

Cultural Landscape of Bali Aga - Tenganan Traditional Village

A.Tutut Subadyo, Razqyan M. B. Jati, Junianto

Department of Architecture, University of Merdeka Malang, Indonesia

*Corresponding Author: tutut.sbadyo@unmer.ac.id

ABSTRACT

Tenganan Pegriingsingan is one of the Balinese Aga or ancient traditional villages which is unique and is expected to soon be included in the tentative list of world heritage lists to UNESCO. With this proposal, it is hoped that the number of tourists visiting will increase, so proper management is needed so that the negative impact does not damage the cultural landscape in the village. The purpose of this study is to identify the characteristics of the cultural landscape of the Balinese Traditional Village of Aga Tenganan Pegriingsingan, and to analyze the potential and constraints that affect its sustainability. The method used is descriptive and spatial analysis. The results show that the potential that affects the sustainability of the cultural landscape is the tradition that is maintained. The spatial pattern is oriented towards spiritual and cosmological values based on the beliefs and customary law of the community's traditions contained in awig-awig (Bali customary law). The spatial structure of the settlements and the surrounding landscape in the form of hills are formed based on the concept of Hindu cosmological philosophy of the Indra's hinduism, utama-madya-nista concept, and the concept of macrocosm and microcosm balance. It is recommended that the management of the landscape conservation concept of the Bali Aga Tenganan Pegriingsingan Traditional Village is a collaboration and integration of the concepts of natural resource conservation and the conservation of culture and traditions of indigenous peoples.

Keywords : Cultural Landscape, Bali Aga, Traditional Village, Tenganan Pegriingsingan

1. INTRODUCTION

Indonesia's ethnic and cultural diversity is a very important asset. This culture is reflected in arts, customs, traditional settlements, architecture, and landscape patterns. One of the cultural landscapes in the archipelago that is unique and interesting to study is the existence of ancient Balinese community groups, which form separate communities and are scattered in various places on the island of Bali. The interesting thing about the ancient Balinese community is the cultural landscape of the settlements and its unique architecture (Subadyo, 2011; Runa,2018). They maintain and uphold the original culture they inherited.

The Bali Aga Traditional Village (ancient) Tenganan Pegriingsingan is one of the oldest villages in Bali, located in the mountainous area of Karangasem Regency bordering Bangli Regency, 90 km northeast of Denpasar city (the capital of Bali Province). This village is flanked by three hills, namely Kangin hill in the east, Kaja hill in the north, and Kauh hill in the west.

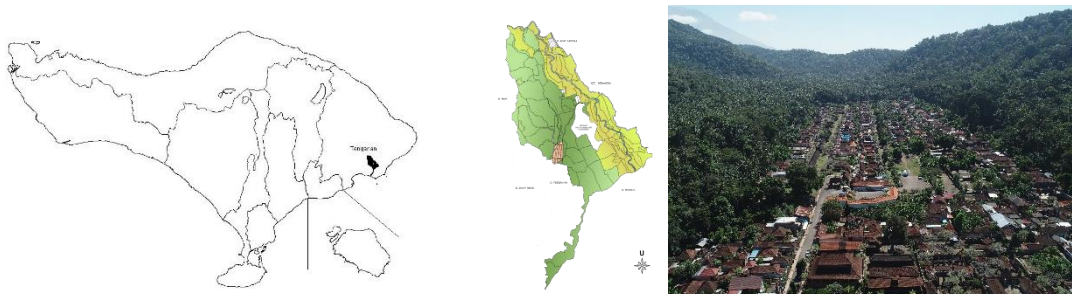


Figure 1. Location Map of Tenganan Pegriingsingan Traditional Village, Karangasem Regency, Bali Province

Administratively, on the north side, it is bounded by Macang Village, Loadem District, on the east side by Bungaya Village and Asak Village, on the south side by the Traditional Village of Pasedahan and Nyuh Tebel Village, and on the west side by the Ngis Traditional Village. Basically, this village area is divided into three traditional banjars, namely the Kauh Adat Banjar, the Central Indigenous Banjar, and the Pande Adat Banjar. This village is located at an altitude of 50-500 meters above sea level, with an area of 917,200 hectares, consisting of 78,325 hectares of residential land, 255,840 hectares of rice fields, and 583,035 hectares of dry land including dry fields and forests.

