

## Form of Conservation and Spatial Planning of House Betang, Suku Dayak Central Kalimantan

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### ABSTRACT

The development of the Betang house of the Dayak tribe in Central Kalimantan from a long house model inhabited by several families into a private house with a much changed shape and spatial pattern. Factors that cause changes that occur in general, include: changes in residents' needs; Changes in local customs and traditions, with the loss of gathering habits such as traditional feasts and tiwah rituals; and changes in the form of building elements, both in form and in the materials used. Changes in the form of houses and spatial patterns that occur are caused by changes in the functions and demands of residents as well as cultural acculturation. There needs to be conservation efforts as a tangible form of conservation in this Betang house to preserve the shape of the Betang house as before.

**Keywords:** conservation; betang house; house shape; spatial pattern; residents.

### INTRODUCTION

One of Indonesia's specialties is its natural environment which is the largest archipelago in the world, consisting of about 17,508 islands stretching along 5,210 km from east to west and inhabited by about 300 ethnic groups with 583 languages and dialects. Consists of 33 provinces with diverse environmental characteristics and there are various inland settlements where the population is more oriented and has access to the interior, including through rivers that connect people upstream and downstream, such as the Dayak community in Kalimantan and the Kubu community. in Sumatra. (Indonesian Heritage, 1992).

The Dayak tribe is an indigenous tribe that inhabits the island of Borneo. Being a tribe that has a unique culture and also many still live in the interior until now. Even so, not a few Dayak people also interact with the wider community. One of the interesting things to discuss is the traditional house of the Dayak tribe, namely the Betang house. Rumah Betang is a traditional house of the Dayak tribe which has a unique building whose buildings stand on the banks of a river. The building carries a long stilt house as its name implies. This stilt house is built with a height of 3-meter to 5-meter above ground level and has a length ranging from 50 to 100 meters.

But lately the development of technology and modern life can't be dammed, many Dayak tribes have started to leave their group life at Betang's house. The development of civilization led to changes in the way of living that led to a modern style, including the types of buildings made. The Dayak tribe began to make private houses with the shape and pattern of space according to their needs and have left the spatial pattern used in the betang house.

It is feared that the shape, philosophy and spatial pattern of the Betang traditional house will slowly disappear due to advancing times, technology and the development of modern life. Therefore it is necessary to preserve this betang house to maintain its sustainability. Conservation is the umbrella for all conservation activities of the built environment, which includes preservation, restoration, rehabilitation, reconstruction, adaptation, and revitalization according to (Budihardjo, 1997). In this article, we want to discuss how the changes in spatial patterns that occur in the Betang house due to changes in the way and pattern of living, and find the right way to preserve it.

### Vernacular Architecture

The architectural study of the Betang house philosophy refers to the theory of vernacular architecture. Vernacular definition refers to something original, ethnic, folk and traditional

architecture. Vernacular terms in architecture identify forms that apply elements of culture, the environment, including the local climate, expressed in architectural physical forms (layout, floor plans, structures, details, ornaments, and so on) (Sumalyo, 1993).

Vernacular settlements consider the physical conditions that surround them in addition to the socio-cultural-religious economic elements and influence their characteristics. A very strong aspect is the human need in the cultural environment. Social structure affects the special character of dwellings, settlements, villages from different cultural environments. The ritual traditions of a society affect the spatial organization of a village. Likewise, marriage traditions and other traditions affect the layout and development of a community's villages. Specific characteristics of the social community will produce vernacular architecture such as buildings, settlements, specific villages (Oliver, P, 1987).

### **Conservation**

Conservation is action taken to prevent damage and manage change dynamically, including actions that extend the life of cultural and natural heritage (Feilden, 1994). The criteria for buildings that are suitable for conservation according to Snyder and Catanese (1989), are as follows:

- a. Rarity (very rare works, not owned by other regions);
- b. Historical (related to locations and important historical events);
- c. Aesthetics (having aspects of beauty in form, structure, and ornament);
- d. Superlativity (oldest, largest, tallest, longest);
- e. Pluralism (representing a certain type or variety of buildings and the quality of certain styles);
- f. Existence (improve the image of the surrounding environment).

