

VERNACULAR ARCHITECTURE INNER BADUY COMMUNITY IN CIBEVO VILLAGE AS REPRESENTATION OF CREATIVITY AND INNOVATION RESPONDING TO THE NATURE

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Abstract

Baduy traditional community consists of two groups, namely Inner Baduy and Outer Baduy. Inner Baduy people live in the restricted villages Cibeo, Cikertawana and Cikeusik, Banten province, Indonesia. They have a mystical belief and strong tradition, including the concept of building house and settlement. They believe in supra natural power.

One important rules is not allowed to build buildings using materials and tools of modern technology products. Their building stand on some wooden stilts. The stilts stand on stones as function to support the weight of the building and set the building floor flat. They also forbidden to change the building site conditions, such as by way of flattened or excavated of ground. Buildings should adjust to the conditions of its site.

The building made from natural materials such as wood, bamboo, palm fiber and so on. They use wood and bamboo construction, using bamboo pegs and wooden and palm-fiber rope. Construction techniques that make buildings resistant earthquake because construction is not rigid, flexible and able to absorb the shocks of the earthquake. Bamboo pegs use when two woods or construction in wet condition, when they are dried the joins becomes stronger.

Another important building is leuit that serves

as a place to store rice. Leuit stand on some stilts but its size smaller than dwelling house. Leuit located separately from the location of the settlement. To prevent the rats entered the leuit, at the top of the pillars mounted horizontally circular board.

In general, the techniques used by traditional Inner Baduy community showed their creativity and innovation, responding to the material and the nature.

Keywords: *Bamboo pegs, Leuit, Circular board*

Introduction

Baduy traditional community in Lebak district, Banten province, West Java, is one among the traditional communities in Indonesia who still hold beliefs and traditions firmly. According to the history, Baduy people is the ancestor of Sundanese who refuse to convert to Islam faith. Therefore, they broke away into the forest until now.

Baduy traditional community consists of two groups, namely Inner Baduy and Outer Baduy. Inner Baduy still has mystical belief and strong tradition which maintained until now. They live in restricted area which separated from the other community in Cibeo, Cikeusik and Cikertawana villages located in the hills of Kendeng mountain. They refuse anything modern, such as electricity, radio, soap, long trousers and the like. Visitor do not allow taking picture of them and their village. But one could take a picture of Inner Baduy people when he outside of his village. Therefore, documentation of Inner Baduy, particularly in architecture still rarely.

Any of Inner Baduy people live in the remote village Cibeo. It is situated in an enclave area which isolated from the outside world. The distance of Cibeo village is about 15 kilometers far from the nearest border of a modern village called Ciboleger. It takes up to approximately 3 - 4 hours to get there on foot across hills and forests.

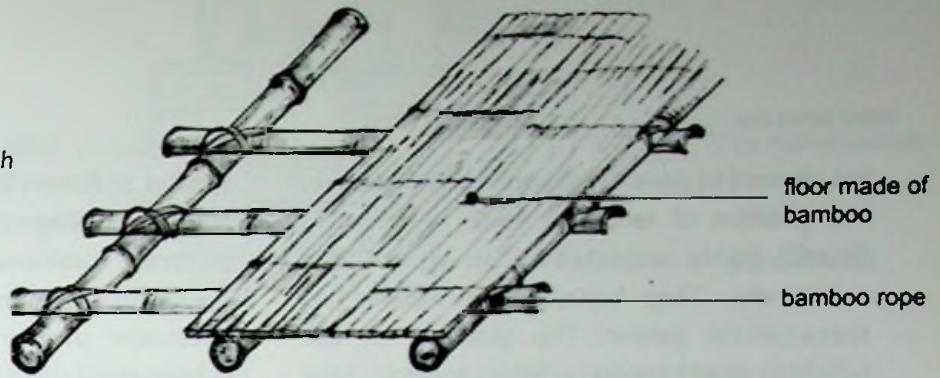
Generally, Outer Baduy people more receptive to other civilization, many of them interact with modern society, adopting some lifestyle of modern society, including the use of some modern technology products, such as radio, mobile phone, long trousers jeans and the like. Some parts of Outer Baduy buildings influenced by modern architectural styles, such as using smooth and decorative bamboo walls, glass window, wooden door and the like. Most of Outer Baduy house has two wooden doors and its interior have been modified or divided into several rooms.