The people of the Balinese Aga Tenganan Pegringsingan Traditional Village live communally, which is marked by the ownership of the same parcels (lots of residential units). Inheritance rights for men and women are the same, unlike the patrilineal kinship system in Bali in general, there is even a rule stating that when a family dies, the inheritance goes to the youngest child (Subadyo, 2011; Libhi & Mahagangga, 2016). If a family has no children, and he dies, then the land becomes the property of the village again and is then used by the entitled family based on deliberation (*sangkepan*) of all village manners. They still adhere to the pre-Majapahit tradition – they do not recognize the caste system, the social hierarchy is based on seniority (*hulu-apad*), and the village leadership adheres to a twin or collective pattern (Adiputra et al, 2016; Dewi et al, 2016; Runa, 2018). His religion is Indra's Hinduism. Almost all activities are more focused on something religious, so that his whole life is focused on the interests of customs and religion. Not only the time and energy they devote to religious activities, but also their wealth. The social stratification does not recognize caste, so the position of all village manners is the same (Subadyo, 2011; 2019).

Another uniqueness of the community structure of the Tenganan Traditional Village is the attitude and action when someone dies, not being *dingaben* (the sacred Balinese cremation ritual) like Hindus but buried naked in a prone position and facing south. This belief grew out of the belief that everything that came from the earth would eventually return to the earth again. The burial ceremony is carried out when the sun is leaning west until before sunset. The funeral procession for adults is transported through the front door of the house, while for the bodies of children through the back door (Subadyo, 2011; Widyastuti, 2018).

Starting from this fact, conservation efforts are needed so that the cultural landscape in the traditional settlement area of the Tenganan Pegringsingan Traditional Village is maintained. In this case, preservation is seen as an effort to re-actualize cultural heritage in the context of the current system and can accommodate possible changes to bring new meaning to cultural heritage itself. Therefore, an in-depth study of the characteristics or patterns of landscapes and cultural customs that influence the formation of the cultural landscape of the Bali Aga Tenganan Pegringsingan Traditional Village is needed. This study is expected to be the basis for management to preserve the characteristics of the cultural landscape of local indigenous peoples.

2. METHODS

The research was conducted in the Balinese Traditional Village of Aga Tenganan Pegringsingan, Manggis District, Karangasem Regency, Bali Province. The study was carried out with limitations on identifying the character of the cultural landscape. The study was carried out in stages including site inventory (field observations, interviews, and literature studies), analysis, and synthesis in the form of formulating the concept of preserving the cultural landscape of the Balinese Aga Tenganan Pegringsingan Traditional Village.

Analysis of the site conditions and the character of the cultural landscape was carried out descriptively and spatially in order to determine the relationship between biophysical aspects and culture so that the landscape arrangement and the factors that influenced it were identified. Descriptive analysis is also used to determine the potential and constraints of the sustainability of the cultural landscape (community culture management system and the influence of external culture).

The synthesis of this study is a formulation of directions for preserving the cultural landscape of the Balinese Aga Tenganan Pegringsingan Traditional Village based on the results of the analysis of traditional settlement patterns with the existing conditions of building architecture in the village.

3. RESULTS AND DISCUSSION

The traditional Balinese village of Aga Tenganan Pegringsingan is a village that is surrounded and limited by a "natural wall" in the form of hills that surround it. With the landscape dominated by the vernacular landscape of rice fields, fields and customary forests, the surrounding panorama becomes very attractive. In the settlements in the valley, the spatial pattern is divided into 3 main parts, namely *awangan*, community settlements, and *teba apisan*.

