

# House Typology of Musi River's Edge in the City of Palembang, South of Sumatra – Indonesia

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## Abstract

**Background/Objectives:** Riverside's houses have specific traits that created by natural form, such as river's water level, and river edges. Developments give rise to problems, namely: How typology building forms that are highly dependent on the river water. **Methods/Statistical Analysis:** The method used is a qualitative method, with a descriptive analysis of the conduct, as well as the study of the relevant literature to gain an understanding of the order of the settlements by the river. **Result:** This study found that, typology of the house Musi river bank happens comprised of: home floating on water that can move because it has no foundation; house floating on water that cannot move because it has a foundation that is embedded in the soil at the bottom of the river. Type the form space in which occur on the mainland are distinguished at the height of the face of the conservatory floors corresponding to the status of nobility from the occupant of the House. While the type of the stage above the water, the type form of space it has the same high floor height, this shows the status of occupants that is the ordinary society. **Conclusion/Application:** Musi river settlements into a tourist attraction of the city, and become cultural preservation and building up to now.

**Keywords:** House Preservation, Riverside, Typology

## 1. Introduction

The river is an urban space that is formal, with a field is basically in the form of surface water. The urban space is to be located in the central of the city and an important role in both directly and indirectly, in terms of growth and development in the city<sup>1</sup>. The river became a primary morphological element in the tissue formation, and also serves as the main transportation mean, to connect the inland centre with the outside world<sup>2</sup>. So can be said the river was the pulse of the life of an area. In which growth and development come early and rely on the river. Similar to the life settlement of the Musi river in Palembang. Since the era of the kingdom of Sriwijaya in Palembang ruling in the 7th century BC (Figure 1)<sup>3</sup> also in the era of the Dutch colonial administration (Figure 2)<sup>4</sup> up to now (Figure 3)<sup>5</sup>, Musi river is the artery of the economy in Palembang and South Sumatra Province.

This river divides the Palembang city into two parts, namely *Seberang Ulu* and *Seberang Ilir*, and is the largest river with a length of 750 kilometers and an average

width of 540 meters, the longest reaching 1,350 meters wide (Figure 4)<sup>6</sup>.

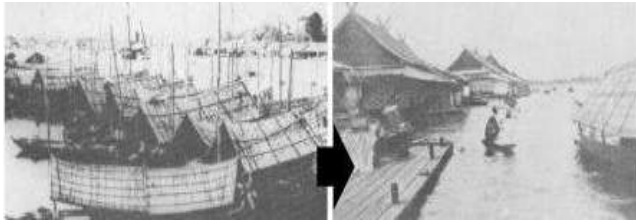
Palembang proclaimed by the President to the 6 Republic of Indonesia, Susilo Bambang Yudhoyono as the 'City of Air Travel' city like Bangkok in Thailand and Phnom Penh in Cambodia, on September 27, 2005. And in 2008 the city of Palembang welcomes tourist visit with the name 'Visit Musi 2008'<sup>7</sup>.

Until now, inhabitants have remained settlement flourished in the river of Musi. A form of settlement which has been there since antiquity, and became a special attraction for a city of Palembang. Using qualitative methods, a survey done in relevant books and through residential typology sat on its edges Musi what happened until now.

## 2. Characteristic of the Bank of a Musi River to use as a Building

Generally, the initial development of a city tends to be centralized, where the city center is a public space, the

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**Figure 1.** An early form of the raft houses is the form of a boat 'Kajang' in the era of the Kingdom of 'Sriwijaya' 7 century AD.



**Figure 2.** Raft houses in the Dutch colonial era in the 1920s (source: tropenmuseum royal tropical institute).



**Figure 3.** Life settlement musu river current.

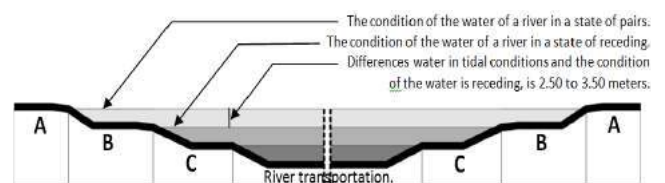


**Figure 4.** Musu riverside residential area in the city of Palembang.

public space is a functional space<sup>8</sup>. Public space in urban areas is understood as a space that is free to use by anyone, and is controlled by the State. Public space the shape is stretched as corridors, generally only have a limit on

its side, as with any form of open space on the river<sup>9</sup>. The waterfront is a dynamic area, where the land meets the water body. The meeting area is an area that is fertile and has the potential for community planning and development. In a larger sense, the waterfront is not only physically seen directly adjacent to bodies of water, but also have a connection with the water in the historical development of the area. Having a separate uniqueness to the development of social society who lives, have economic value, creating public enjoyment of its own, and become the identity of these regions<sup>10</sup>.