In Feilden (1994) the values of aspects in conservation remain sustainable while there are three aspects of value in conservation including:

- a. Emotional values include admiration, identity, continuity, spiritual & symbolic;
- b. Cultural values include documentary, historical, archeological, age, and rarity, aesthetic & symbolic;
- c. Use values include functional, economic, social, political & ethnic.

The objectives, targets, benefits and scope of conservation are described as follows:

- a. Conservation Goals;
- b. Conservation Goals;
- c. Conservation Benefits;
- d. Scope of Conservation

### **Spatial**

Order is a set of elements that interact, or relate to, or form a common unity; system. While space (trimatra) is a cavity that is limited by the surface of the building. Arrangement / arranging / managing space includes three main elements, namely elements (activities), quality (specificities / characteristics of things / properties), benchmarks (standards used as a basis for determining assessments). ; criteria (White, 1986).

Space is a place (topos), a place where, or a place of belonging, space is the exact location where every physical element tends to be. Space is the 'emptiness' that surrounds us or around objects or objects. The space in it is more essential than the material/mass. (Van de Ven, 1995).

### **Space Function**

Function is an architectural principle in which the form of a building must be derived from the functions that must be fulfilled. According to Mukarowsky (1978), the function of a building is determined by its immediate purpose in the context of its use.

### **Space Transformation**

According to Laseau (1980), transformations are divided into 4 (four) categories, namely typological transformations (geometry), decorative grammar (ornamental), reverseal and distortion. Factors that cause a transformation (Sari, 2007), namely social, political, economic, cultural. Meanwhile,

according to Habraken (1976), that the factors that cause transformation, namely the need for self-identity (Identification), changes in lifestyle (Lifestyle), and the use of new technology.

### RESEARCH METHODS

This research method uses a case study method with a qualitative research approach (a qualitative Exploratory Research), to find out the changes that occur in the spatial planning pattern of Betang House. The data collection is naturalistic, while the analysis technique is inductive. The data was obtained through searching and reading scientific articles about Betang House.

The data collection technique used in this paper is to collect various sources of data and literature, both from books and articles that discuss the architecture of the archipelago and the Betang house itself. After the data and literature are obtained and compiled, then the identification of developments and changes that occur in this Betang house is carried out. Then look for solutions for its preservation and finally conclusions can be drawn.

### RESULTS AND DISCUSSION

Betang house is a traditional house of the Dayak tribe which has a unique building. The building carries a long stilt house as its name implies. This stilt house was built with a height of 3 meters to 5 meters above ground level is not without purpose. Given that many of them live in the forest, the use of houses on stilts is considered the most suitable to be able to protect from various things.

Starting from the flood, because usually this house will be built on the river bank. Then also to avoid the threat of wild animals until the enemy suddenly attacks. What makes this Betang house even more unique is its elongated shape. Even the length can reach 150 meters and even more with a height of about 30 meters. This is because in one house will be occupied by more than one family.



**Figure 1.** Central Kalimantan Betang House (Source: wisata-indonesia-elipl.blogspot.com)

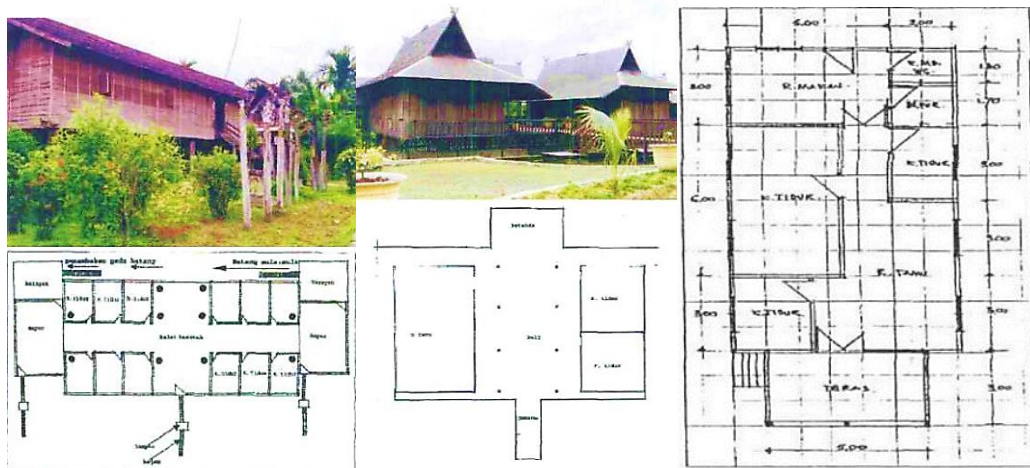
The more people who inhabit it, the bigger the house that will be built. By living in one house, a family consisting of several families will be able to communicate easily. In addition they can also protect each other and help other families. This is also in accordance with the character of the Dayak people who maintain a very high togetherness and friendliness.