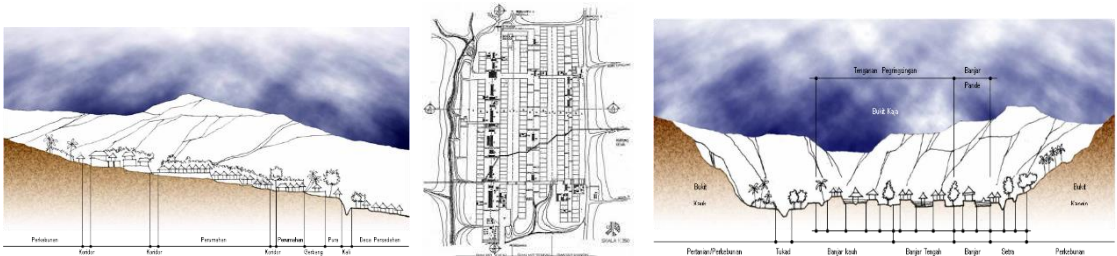


Figure 2. Longitudinal Section, Layout and Cross Sections of the BATP Traditional Village

Philosophy of Building Space

There are three spatial concepts that are implemented in the spatial zoning, namely the *Mahulu ka Tengah* Concept, the *Jaga Satru* Concept, and the *Tapak Dara* Concept, which are integrated and influence each other. The concept of *Mahulu ka Tengah* explains that the middle part or village *awangan* is a sacred or sacred part because it has an inward or middle orientation meaning (Dwijendra, 2009; Runa, 2018). This concept becomes the grip of people's lives, where it can be seen from the way they sit when they are *sangkep* in Bale Agung or in Bales that are along the village *awangan*. At the time of these ceremonies, the middle direction is considered the most sacred position, so that the sitting position facing each other forms 2 straight lines from North to South (the highest position is in the North). The application of this concept can be seen in the implementation of village activities centered in the sacred space (*awang desa*) as well as the orientation of sacred and sacred village buildings located in the middle of the village.



Figure 3. Integrating the concepts of *Mahulu ka Tengah*, *Jaga Satru* and *Tapak Dara* spaces in the *Utama*, *Madya*, *Nista* zoning in the BATP Traditional Village.

The integration of the three spatial concepts of *Mahulu ka Tengah*, *Jaga Satru*, and *Tapak Dara*, then the meaning is associated with the function of the zones, namely: *Utama* (sacred) zone, *Madya* zone, and *Nista* zone. Based on *awig-awig*, spatially, the division of settlement zoning functions to describe activities and social interactions, divided into 3 parts, namely: (1) *Banjar Kauh* and *Banjar Tengah* whose settlements or residences are intended for natives of the traditional Balinese village of Aga Tenganan Pegringsingan; (2) *Banjar Pande Kaja* which is

inhabited or a place to live for the original residents of the traditional village of Bali Aga Tenganan Pegringsingan who have physical disabilities or have made a mistake so large that they are discarded or exiled by the provisions of the customary village; and (3) *Banjar Pande Kelod* which is allocated as a settlement or place of residence for migrants who settle in the customary area.

Customary Institutions and Natural Resources Conservation.

In carrying out their daily lives, the Balinese Aga Tenganan Pegringsingan indigenous people carry out in accordance with *awig-awig*. In *awig-awig* taught their procedures for behaving. Traditional leaders always guide them to carry out *awig-awig* correctly. All their actions, starting from bathing, cooking, going to the fields, going to the fields, going to the market to relaxing before going to bed are their daily lives which are always maintained by custom. The customary holders and village manners (30 *luan*/elders) are determined based on the marital seniority of a husband and wife. His leadership consists of 6 couples in *Bale Agung*, where community and legal decisions are made by deliberation and consensus.

The customary law is also unique and different from the traditional Balinese people in general. Outsiders may not live-in traditional settlements covering 7% of the total area. However, they can live on land outside the core settlement. Usually, these outsiders work and live as farmers, cultivators of rice fields, customary land fields by means of profit sharing (Sumunar et al, 2017).



