

# SOCIO-CULTURAL CONTEXT, ENVIRONMENT AND PRESERVATION OF VERNACULAR ARCHITECTURE LAMIN PAMUNG TAWAI

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## ABSTRACT

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Lamin Pamung Tawai is a replica of the vernacular house of the Dayak Kenyah before finally moving to the outskirts of Samarinda City. Along with the development of the times and the flow of globalization, local or regional culture is increasingly being displaced. This research was conducted so that there is documentation of Lamin Pamung Tawai. This study also aims to enrich the repertoire of knowledge of the archipelago's vernacular houses which were wisely designed by the nation's ancestors. This study uses a literature study approach, by collecting various related literature studies to see the relevance of the vernacular house. This study found that the Lamin Pamung Tawai vernacular house in Samarinda City has a close relationship with socio-culture and its environment in a humid tropical climate.

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## INTRODUCTION

Many cities in Indonesia have a rich cultural heritage that forms regional identity. Indonesia which is geographically placed at the intersection of two continents and two oceans, is susceptible to a variety of influences (Sahertian & Jawas, 2021). As time develops and needs to develop, the physical development of an area is unavoidable. Changes that occur if they cannot be controlled will certainly threaten the sustainability of the culture with the loss of identity. Culture and socio-cultural attributes are one of the main factors that influence the shape of an area and its vernacular building units. Vernacular buildings are built by local people whose construction techniques are influenced by geography, climate, traditions, culture and materials (Misra, 2016). Local people with specialized knowledge of their area have achieved this technique through long-term experience (Anna-Maria, 2009; Zhai & Previtali, 2010).

The vernacular house, with a long evolution, must accommodate the needs of the activity in it. The vernacular house shows a particular group of people's climatic, aesthetic, socio-cultural, and spiritual aspects (Tratsiakovich, 2018). Therefore, they can demonstrate the fulfillment of complex human needs that are more than just functional needs. Vernacular houses have various spatial designs and create more thermal comfort than modern homes. Thus, the spatial principles of these houses still have high value for modern building design (Du, Bokel, & van den Dobbelen, 2016; Enai, Aratania, Kubota, & Ikenaga, 1993; Philokyprou, Michael, Thravalou, & Ioannou, 2018). Vernacular houses have various forms. The diversity of

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traditional architectural forms of an area is a design characteristic passed down from predecessors to ethnic descendants of the local community. The rapid development of the wave of globalization has hit all aspects of people's lives today. The causes include the rapid development of modern information technology in the community, which greatly impacts the neglect of local wisdom values. An area that must be preserved as an identity and characteristic of an area, in this case, the design of the characteristics of the area concerned.

The process of spatial formation is the result of cultural phenomena, and has a direct effect on the physical form and configuration of space influenced by the cultural context (Affrilyno, 2020; Rapoport, 1969). Socio-culture is the adoption of various complex accumulations of activity systems, beliefs, ways of life, kinship systems, social values, rituals, thoughts, collective visions, ethics, art, literature, gender symbols, and systems of government produced collectively and gradually maintained in the community between a group of people or society that frame various aspects of daily life practice (Holton, 2011; Rapoport, 1994, 1990, 1998, 2005; Kamalipour & Zaroudi, 2012, 2014; Hofstede et al., 2010; Rachmah, 2018). Given the increasing breadth of socio-cultural knowledge, this study explores the special relationship between vernacular and socio-cultural houses in terms of form.

Lamin Pamun Tawai is a replica of the past vernacular house of the Dayak Kenyah Tribe, which has an elongated shape. Lamin Pamung Tawai is located in the Pampang Cultural Village, on the outskirts of Samarinda City. Because the Pampang Cultural Village is located on the city's outskirts, it is undeniable that globalization and local or regional culture can be displaced. Their communal life is not done in line over time. This life began to be abandoned after they began to separate from the traditional Lamin with a communal life inhabited by a hundred families in their place of origin (batih absolute) and began to separate themselves and travel to make new settlements and form a new batih or communal life inhabited twelve heads of families in Lamin Pamung Tawai, Pampang Village, Samarinda.

Forming a new batih is a form of separation to want a better life in a new and fertile land. The newly formed batih is located in Pampang Village, Samarinda. The problem that arises in the traditional Lamin as the new batih is how the function of the residential space with communal life can survive when they live in the suburbs of Samarinda City with much more modern culture, resulting in a shift in mindset that causes traditional people to start leaving traditions and the culture they have. With a series of problems that occur, along with changes and shifts in local values, to maintain this culture with government intervention to rebuild these local values by changing the function of Lamin Pamung Tawai from a living house to a cultural performance house.