Palembang has the character as a city of water, Statistical data from 1990 shows that the natural physical condition of Palembang city, mostly made up of water approximately 52.24%<sup>11</sup>. This can be seen from the many large rivers and creeks that are in the city. River in Palembang is strongly influenced by the tides, with effect as far as 60 km from the mouth of the river. The highest tides occur from October to April, with fluctuations in water level reaches 2.50 – 3.50 meters at high tide. Consequently, the buildings in the area of a stage 2.50 – 3.50 meters with a height of the bottom of the stream, situated above, or on the surface of the water of a tide. Based on the topography, the settlements in Palembang, generally located at three locations, namely directly on the water, the tidal or river banks and land. The River grows very naturally, depending on the circumstances of the ebb and flow of the waters of its river. To avoid the tide is always changing, and affect the surrounding area, the embankment used as a barrier (Figure 5).



**Figure 5.** configuration Pieces of land on the banks of the Musu River in Palembang.

**Figure 5.** configuration Pieces of land on the banks of the Musu River in Palembang.

A = Area of land and the riverside area, at the time of high tide, this area is the area of the riverbank. However, at low tide, the area became land area. Foster home ground in the form of a stage.

B = Area of the tidal river, where the current state of the waters receding, this area became the riverbank. Clearly visible pillars of the building. However, at high tide, the waters of the river area, where buildings look like floats on water. Foster home stage.

C = Area waters by the river, foster homes raft.

D = The area of traffic lanes at the waters of the inland waterway transportation.

If you do not use the levee as a barrier, then the tide would be unclear, so that the area at the time of low tide, is as ground, but at high tide, into area waters.

### 3. Dwelling Settlement Building Typology Musi River Edge

The grouping of a kind of means of building the river based on the configuration of the state of its natural, consisting of: (A) The land of the stage; (B) The tidal stage; (C) The house of a raft (Figure 6).

Typology means of settlement building on the banks of the river can be broadly divided into two, namely land and houses on stilts above the tidal land, and houses floating on water.

### 4. (A) Stage House on Land and (B) House Stage at The Tidal River Water

Houses on stilts land and houses on stilts tides in Palembang have the same characteristic shape. The stage house consists of two types of Pyramid house and Barn house. The difference lies in the function of the bottom only, namely: This house rests immediately on the ground and close to the bank of a river, made also in the form of the stage. The house which located on the ground created in the stage for the securing for a wild animal attack. Therefore, the bottom part of the house is not occupied by the family. But functioned as a warehouse, or to take care of pets. With warehouse functions under the house, then the location of the stairs to the room above were outside the building, which can be reached directly by the public. The tidal stage house is a form of anticipation of tidal waters, avoiding flooding. Stairs-even position located outside the building.

### 5. Pyramid (Meru) House

A house with a roof shape pyramid (*meru*), supported by poles above the ground. Especially in the area of tidal



Figure 6. Grouping building types Musi riverbank.

waters, pole height is measured by the height of the highest tide in the area. While on land, the height of the mast is as tall as a human, so that people can be to put goods on under the house. This pyramid house in antiquity is the residence of the nobles, where there is a difference in floor height. It is associated with the hierarchy of space and social status of its inhabitants. On the roof there are ornaments like crowns. Called the 'head' is the roof along with the ornament (*tandook kambeeng* and *simbar*). The 'body' house consists of all the rooms in the house except the pyramid 'jogan' or guest rooms. The 'legs' house consists of 'jogan' entrance stairs up on poles foundation called 'cagak' (Figure 7 + Figure 8).

### 6. Barn House

A residence for traders and ordinary people, and is also used for storage of goods. The roof shape shield without ornamentation. Flat floor, there are differences in floor height. This type of home is still widely used as well as new built, especially in swampy areas (Figure 9 + Figure 10).

### 7. Raft House

At the beginning of its development in the kingdom, raft houses inhabited by migrants, namely Arabic and Chinese



Figure 7. Typology a sketch and Form Roof on House Pyramid Stage.



Figure 8. Looks House Pyramid Stage.

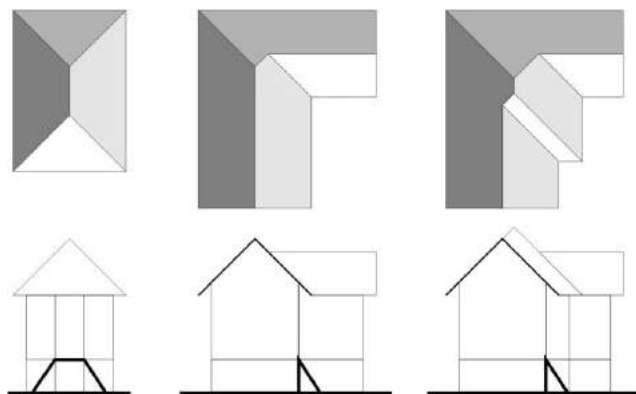


Figure 9. Typology Forms Warehouse Roof House Stage.