Inner Baduy house made of rough bamboo walls, no windows and have one bamboo door only. The house consists of two rooms, called Imah and Sosoro and Tepas. Imah is

Figure 1: Inner Baduy house



Figure 2: bamboo floor called Palupuh



the main room which have multi function such as sleeping room of the owners, cooking room and storage for household utensils. It is a closed and special room covered by bamboo wall. The Sosoro and Tepas are L shaped room its size bigger than Imah. It has multi function, such as family gathering, eating and sleeping place for children and guest.

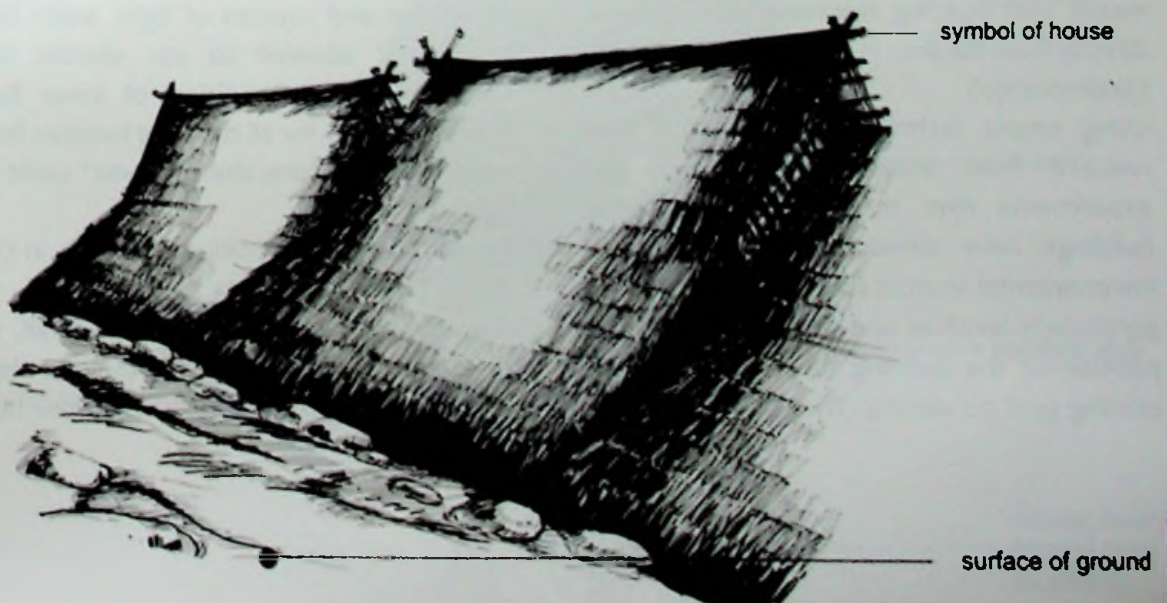
floor are widely used in traditional Sundanese buildings till now. Generally, it was used as a place to save the fire wood. A raised bamboo floor also serves a number of purposes, such as keeps people from dampness and moisture and make rooms freshly. Stilt house is Sundanese traditional architecture since several hundred years ago.

Stilts House Vernacular Architecture of Baduy

All of Baduy buildings stand on wooden stilts. The floor is high and there is a void beneath the floor. The floors are made of bamboo splitted and flattened called as "Palupuh". Bamboo

Inner Baduy traditional community has some beliefs and taboos, among others, is prohibited to build houses using modern tools or products produced by modern technology such as using iron nails, iron wire, clay roof tiles, glass, plastics and the like. The surface of wood construction must not be crushed but rough. Similarly, Baduy building - either inner or outer community - should not be painted. In addition, they are prohibited from changing or leveling of land for building houses. They are

Figure 3: Inner Baduy of Cibeo village



not allowed to pave the ground for their house. The position of land or earth, they called "Bumi", highly respected by the Inner Baduy community. They believe that nature has supra-natural power. The position of the building must conform with existing land conditions. Not allowed to alter or flatten the land. Meanwhile, most of condition the village of Cibeo is slope area and has difference surface.

Generally speaking, in Baduy community the management of land and sites for building purposes has been an essential part of the way of life of its Baduy inhabitants for many thousands of year.

Living with some prohibitions or taboos and limitations of materials and techniques, it has been encouraging Inner Baduy people creative and innovative. Trying to respond to natural challenges with wisdom and smart solution. Because of technological limitations, changes and development of traditional Inner Baduy settlement tended to be slower incremental.