### Betang House Room Pattern Space Division

The division of space is very simple, as can be seen from the floor plan, where the room is divided into 3 (three) parts, namely: 1. Batang Huma which consists of a dorm room and bedroom, 2. kitchen and 3. karyan. The division of space is always based on trust in the supreme ruler of nature (Asteria). However, at Betang now the symbolism of space as an artificial residence, the arrangement was originally based on sacred principles but because religion and actuality were used as the center of life, over time the symbolism of residential spaces tended to disappear (Suptandar, 1999: 43). In the Betang house, one bedroom can be occupied by one family and each bedroom has the same area.

## Space Shape

The space in the Betang house is always on one wall that covers the space as a whole, so it can be called a closed space. It is different with the Betang II house where the spaces are on different real walls and the real space has a direct relationship with the outside, so it is called open space (Suptandar, 1999:62).



**Figure 2.** Development of the Betang House Plan, top-down: Betang then-Betang now (Source: Ministry of Education and Culture 1997/1998)

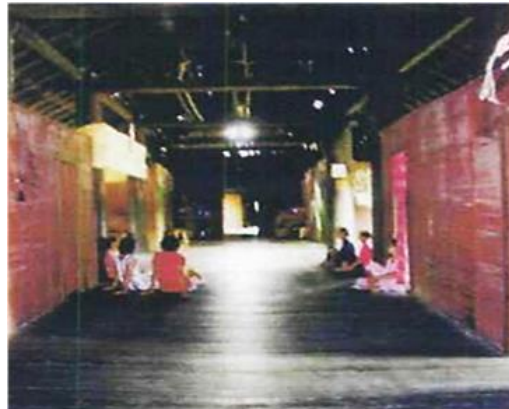
From the left image it is very clear that the concept of life, mindset and lifestyle at that time was very simple where the Dayak tribe had not been touched by the times and technological advances, so the plan was very simple but contained philosophies of life. Along with the progress of the times, the Dayaks no longer live in groups and live in one house, but have begun to separate themselves to make their own family homes.

In the Betang house there used to be a room that was the largest in size from other rooms, namely the los room as well as Betang II and Betang Now where there is a larger room, namely the living room or family room, that's because the Dayak tribe adheres to a large family system and strong kinship so it needs space for the family to gather. Thus, it can be said that the concept of living together and openness is still maintained and it is reflected in the form of space in the Betang house.

## Space Layout and Laying

### Los Room

In the Betang House, the los room had to be in the middle of the building because it was the center or axis of the building where people gathered to carry out various kinds of activities, be it religious, social and other activities.

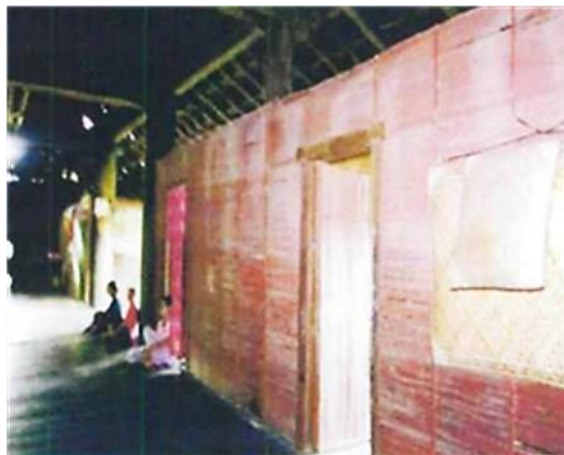


**Figure 3.** Los Room (Source: Ministry of Education and Culture 1997/1998)

In Rumah Betang II, the los room is still maintained as an open area and a liaison between the rooms on the right and left sides of the los room and is still used as a gathering room with relatives or house members. In Rumah Betang now the los room has been replaced by a living room like modern houses in general as a place to gather. The meaning of the los room at Rumah Betang now still survives as a gathering place, but in terms of shape and layout it is much different from the Betang House before.