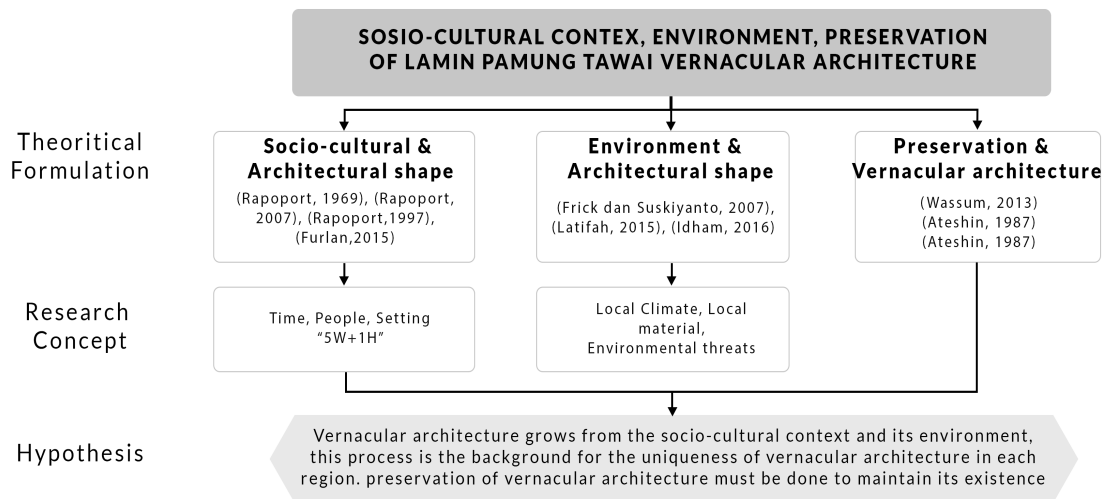
Moreover, this study is expected to provide input to the local government. Either how the building adapts to its environmental conditions or how the building is formed from its socio-cultural background. In addition, this research is expected to enrich the knowledge of the archipelago's vernacular houses, which the ancestors of the Indonesian people have wisely designed. Also, so that the positive values contained in Lamin Pamung Tawai can be used wisely by the next generation, the existence of Lamin Pamung Tawai is maintained for the future. Research on Lamin Pamung Tawai in Budaya Pampang Village as a case study in research has been widely adopted. Many of them raised issues from the smallest scope, starting from the architectural elements, the building units, to the regional scope. There are 3 studies that are very significant in relation to the research theme that the author takes. The following is a previous study related to the theme and research location of the Budaya Pampang Village.

**Table 1**  
**Originality**

<b>Title</b>	<b>Changes in Space Patterns in the Dayak Kenyah Traditional Lamin House Due to the Effect of Modernization in Pampang Village, Samarinda</b>	<b>The Settlement Pattern of the Kenyah Dayak Tribe in the Pampang Cultural Village, Samarinda City</b>	<b>Study of the Meaning of Structural Systems in Lamin Houses</b>
<b>Authors</b>	Ririn Prasetya Pergitawati, Antariksa, Abraham Muhammad Ridjal	Puput Wahyu Budiman, Sudaryono	Faizal Baharuddin, Mohammad Mochsen Sir, Abdul Mufti Radja
<b>Year</b>	2014	2021	2019
<b>Journal</b>	Journal of architecture students of Universitas Brawijaya	Riset Pembangunan Journal 3 (2), 66-77, 2021	Atrium Journal 5 (2), 97-104 , 2019
<b>Similarity</b>	Research Limitations on the space in the Traditional Lamin House	The location of the research, raising the theme of physical form and its relation to socio-culture	Research Limitations on the space in the Traditional Lamin House
<b>Difference</b>	Goals, methods and results of the research are different. This journal focuses on modernization that changes the spatial pattern of the lamin house.	Goals, methods and results are different. This journal focuses more on the scope of the Region	The aims, methods and results of the research are different. This journal focuses on extracting connotative and denotative meanings in the lamin house structure system.
<b>Originality</b>	This research focuses on the relationship between lamin pamung tawai with socioculture and preservation <b>Objectives:</b> This study also aims to enrich the knowledge of the archipelago's vernacular houses which were wisely designed by the nation's ancestors as national preservation and its relationship with its socio-culture. <b>Research result:</b> Lamin Pamung Tawai has a close relationship with socioculture and its environment in a humid tropical climate. Forms of preservation that can be done multipersonally from various parties		

## METHOD

This research uses a literature study approach. To analyze the literature according to the research objectives, the literature on Lamin Pamung Tawai was collected from journals and then highlighted for its special characteristics related to socio-cultural and the environment. The following is a framework for this research method.