All the buildings in the village are made of Inner Baduy - natural ingredients contained in the vicinity, such as wood, bamboo, palm fiber, thatch grass, rattan, stone and the like. In addition, these are easily obtained and ease to use. The tradition of traditional settlements meant that building materials were derived directly from the area in which they were used. (Skidmore:157)

Using simple techniques, a technique that resulted from trial -error process and experiments over the years. Inner Baduy buildings have developed to respond to environmental sources and natural conditions, particularly weather and land condition. The position of the building must conform with existing land conditions. They do not allowed

to alter or flatten the land. Mostly condition of land of the village Cibeo is slopes with different surface. "Traditional societies did not have the means to make large-scale alterations to the landscape, so their urban developments were subservient to and fitted into and around major natural features". (Skidmore:156)

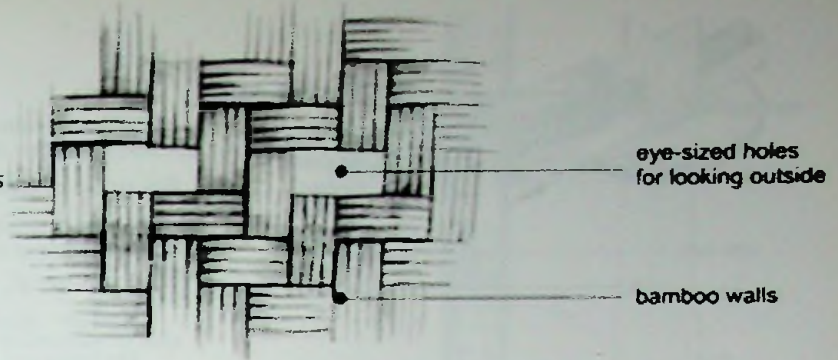
Inner Baduy people have some simple but functional construction techniques. Techniques and knowledges are comes from some experiments and it is hereditary in a few generations. Although its development and innovation rather static but very useful for their daily life.

In general, the technique used by Inner Baduy are the techniques of tie and peg constructions. Using both techniques to build simple building design and earthquake-resistant building. In addition, Baduy buildings is environmentally friendly design because all of the building materials come from nature. Environmentally sensitive and sustainable landscape design has become an important goal of Baduy societies seeking to achieve sustainable development.

Inner Baduy house made of woven bamboo walls called a *Sase* or *Bilik* (Sundanese). The woven techniques create small holes, such as "pores". These small holes also function as air circulation and sources of light. Inner Baduy house not allowed to use electric lamp. Generally, inside condition of Inner Baduy houses are dark for all day long because has no windows. Therefore, these "pores" could help lighting the room.

For the purpose of looking outside - in Outer Baduy house through a glass window - they make small holes in the bamboo wall, eyes sized hole called "*Lolongok*". They do this by punching holes in bamboo walls of their house.

Figure 4: holes to look outside called as Lolongok



Placement "Lolongok" placed anywhere, in accordance with the wishes and needs of the house owners.

The main entrance to the Inner Baduy house made of a plaited bamboo door. It is without a hinge, but it is tied by ropes on a bamboo pole. Most of door do not lock when the owner go out or working in the rice field. Most of theirs time spend outside, such as rice field and plantation.

In addition, they do not know the size or measurement of meter. They measured an object by comparing its object with another object. For example, for the size of the door measured with an instrument called a winnow tray, a household utensil which function is cleaning the grain. Therefore, door size should match to the size of these winnow tray. Baduy roof made of thatch grass and palm fiber. The first layer of roof is thatch grass and then

covered by palm fiber on outer side. Palm fiber is impervious to water, but it was rarely and make its price expensive.

The roof ridge as meeting point between the two roofs covered by splitted bamboo which put in face down position. Its function and position are to keep water from entering the house. Then, on top of the splitted bamboo is covered with palm fiber. The construction of bamboo roof frame tied by bamboo ropes only. It consider as light weight construction.

Crops Storage Building "Leuit"

Baduy people is agricultural community who live by farming and cultivation. They grow rice