#### **Los Room**

In the Betang House, the bedrooms must be arranged in a row along the length of the Betang building. The placement of the bedroom for children and parents has certain provisions where the bedroom for parents must be at the very end of the river and the bedroom for the youngest child must be at the very end of the downstream river, so the bedroom for parents and youngest child should not be flanked and if so violated will be disastrous for the whole house. At Betang House now the children's and parents' bedrooms do not follow the provisions as in the Betang House before. Placement of bedrooms for children and parents is now based on the wishes and needs of residents.



**Figure 4.** Bedroom (Source: Ministry of Education and Culture 1997/1998)

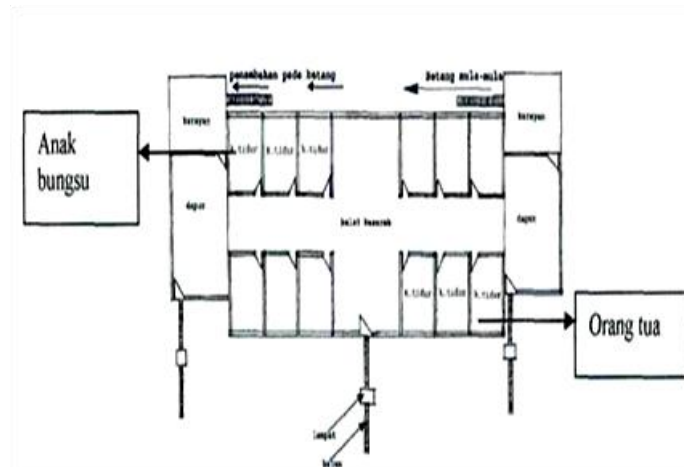


Figure 5. Bedroom Plan (Source: Ministry of Education and Culture 1997/1998)

### Kitchen

In the Betang House, the kitchen was located either to the right or left of the body of the house and had to face the flow of the river so that the residents of the house always got sustenance. At Rumah Betang, the kitchen is now at the back of the house and sometimes becomes one with the dining room.

### Conservation of the shape and layout of the Betang House

It is necessary to underline the factors that caused the changes that occurred in Rumah Betang in general, including: changes in the demands of the occupants; Changes in local customs and traditions, with the loss of gathering habits such as traditional feasts and tiwah rituals; and changes in the shape of the betang building elements, both in form and in the materials used. The changes that occur are caused by changes in the functions and demands of residents and cultural acculturation. (Hamidah, Garib.) To preserve the Betang House, it is necessary to conserve this Betang House.

### Efforts to conserve the shape and layout of the Betang House

From the results of the analysis of the development of the form and layout of the former Betang House and the present Betang House, there are several things that can be obtained, namely:

1. Changes in the shape of the Betang House in the past and the Betang House now, in the former Betang House the shape of the Betang House is very simple and the size is very large/reaching tens or even hundreds of meters, at the Betang House now the shape and size of the house is very different, much to the wishes of the home owner ;
2. The layout pattern of the Betang House no longer follows the philosophy or myth as in the Betang House before, the spatial pattern of the Betang House is now more in accordance with the wishes of each occupant;
3. Although the shape, size and spatial pattern of Betang House have changed greatly, the philosophy or meaning of each room still exists, such as the living/family room as a substitute for the los room with the largest size in the house and the same function.

According to the review, it can be concluded that there is a need for efforts to maintain and preserve the physical or tangible form of Rumah betang as a form of conservation by taking the following actions:

1. Cultivate or re-instill the cultural values and traditions of the Dayak tribe to the next generation. If they know and understand their culture and traditions, they are expected to be able to preserve the tangible and intangible forms of Rumah betang;
2. Because culture is a fundamental thing as a prerequisite that must be met towards sustainable architecture;

3. Maintenance and preservation of the Betang house of the Dayak tribe, both in terms of tangible and intangible;
4. Special attention needs to be paid to the former Betang House which is still left in traditional Dayak settlements from both the government and the community so that the number does not decrease.