Figure 4. Linkages between Traditional Villages and Service Villages and Customary Governance Schemes in Tenganan Pegringsingan

Nature conservation has been taught in the *awig-awig* of the indigenous people of Bali Aga Tenganan Pegringsingan. They have divided zoning and designations intended to preserve the environment and water resources. In *awig-awig* the traditional Balinese village of Aga Tenganan Pegringsingan, the hilltop area is left as customary forest and the trees are not allowed to be cut down.



Figure 5. Rights to Management of Natural Resources, Village Assets and Rituals of Usaba Accountability as a symbol of environmental conservation by residents in the traditional Balinese village of Aga Tenganan Pegringsingan

The rights of the traditional village of Bali Aga Tenganan Pegringsingan in the management of customary forests are carried out based on the *Ngalang*, *Ngrampag*, *Nrambang*, and *Ngambang* ceremonies. *Ngalang*, is the right to take forest/*tegal* products for ceremonial purposes. While *Ngambang*, is the right to take traditional forest products - moor, such as palm wine, durian, and so on for the purposes of traditional ceremonies. Meanwhile, *Ngambang*, is the right to catch chickens that still have their mothers for traditional ceremonies.



Figure 6. *Penaho & Penapih, logging of wood for buildings and registration of village manners in the traditional Balinese village of Aga Tenganan Pegringsingan*

The Balinese traditional village community Aga Tenganan Pegringsingan respects and protects springs. Existing trees can only be harvested and the wood with the permission of Krama Desa is not allowed to cut down without permission (Soeriadiredja et al, 2017). They know that the hilltop area is a water catchment area and is a source of flowing water and they use it for cooking and toileting. Thus, conservation behavior has been regulated by *awig-awig* and implemented by the whole community.



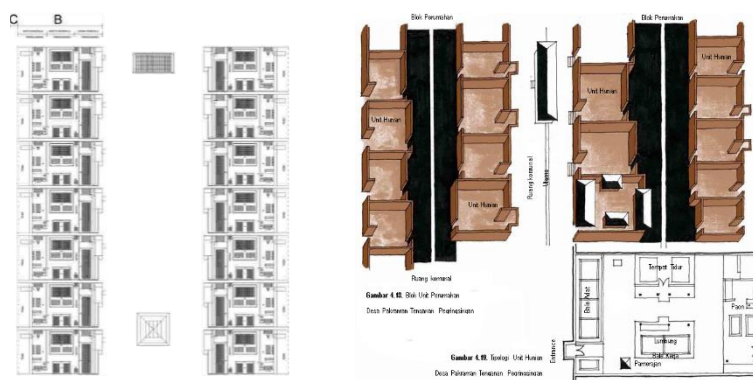
Figure 7. *Ulung-ulung, etiquette for picking permits for traditional forest products and Tumapung, etiquette for permits to cut firewood for building materials for new/young family members in the traditional Balinese village of Aga Tenganan Pegringsingan*

Manners of Residential Architectural Landscape

The pattern of houses in the Balinese Traditional Village of Aga Tenganan Pegringsingan has the same layout of the mass of the building, which is *Awangan* oriented. *Awangan* has steps with layers of river stone (a feature of megalithic culture) the higher it goes to the north (Subadyo, 2011; Runa, 2018). The boundary between one *Awangan* and another facing each other is a water ditch called a *boatan*. Meanwhile, as the backyard boundary of each residential reef, there is also a water ditch 1 m - 1.5 m wide, which is called *teba pisan*. The number of *Awangan* as a longitudinal road from North to South is 3, namely the widest *Kauh* (West) and the main function. The most common public facilities (traditional buildings and sacred buildings) are the Central *Awangan*, and *Kangin Awangan* (East). Thus, the *awangan* is the outer courtyard of the residence, social

space as well as a road. Meanwhile, Teba as a backyard is located behind the kitchen (*Paon*), which is a place to dispose of waste and raise pigs. The building plot that is used as a residence is called a coral or coral which is in the middle between *Awangan* and *Teba* (Subadyo, 2011).