**Figure 1. Method framework**

## RESULTS AND DISCUSSION

### A. Concept of soil conservation in the Pamung Tawai

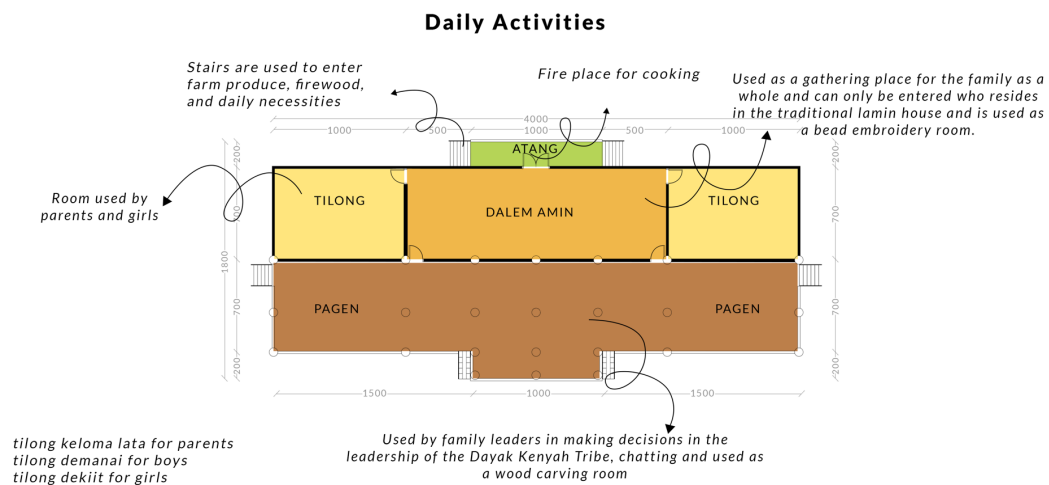
Lamin, The development of the Pamung Tawai Lamin begins with gathering all the Dayak Kenyah tribesmen for deliberation. Lamin construction site must be a good plot of land, not flooded, facing a large or small river. This land area is called lasan palaki, which means 'eagle's field'. After the land was obtained, they discussed again choosing the right time to build the Lamin. On the day the Lamin will be established, everything is done with traditional ceremonies or rituals that are still traditionally led by a traditional head. To hold a traditional feast, dozens of farm animals, such as chickens, pigs, and buffaloes, are usually slaughtered. The next day, it was continued with mutual assistance activities for all village residents, young and old, both men and women, to establish or stake the Sukaq, the name of the great pillar (Kusumaningrum, 2018).

### B. The influence of sociocultural context to Lamin Pamung Tawai

#### 1. Activity (Nature of the activity)

Each room accommodates the daily activities of the Dayak Kenyah community, the traditional ceremonies etc. In Dalem Amin, a room is divided, just like in a house in general. Usually used for nuclear family gatherings. Tilong is part of the *dalem amin*, a separate room for parents, boys and girls. Atang is a food storage room and also a kitchen room (Agustin & Nabila, 2021).

**WHAT** Nature of the activity  
**WHO** The person involve, gender  
**WHERE** The location & privacy



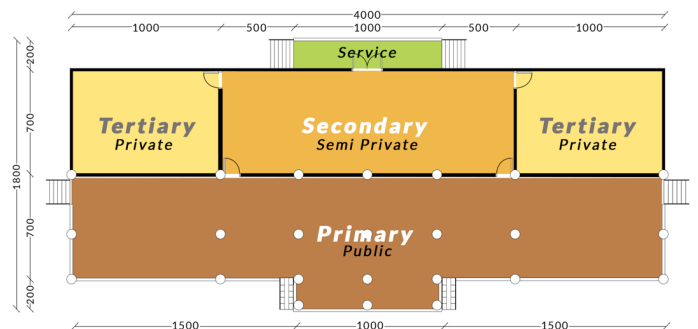
**Figure 2. Space's Functions**

2. Gender Segregation

Room The function of the space in the lamin house before changing its function (the old adat lamin) is based on marital status grouping and gender differences. The grouping is done because of the house's function as the nobles' residence.