Figure 10. House Stage Warehouse.

traders, who are not allowed to own land on the mainland. It is paying particular attention to if they do not pay taxes, then the rulers at that time could easily expel them. Besides foreigners, there are also natives who stay at home rafts coming from lower classes<sup>12</sup>.

These immigrants settled in the raft house, the house is placed on a foundation which can float in water. The anvil is made of a series of bamboo or wood<sup>13</sup>. To maintain stability, the house is placed in the middle of the raft (Figure 11).

The house of a raft there is no foundation until embedded into the ground. But the house of a raft will be carrying the burden of ballast that can be brought down to the river bed. With the ballast tools, house these rafts can stop somewhere. These waters also built an embankment that is embedded in the bottom of the stream, that serves to bind the fore part of the house of a raft so as not drifting by the flow of the water of a river. In general, the raft house has two doors, each facing the mainland and into the river. In the section that faces the mainland, there is a bridge in the form of a series of bamboo or board. Home form is simpler than pyramid house and barn house. Rectangular and on the inside there are two rooms. The front room is used to receive guests and daily activities, while the back room serves as a bed. The kitchen at the house raft part attached to the outside wall of the back room.



Figure 11. The position of the house which placed in the midst of a raft.

## 8. Conclusion Typology in The Form of Home River Edge Musi

The edge of the river waters has natural characteristics that are closely related between water, soil, climate, as well as social and cultural heritage of the people in that location. Typology of the house Musi river bank happens composed of: home floating on water that can move because it has no foundation; house floating on water that cannot move because it has a foundation that is embedded in the soil at the bottom of the river.

The houses are using material from wood or bamboo. Taking into account the security of a wild beast, then the house that are found on land was made to float above the surface of the ground, which is being raised on a platform. Type raised on a platform happened on land, and in the area of ups and downs of water. Type the form space in which occur on the mainland are distinguished at the height of the face of the conservatory floors corresponding to the status of nobility from the occupant of the House. While the type of the stage above the water, the type form of space it has the same high floor height, this shows the status of occupants that is the ordinary society.

## 9. References

1. Werner R. Cities and towns in Indonesia; Their development, current positions and functions with regard to administration and regional economy, Urbanization of the Earth. 1987; 292.
2. Johannes W. The Role of Chinese Settlements in The Urban Development of Southeast Asian Coastal Cities. Singapore: Journal of the South Seas Society. 1996.
3. Djohan H. Palembang Zaman Bari: Citra Palembang Tempoe Doeloe. Palembang: Humas Pemda TK I Palembang. 1990; 323
4. Paul Michel M. Early Kingdoms of the Indonesian Archipelago and the Malay Peninsula. Singapore: Editions Didier Millet. 2006; 175.

5. Sungai Musi Sumatra Selatan, 2012 Nov. Available from: <http://fransiskatya.blogspot.com/>
6. Kerjasama antara Pemerintah Kota Palembang dengan Badan Aplikasi Ilmu Pengetahuan dan Teknologi Sriwijaya. Bappeda kota Palembang, Tahun. 2002.
7. Kategori: Kota Palembang, 2012. Available from: [https://id.wikipedia.org/wiki/Kota\\_Palembang](https://id.wikipedia.org/wiki/Kota_Palembang)
8. Jonathan B. Redesigning Cities Principles, Practice, Implementation, APA: Chicago, 2003; 312.
9. Rob K, Urban Space, New York: Rizzoli Intl Pubns, 1979.
10. Wrenn DM. Urban Waterfront Development, ULI - The Urban Land Institute, Washington D.C, 1983.
11. Pemerintah Kota Palembang dengan Badan Aplikasi Ilmu Pengetahuan dan Teknologi Sriwijaya, Laporan akhir: rencana pembangunan jangka panjang (RPJP) kota Palembang (2005-2025), Baliteks Unsri: Palembang, 2006.
12. Van Sevenhoven JL. Lukisan Tentang Ibukota Palembang, Bhratara: Jakarta, 1971.
13. Hartanto B. Rumah Rakit Palembang, presentasi simposium arsitektur vernakular ke 1, 22 Mei 2004, Gedung Serbaguna, Universitas Katolik Parahyangan: Bandung, 2004.