In one yard - the coral of the Balinese traditional village of Aga Tenganan Pegringsingan, there are several types of buildings (*bale-bale*). The entrance (*Jelanan Awang* or *Kori Ngeleb*), *Bale Buga* (a place for ceremonies and a place to store sacred village objects, ceremonial/agricultural equipment, and parents' beds), *Bale Tengah* (a place for birth/tebanan ceremonies, funeral/luanan ceremonies; for bed, receiving guests, weaving, and sitting there is an "additional bale" called *Pelipir*), *Paon* including the back door, as well as *Sangah Kelod* (a place of prayer and offerings for *Brahma-Pertiwi* in the Northwest corner, *Wisnu-Betara Majapahit* in the Southeast, and *Shiva-Hyang Guru* above) are mandatory buildings that must be owned by each family with various provisions of the BATP traditional village regarding the location, shape, and materials, while other buildings such as *Bale Meten*, bathroom, and *Sangah Kaja* (*Sanggah Peampangan*) is a building that is not mandatory or other buildings can be erected according to the wishes of each family.



Information:

A: *Awangan* (*Utama Zone*); B: *Settlement* (*Madya Zone*); C: *Teba Apisan* (*Nista Zone*)

Figure 8. Implementation of the *Mahulu ka Tengah* Concept, the *Jaga Satru* Concept, and the *Tapak Dara* Concept in the Spatial Pattern of the Tenganan Pegringsingan Traditional Village.

Every house building in the Balinese traditional village of Aga Tenganan Pegringsingan is made of a floor elevation, which functions as a barrier to rising groundwater and a humidity regulator in the building. The building materials used for raising the floor of the building in addition to soil are natural stone. The average building foundation uses natural stone with a pedestal system, with a tectonic construction. Floor pavements usually use bricks, but in the development of the times many have used ceramic tiles. However, in real terms the wisdom of the residents of BATP traditional villages in the use of building materials prioritizes materials that are in the surrounding environment.

In line with the physical layout of the village environment, the arrangement of each dwelling house also results in the application of the same basic concepts of traditional architecture, for example: sacred buildings (*Bale Buga*, *Sanggah Kelod*, and *Sanggah Kaja/Pempangan*) are in front near the *awangan* as a zone. Sacral - *Utama Mandala*, further to the edge are residential buildings (*Bale Tengah* and *Bale Meten*) as the middle zone - *Madya Mandala*, while at the edge of service buildings (*Paon* and toilet) as the *Nista - Nista Mandala* zone.

On each rock in the traditional Balinese village of Aga Tenganan Pegringsingan, there are two *sanggahs*, namely *Sanggah Kaja* (to pray to *Ida Sang Hyang Widhi*) which faces south, and *Sanggah Kelod* (to pray to the ancestors) which faces north. The two *sanggahs* are located between *Bale Buga* and *Bale Meten Tengah/Bale Dangin*, between an open space that functions for family religious ceremonies and is sacred. Places of offerings (*ancak serve*) that are next to both sides of

the entrance to the yard or building, indirectly give a decorative impression to the appearance of the door and the facade of the building itself. Meanwhile, the position of *Bale Tengah* is on the axis of the entrance and is next to *Sanggah* facing south to the left of *Bale Buga* and in front of *Bale Tengah - Bale Dangin/Umah Meten*. *Bale* is intended for birth ceremonies and death ceremonies to place the body before burial. *Bale Dangin/Umah Meten* is a building located in front of *Bale Tengah* which is in the south position in the reef and facing north, serves as a residence. Located in the yard zone and in a private area within the yard zone. *Bale Dangin* has nine pillars (*saka sanga*) and is always one with *Natah* (open space in the reef) because the left side of *Bale Dangin/Umah Meten* faces *Bale Buga*.

