



## ADAPTATION FROM FLOORING LEVEL OF STILT HOUSE IN SUSTAINABLE SETTLEMENT MUSI RIVERSIDE PALEMBANG

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## RESEARCH HIGHLIGHTS

The development of Musi Riverside house was influenced by the role of the river. The form of Musi riverside house is a riverside house and a stilt house. The choice to build stilt house is inseparable from the condition of the land in South Sumatra, which is generally in the form of wetlands. The level / height of the stage of flooring house is influenced by the condition of the house in the settlement layer, given the higher volume of water due to the denser density of the riverside houses. The high pole of the house is a form of adaptation to the high volume / tide of river water in the rainy season. The stilt house or pillar houses is a sustainable alternative to the Musi Palembang riverside community. Changes in house elements from wood material to permanent material resulting in riverside houses characterized by land houses.

**Keyword:** *Settlement, Floor Level, House on Stilts, Sustainable, Riverside*

## RESEARCH OBJECTIVES

The purpose of this study was to determine the tendency of the elevation of the stage floor level to the volume of water at the tides of the Musi River in Palembang. The stilts house or pillar houses is a sustainable alternative to living in the Musi Palembang riverside community (1). In achieving this goal, a study was conducted to identify architectural traces, explore activities and ideas of the Musi coastal communities. Then, to know the consequences of problems that will arise from permanent housing, the distance between houses that are very tight, and landfill on the banks when the tidal river of the Musi occurs (2).

The direction will show that most of the houses on the banks of the river experience physical changes in buildings, both in terms of functions and building materials (3). Changes in the constituent elements of the house from wood material to permanent material occurred in most of the stilt houses on the banks of the Musi River, resulting in riverbank houses characterized by land houses.

## MATERIALS AND METHODS

This study uses a case study approach (4). The case study approach is a form-based approach that can be shown in three perspectives, namely activities, artifacts, and ideas. Architecture as a trace of civilization can be included as an artifact, but looking at architecture is not only physical.

The method of data collection is done through observation (maps, photos, books, journals). Basically, data collection is done qualitatively which consists of observation of settlements, in the form of interviews and literature studies.

Observations made are more directed at the condition of the land surface in riverside of Musi river. Whereas the interview was carried out more on matters that determine the height of the pillar of the house, which in this case relates to the background, purpose, and activities of the Musi Riverside community.

This method is carried out with a case study approach in which elements of research such as society and humans are the factors that regulate or experience the process of change (5). In the analysis of core data. Settlements chosen as cases must meet the criteria (integrated), namely the relationship between phenomena and contexts and also proven from observational studies on the surface.

## RESULTS





The development of the Musi riverside settlements has shifted the orientation of settlements that affect the existence of life on the banks of rivers (6). Water space that was previously so extensive, began to be narrowed by the presence of land space and the increase in the number of stilt houses on the banks of the Musi River, which resulted in higher water volumes due to the narrowing of water circulation due to the increase in the number of riverside houses.

The stilt house was built because they responded to the wet conditions of the river or swamp water, and the conditions of the soil were less dry. The condition is neatly arranged and still stands firmly in the riverside Musi, but some are rickety because influenced by the age of the wood, and houses that stand on wetlands (7). Residents in stilt houses live at the top, the bottom is filled with pillars of house construction. The average support pole is more than two meters from the ground so it is safe from the water entering the house. River flows flow at the bottom, while the upper part remains safe.

## FINDINGS

Flooring level / height of the stage of the riverside house is influenced by the layer of settlements, the pillars in the first layer of settlement will be higher than the surface of the land. The high pole of the house is a form of adaptation to the tide of river water. Changes of house elements from wood material to permanent material occur in most of the houses on the banks of the Musi River. This tendency will have an impact on the loss of the characteristics of dwelling architecture in the riverside Musi Palembang characterized by land occupancy.

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