## CONCLUSION

From the results of the analysis of this study, conclusions can be drawn, namely: Changes in the spatial pattern of Betang House are influenced by changes in the patterns and lifestyles of the Dayak people themselves; The most visible changes occurred in the shape and size of the Betang House as many people began to choose to live separately and build their own private houses; Changes in spatial patterns occurred such as starting to abandon the philosophy of placing bedrooms that follow the upstream and downstream of the river and being replaced by needs and placements according to personal desires; The meaning of several spaces, such as the los room, is still maintained, which is used as a place to gather and carry out various joint activities; There is a need for conservation efforts in order to maintain the sustainability of the Betang House which has begun to be abandoned by the community. Efforts are as follows: Cultivating or re-instilling cultural values and traditions of the Dayak tribe to the next generation. Because culture is a fundamental thing as a prerequisite that must be met towards sustainable architecture; Maintenance and preservation of the Betang house of the Dayak tribe, both in terms of tangible and intangible; and It is necessary to pay special attention to the former Betang House which is still left in traditional Dayak settlements from both the government and the community so that the number does not decrease.

## REFERENCES

- Andaya D. 2017. *Kajian Penerapan Kearifan Lokal Rumah Adat Betang Pada Bangunan Kantor DPRD Provinsi Kalimantan Barat*. Jakarta; Universitas Mercu Buana
- Asteria, 2008. *Perkembangan Penataan Interior Rumah Betang Suku Dayak ditinjau dari Sudut Budaya*. Surabaya; Universitas Kristen Petra
- Budihardjo, Eko, 1997. *Arsitektur sebagai Warisan Budaya*. Jakarta; Djambatan.
- Budihardjo, Eko, 1997. *Arsitektur, Pembangunan dan Konservasi*. Jakarta; Djambatan.
- Feilden, Bernard M., 1994. *Conservation of Historic Buildings*. Butterworth; Heinemann.
- Hamidah, Garib, 2014. *Studi Arsitektur Rumah Betang Kalimantan Tengah*. Palangka Raya; Universitas Palangka Raya.
- Haryadi dan Setiawan (2010). *Arsitektur Lingkungan dan Perilaku: Suatu Pengantar ke Teori, Metodologi dan Aplikasi*, Gajah Mada University Press.
- Kanwil Departemen Pendidikan Dan Kebudayaan. 1997/1998. *Arsitektur Tradisional Daerah Kalimantan*. Palangka Raya: Tenfiah.
- Rabbani dan Prasetyo. 2016. *Hunian Rumah Betang (Agresi Budaya. Alkimia Arsitektur Dayak Demi Fundamentalisme Arsitektur Nusantara)*. Surabaya; Institut Teknologi Sepuluh November.
- Riswanto D. 2019. *Falsafah Huma Betang di Kalimantan Tengah: Sebuah Pergulatan Identitas Konselor Dayak Muslim*. Banten; Universitas Mathla'ul Anwar.
- Sari, 2007 dikutip dari Pakilaran, 2006. *Definisi Transformasi*. ITB: Bandung.
- Snyder dan Catanese A., 1979. *An Introduction to Urban Design*, New York; Harper and Row.
- Sulistiani, Siti Rukayah, Ratih Sari, 2018. *Konservasi Nilai-nilai Kearifan Lokal pada Pola Tata Ruang 'Huma Hai' Djaga Bahen; Studi Kasus: Humahaidjagabahan di Desa Bahupalawa, Kalimantan tengah*. Semarang; Universitas Diponegoro.
- Suptandar, J. Pamudji. 1999. *Desain Interior*. Jakarta: Djambatan.
- Ven, Cornelis Van De, 1995. *Ruang Dalam Arsitektur*. Jakarta; Gramedia Pustaka Utama.

Wardinarsih, S. 2015. *Arsitektur Nusantara Mempengaruhi Bentuk Bangunan yang berkembang di Indonesia*. Jakarta; Institut Sains dan Teknologi Nasional.

White, Edward T., 1986. *Tata Atur*. Bandung; ITB. Laseau, Paul, 1980. *Architectural drawing; Communications in architectural design; Architecture; Graphic arts; Sketch-books*. New York; Van Nostrand Reinhold Company.