3. The location and privacy

Location and privacy can be seen from the hierarchical level and zoning. Public space is a room considered important to be used by family leaders in deciding a decision in the leadership of the Dayak Kenyah Tribe, namely the pagen of an open space commonly called the wider community is the terrace. Semi-private space is a secondary function, where the room is of lower importance and is used as a gathering place for the whole family who resides in the Lamin traditional in amin a closed room that only families can enter. The private room is a complimentary space for other functions, namely the tilong (room), which is only for parents and girls.

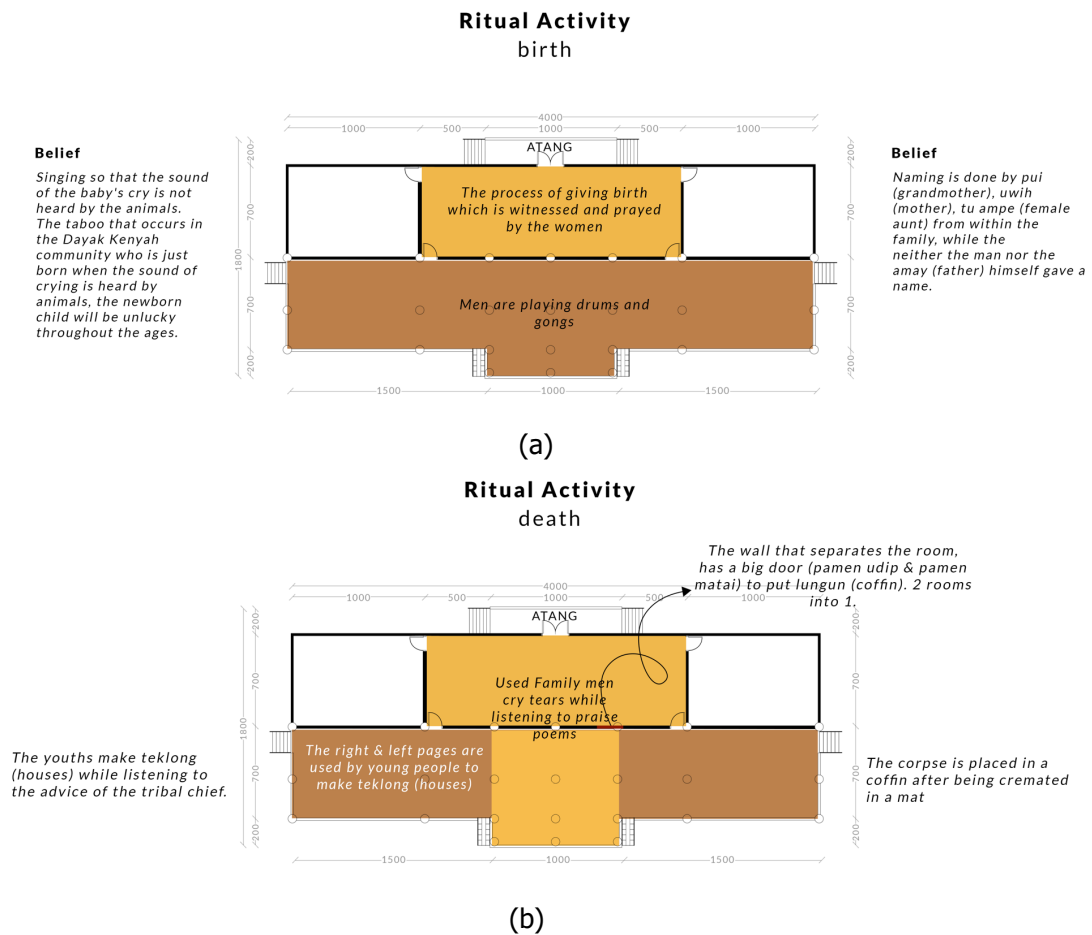


**Figure 3. Hierarchy and zoning of space**

#### 4. The timing

Apart from functioning as a communal residence consisting of twelve heads of families, the function of the traditional lamin house space at certain times is used as a traditional ritual believed by the Dayak Kenyah community, utilization of the inner space, which is used as a traditional ritual.