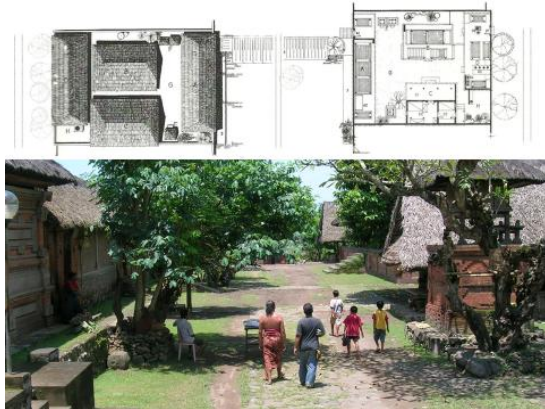


Figure 9. Site Plan, Layout Plan, and Sequential Traditional House of Tenganan Pegringsingan Traditional Village

The entrance from the *awangan* facing east, *Bale Dangin/Bale Meten* position is on the west side (*Kauh*) of *Bale Buga* and the location of *Paon* is at the easternmost tip against the back wall of the rock boundary, while for the entrance facing the west *awangan*, *Bale Dangin/Umah Meten* is on the *Kangin* (East) side, and *Paon* is on the west side next to the back door. Thus, the *awangan* is the outer courtyard of the residence, the social space as the orientation center for the yard unit as well as the road. Meanwhile, *teba* as a backyard is located behind the *paon* (kitchen), which is a place to dispose of feces and raise pigs. The plot of building that is used as a place to live is called a coral which is in the middle between *Awangan* and *Teba* (backyard of the house). The orientation of space and buildings for activities on a reef in a traditional BATP village in the form of *Natah* as a binder for the mass of buildings that surround it. In addition, the existing spatial capabilities of the corals still allow the development of new settlement patterns, while remaining strong and persistent and considering the existing traditional architectural principles. Therefore, in accordance with the sedentary pattern and use of space in the existing coral reefs, the availability of building materials from nature in their environment, as well as the customs and traditions of settled and inhabited patterns that are still held tightly and firmly, it is very possible for the residents of the traditional Balinese village of Aga Tenganan Pegringsingan to maintain sustainability and preserve it.

In line with the physical manners of each dwelling in the traditional Balinese village of Aga Tenganan Pegringsingan, the implementation of the basic concepts of traditional architecture is still being implemented, where the sacred buildings (*Bale Buga*, *Sanggah Kelod* and *Sanggah Kaja/Intersection*) are located near the *Awangan* representing a sacred zone, getting closer to the front. On the edge are residential buildings (*Bale Tengah* or *Bale/Umah Meten*) as an intermediate zone, while on the far edge are occupied by service buildings (*Paon* and bathrooms) as a representation of the humiliating zone. However, the existence of a semi-permanent building in the *natah* room makes the binding space less and even narrower. This needs attention so that the sustainability of the spatial and physical manners of the traditional house building does not further obscure the spatial values and religious symbols that are the identity of the authenticity of the Bali Aga village.

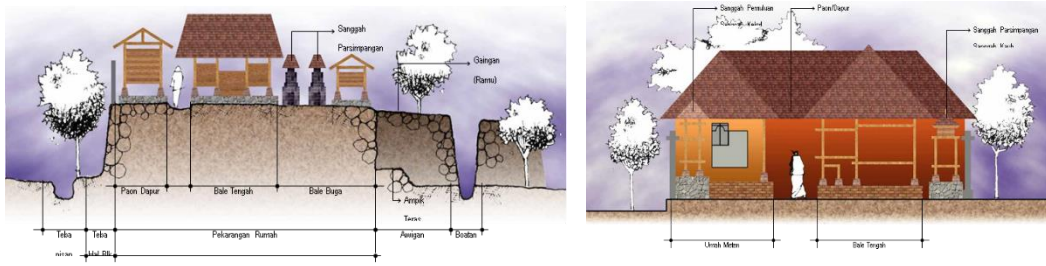


Figure 10. Cross and Longitudinal Sections of Traditional Houses in Tenganan Pegringsingan Traditional Village.