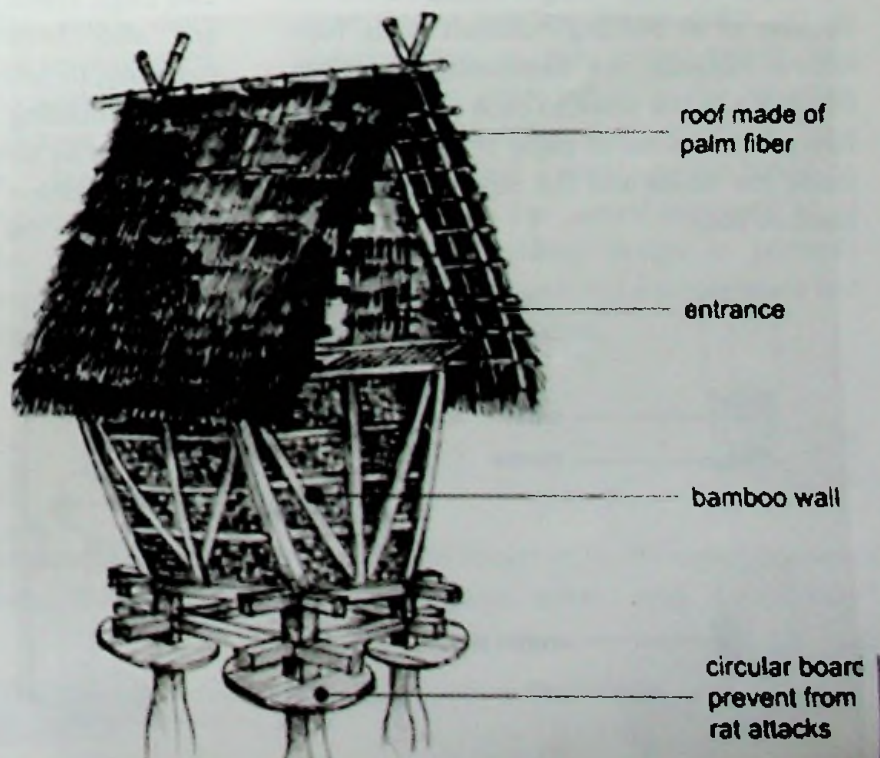


Figure 5: crops storage building Leuit

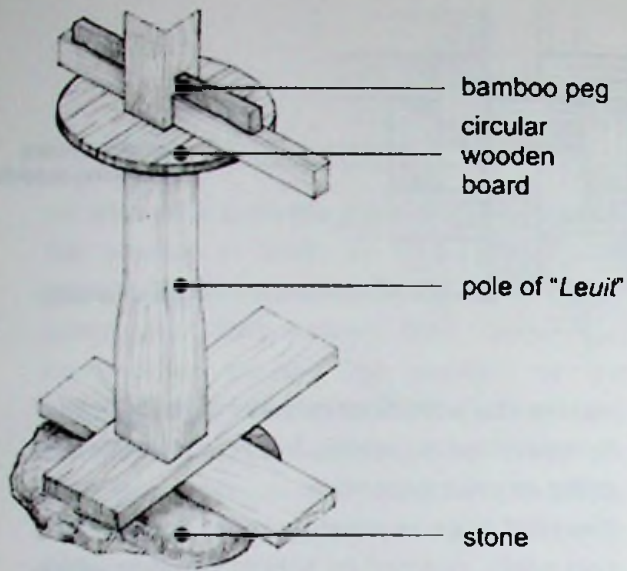


Figure 6 : circular wooden boards to prevent rats

in the slopes of hills or in the dry rice field called "Huma". Crops, especially rice, stored in small stilts building called as "Leuit". Locations of "Leuit" in the outside of the village but not far away from the village. The aim to put it in separate location is to protect it from fire. Because it is placed outside the home, then the crop should be protected from attacks by animals, particularly rats. To avoid attacks by putting in each pillar circular wooden board that prevent rats could not enter into it. It is a creative solution of traditional people who do not interact with people from outside world. Indeed, all of Baduy villages susceptible to fire because of all building materials made from natural materials are flammable. Most fires occur due to the stove to cook who forgot to turn off. Because of place of the kitchen is inside the house and the stove is placed on bamboo floor.

In general, construction of buildings of Inner Baduy people using simple construction techniques, particularly pegs and ties. The use of wood and bamboo pegs function to lock and tighten construction. Usually the pegs are used for major construction and connection to withstand heavy loads of wood. For example the construction of vertical poles connection with horizontal truss.

The process of connecting or joining woods is made when wood is still wet. Connection or joint will be stronger when the wood dries up because the hole became narrows. Using wooden or bamboo pegs made of wood construction is more powerful because they come from similar materials. Installation mode when connections or construction done in wet conditions, when drying shrinkage will occur so that the peg could be fit or strong. Peg is elastic part which could adjust existing condition.