**WHAT** Nature of the activity  
**WHEN** The timing



**Figure 4. Rituals held at a certain time (a) Childbirth (b) Death**

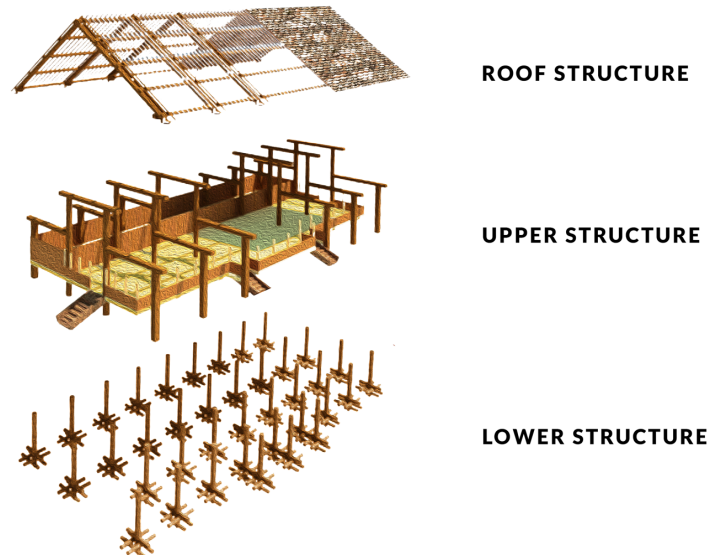
#### 5. Meaning

##### a) Orientation

Lamin orientation facing the River. The orientation of the traditional lamin building can affect the interior layout pattern because each direction has a sacred meaning. North is "upstream," meaning people from Hulu Mahakam, which means Dayak. East is a natural phenomenon where the Dayak people commonly use the direction of the rising sun as a benchmark for the front view of their nobles' houses and as a benchmark indicating those who have gone to their God (died). The south is downstream of the river. The orientation at the top of the water is the residence of the Kenyah Dayak people who have inter-tribal marriages and currently have a contagious disease. West is the direction of sunset, which is used as a benchmark for the front of the house of ordinary Dayak Kenyah people and becomes a benchmark for people who have died (Pergitawati, Antariksa, & Ridjal, 2014).

b) The structural system

Lower Structure As support for all the above loads, the lower structure is a symbol of carrying or supporting all activities above it, as well as being a liaison between the Lamin house and nature (soil). The upper structure has a symbol as the body of the Lamin. The body has a meaning as the place of the spirit of the Lamin. The upper structure has a symbol as the body of the Lamin. The body has a meaning as a place for the spirit of Lamin (Baharuddin, Sir, & Radja, 2019).



**Figure 5. The structure of the Lamin Pamung Tawai**

c) Carvings

Carvings fill the dividing wall between the pagen (usei) and the dalem amin, which tells the story of the lineage of the Dayak people in the form of carvings, where a king leads and guards each head of the Dayak sub-tribe, which is depicted in the form of a human statue in the middle. The jar is located right under the feet of the human statue that gathers all the tribal chiefs and the gong on the top as a cover so that it does not fall apart. In comparison, each of these tribal chiefs is depicted in the form of a white circle connected by a curved line that connects and is bound to each other.

The hornbill has a meaning to remember that the unity of the Dayak community is expected to be brave, loyal, and humble; The shape of the crocodile in the ornament is used as a symbol of strength and magic when there are more and more immigrant tribes and the influences they bring, it takes an attitude that they must also be able to maintain their traditions and characteristics amidst many outside influences; The tiger from the perspective of the Kenyah Dayak community is a symbol of one's nobility. A motif that only the king and his nobility could use; The human form in the ornament is used as a reminder that the unity between the Dayak people is important and the main thing because each individual has a role in the future of the tribe; Curved lines and circular shapes are symbols of the descendants of every Dayak chief in Kalimantan. The shape of the arch and the circle in the ornament is used as a symbol of unity among the Dayak people; The meaning to be conveyed through the ornaments of jars and gongs is a memory of the ancestors and is a valuable thing. Used as a protector from evil forces.





**Figure 6. Carving of (a) Hornbills, (b) Crocodiles, (c) Tigers, (d) Humans, (e) Curved lines and circles, (f) urn**

d) Colors

The white color symbolizes the cleanliness of the soul. The blue color symbolizes loyalty. The yellow color symbolizes authority. The red color symbolizes courage (Kusumaningrum, 2018).