Cultural Landscape Conservation Concepts and Strategies

The landscape of the Balinese Aga Tenganan Pegringsingan Traditional Village is a traditional residential landscape that has a character as a landscape structure that is influenced by natural conditions in the form of hills and customs, religion, and ancient Balinese culture. Indigenous peoples are open to selective foreign culture which becomes a strength and a weakness for the sustainability of the landscape order. The establishment of the Bali Aga Tenganan Pegringsingan Traditional Village as a tourist village is a form of preservation of the character of its cultural landscape. At the same time, the recommended concept of conservation is to protect the existence of the landscape by maintaining and increasing cooperation with various parties.

The conservation strategies related to the role of the traditional villagers include:

- 1) Improving the application of traditional culture to indigenous peoples periodically and sustainably
- 2) Improve and stabilize as well as physically renovate a number of existing traditional architectural building artifacts to maintain their characteristics
- 3) Increase the publication of the Balinese Traditional Village of Aga Tenganan Pegringsingan with several features, uniqueness, and peculiarities either through research activities or other popular writings
- 4) Improving the ability of its citizens to manage the environment and resources based on their wisdom, adherence to customary *awig-awig* and sustainable environmental management patterns that can maintain the characteristics of the landscape
- 5) Increase the role of customary institutions optimally to control or supervise government policies and programs, including the courage to question and question government policies that are not in line with their cultural values, customs and beliefs.

Coordination between the people of the Balinese Aga Tenganan Pegringsingan Traditional Village and the local government is needed to realize the preservation of the traditional landscape character of the village. Indigenous people and the Krama of Tenganan Pegringsingan Village as their owners are the most directly authorized parties to the preservation of their cultural landscape. The government in formulating policies must pay attention to the wishes and needs of indigenous people and uphold the traditional wisdom that has been developed by the community for hundreds of years. Thus, the hope for the sustainability and preservation of the Tenganan Pegringsingan cultural landscape will be carried out according to the functions and conditions of the landscape.

4. CONCLUSION

The landscape order of the Balinese Aga Tenganan Pegringsingan Traditional Village is a pattern in which there are elements of the landscape that form it, various types, layouts, forms, functions and meanings of these elements which are influenced by religious beliefs, socio-cultural (traditions, customs, customary institutions), etc.), and natural resources.

The landscape arrangement of the Balinese Aga Tenganan Pegringsingan Traditional Village can conceptually be grouped into 3, namely: macro, meso, and micro space concepts. The macro space is in the form of customary forest space, plantation space, and rice field space, which are located around the village space. The area of the dominant macro space in the form of hills and land contoured from steep to sloping, is a form of landscape that is environmentally sustainable, and the use of space is in accordance with its potential and function. The existence of fields/moorlands and rice fields surrounding their traditional settlement spaces demonstrates that the people of Tenganan Pegringsingan village whose main income is from agriculture and plantations in meeting their daily needs are strongly supported by agricultural and plantation products.

The meso space of this village is in the form of a traditional residential area located on a relatively flat topography. The settlements of Tenganan Pegringsingan traditional village are divided into 3 traditional banjars, namely the *Banjar Adat Kauh* and the *Banjar Adat Tengah* which are settlements for the indigenous people of the village, while the *Banjar Adat Pande* is a place to live for migrants and village natives who make mistakes or are physically disabled. The settlement pattern pivots on the village *Awangan*. The settlement pattern shows the formation of kinship with very strong ties, has a basic spatial philosophy derived from the integration of the three spatial concepts of *Mahulu ka Tengah*, *Jaga Satru*, and *Tapak Dara*. The application and pattern of utilization of nature is in accordance with its potential wisely, carefully, thrifty, efficiently and economically.

