the direction of the BayungGede Village settlement.

As the villagers are not familiar with Trimurti (three supreme deities in Hinduism), so they worship Sri, Vishnu, and Surya as their major deities. It also shows that the *sanga mandala* is a foreign concept in the village. The residential layout also applies the concepts of *hulu* and teben: (1) *sanggah*at the *hulu*; (2) *pawon* and *bale pegaman* in the middle; and (3) *lumbung* at the *teben*.

The basic shape used is a rectangle or variations of a square. BayungGede Village's distinct residential architecture, from the residential layout, building appearance, structure, and bamboo and wood materials, distinguishes the village's houses from those of other ancient villages. BayungGede Village has an abundant supply of bamboo, so the villagers use bamboo frameworks to build the perimeter wall and use woven bamboo to cover the wall. This method provides warmth and proper ventilation at all times.

IV. Conclusion

The ecotourism potential of BayungGede Customary Village lies in the village's strong regulations that successfully preserve their environment and conserve the village's area, settlement pattern, and building layout. It also makes the local community a strong subject from birth to death according to local traditions. As a result, awareness and appreciation of nature improve greatly, apparent in the cultivation and harvest of oranges that follows the local calendar.

The typology of the village settlement's spatial design follows a linear pattern, which is typical of mountainous villages. The concept of *hulu-teben* also dominates the village. The hulu is Mount Batur as *kaja* or north, while the opposite direction is the *teben*. The residential layout, another local wisdom of the village, also applies the concept of *hulu-teben*. The road is considered the *teben*; therefore, the *sanggah* as the *hulu* is always situated in the opposite direction from the road.

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