### C. Adaptation of Lamin Pamung Tawai to environmental conditions

#### 1 Roof system

The overall shape of the roof has an elongated shape (according to the shape of the floor plan) and has a towering roof. The shape of the Lamin Pamung Tawai roof is a piled gable roof with a large volume that helps the hot air flow up and is used as heat storage (thermal mass) to be released into the room at night. The lightweight roof material makes the thermal mass low, and this is by the location in Indonesia, which is a humid tropical climate, so that thermal mass does not become urgent. So that the volume roof is focused on flowing hot air to the volume part of the roof, which makes the air temperature inside cooler. The Lamin Pamung Tawai roof also has a fairly steep roof slope so that it can accelerate the overflow of rainwater.

#### 2 Wall System

The elongated shape of the building makes every room have a direct relationship with the outside. The number of openings on the sides of the building is many and wide, and the shape of the building is flat can help a good flow of air circulation due to cross ventilation. The material used on the walls of the Lamin Pamun Tawai vernacular building is ironwood arranged vertically around the sides of the building.

#### 3 Floor System

At the Lamin Pamung Tawai House, it was also found that the house's foundation was high using wooden poles and stilts. The elevation of the floor through the construction of the stage reaches a height of about 1 meter from the ground. Lamin Pamung Tawai's vernacular house stands on peat soil. The underside is not used for daily activities but only to store wooden blocks. Floor elevations are used to reduce humidity and avoid the threat of wild animals.

#### 4 The structural System

The system of the Lamin house in Pampang Village is as follows: Sukaq Epek is the basic foundation pillar to support the floor beams (dasei), which are partly embedded in the ground and partly above the ground consisting of (a) Sunduk is a locking beam with a length of 20 cm - 40 cm. (b) Kalang is a beam or transverse board with a length of > 5m; Sukaq Solai is the main pole with a round shape made of ironwood with a diameter of 30 cm - 50 cm, positioned into the ground + 2m up to the roof. The length of the main Sukaq is between 10 m - 12 m; Sukaq is a pillar/column as support for space, Sukaq is made of ironwood with a size/diameter of 10 cm - 12 cm; Sulo is the main beam of ironwood with a size of + 6/12 cm which connects or binds the Sukaq Epek with



the Sukaq Epek; Ladeng Aso or commonly called girder beams are floor beams with a size of 5/10 cm or 6/12 cm resting on the main beam with a distance of 50 cm. 6. Sukaq Ba'a is the main pillar of the wall; Sulo Da'a is a binding beam between Sukaq Ba'a and other Sukaq Ba'a or better known as Ringbalk; Sekang is an iron beam with a size of 6/12 cm which functions as the main structure for supporting the roof; Kang is a wood connection term that is used for all connections both Sukaq, Sulo and Da'a; Sapau is a roof that uses shingles (thin boards made of ironwood); Kasoa is part of the horses.

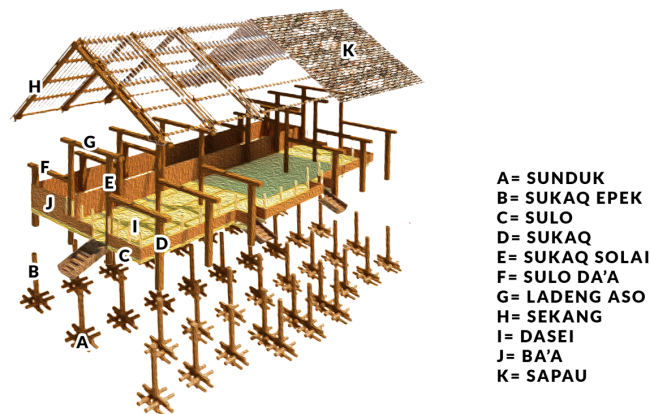


Figure 7. Structural System of Lamin Pamung Tawai

## CONCLUSION

The vernacular house of Lamin Pamung Tawai in Samarinda City closely relates to socio-culture and its environment in a humid tropical climate. Efforts to harmonize with the dynamics of the motion of changing things become part of the dynamics themselves. The Dayak Kenyah community, with their philosophical power of religious knowledge, performs rituals, creates myths and symbol meanings that are passed down from generation to generation and become part of their beliefs to align themselves with cosmic dynamics. Thus, it raises the potential to become one of the preservation objects of the Indonesian archipelago. The forms of preservation that can be carried out can involve multipersonality from various parties.

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