Micro space is a layout on the scale of the yard or reef. The total number of corals is 220 corals/lot. The coral plots tend to be of the same area and type and location of the building and are relatively uniform, where there are several main elements of a dwelling, such as the entrance and exit (*jalan awang*), *Bale Buga* overlooking the center of the house, *Sanggah Kelod* in the south facing north, *Sanggah Kaja* in the north facing south, *Bale Meten* facing north, *Bale Tengah* facing south, and the back which includes the back door, backyard (*teba*), and kitchen facing the central courtyard House. The layout of the buildings is neatly lined up from the north of the village to the south end. Consists of 4 rows, the westernmost facing east and the second row from the west facing west.

ACKNOWLEDGMENT

This article is one of the outputs of the research scheme "Penelitian Terapan Unggulan Perguruan Tinggi". This research funded by the General Directorate of Research Strengthening and Development, Ministry of Education Cultural Research and Technology, Indonesia. For that, thank you to the institution mentioned above.

REFERENCE

- Adiputra Tri IGN et al. 2014. Konsep Hulu – Teben pada Permukiman Tradisional Bali Pegunungan – Bali Aga di Desa Adat Bayung Gede Kecamatan Kintamani Kabupaten Bangli, Bali. *Jurnal Forum Teknik Vol.37 No 11 Januari 2014*.
- Dewi, Ni Ketut Agus Sinta, I Wayan Yuda Manik. 2016. Menguak Tradisi Masyarakat Desa Bali Aga di Kabupaten Bangli Desa Sekardadi dalam Jelajah Arsitektur. Laporan Akhir Penelitian Hibah Unggulan Program Studi Arsitektur Udayana, Denpasar.
- Dwijendra, Ngakan Ketut Acwin. 2009. Arsitektur Kebudayaan Bali Kuno. *Udayana University Press, Denpasar*.
- Dyah RSS. 2017. Masyarakat Adat Tenganan Pegringsingan. *Jurnal Penelitian Humaniora*.
- Kumurur, Veronica et al. 2009. Pola Perumahan dan Permukiman Desa Tenganan Bali. *Jurnal Sabua Vol 1 No 1 :1-7*.

- Libhi, Kadek Sidhi Surya. 2016. Sinergi Desa Adat dan Pengelola Pariwisata dalam Pengembangan Pariwisata di Desa Wisata Penglipuran. *Jurna Destinasi Pariwisata Vol 4 No 2.2016 (128 – 133)*
- Runa, I Wayan. 2018. *Arsitektur Publik Bali Kuno dan Sistem Spasial Desa Pegunungan. Udayana University Press, Denpasar.*
- Subadyo, A. Tutut. 2011. *Lanskap Kultural dan Spatial Arsitektural Desa Pakraman. Unmer Press, Malang.*
- Subadyo, A. Tutut. 2018. Assessment of Apropriate Site Development in the Penglipuran Traditional Vilagge. *3 rd ICGSS International Conference of Graduate School on Sustainability Contemporary Studies on Sustainable Development* September 22 – 23, 2018. Graduate School Building, University of Merdeka Malang. Terusan Raya Dieng No 59 Malang, East Java, Indonesia.
- Subadyo, A. Tutut. 2019. *Restorasi Desa Pakraman Penglipuran Berdasarkan Konsep Green Architecture. Laporan Akhir Penelitian Terapan Unggulan Perguruan Tinggi.* Jakarta: Kementerian Riset dan Teknologi – Direktorat Pendidikan Tinggi Republik Indonesia, Jakarta.
- Soeriadiredja, Purwadi, Aliffiati. 2017. Napak Tilas Jati Diri Orang Bali Aga. *Sunari Penjor 1 (1): 43-52.*
- Widyastuti. 2018. Ketahanan Budaya Masyarakat Bali Aga dalam Menciptakan Desa Wisata yang Berkelanjutan. *Jurnal Kajian Bali*.<http://doi.org/10.24843/jkb.2018.v08.i01.p06>.