Mostly, tie techniques used to connect light constructions, serves to attach and hold the bamboo walls, palm roof and bamboo floor. Like pegs, ropes or bamboo and rattan cords are also becomes stronger over time. Generally, tie technique used to install the light parts of building. Stilts house of Inner Baduy supported by some wooden pillars. Because of the condition of uneven land, should not be in if, then the building must conform with

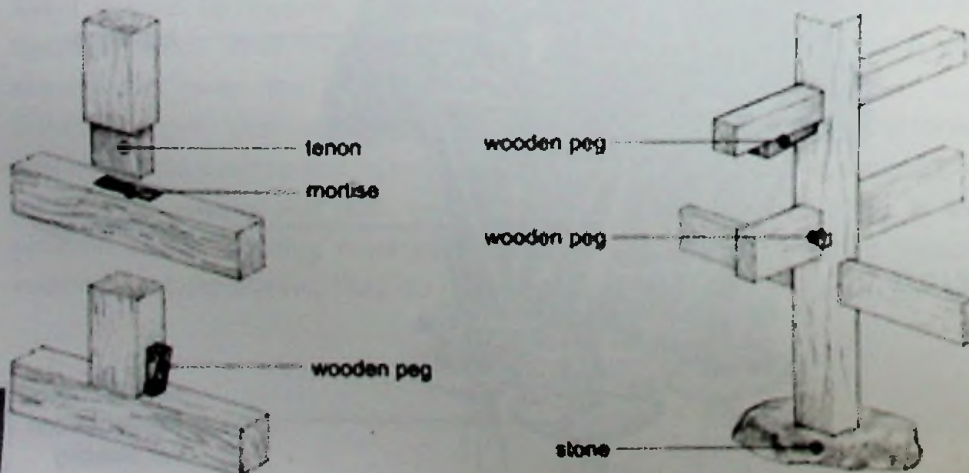


Figure 7: wooden pillars construction

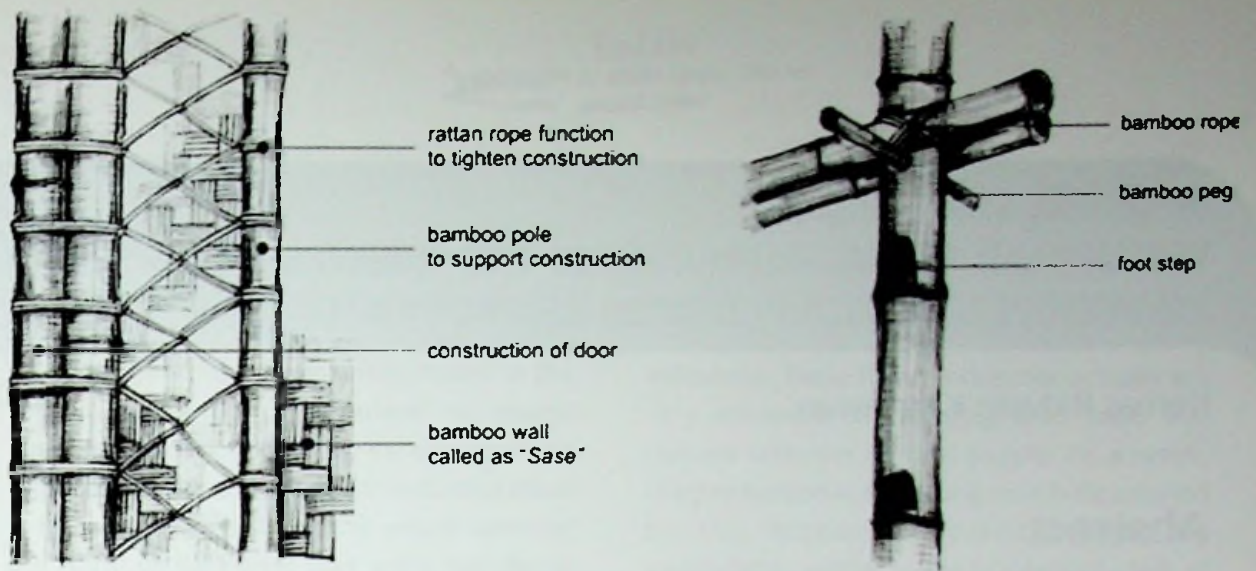


Figure 8: Wooden constructions

state of the land.

To be flat or a flat floor surface, the height of the pillars should be set. These stilts stand on stones so you can easily adjust the surface of floor. Besides, such stones serves to hold the load of main construction.

Because of sloping land surfaces cause high of stilt in every house is differently, depend on its site condition. Some houses have a long stilt in front and higher than the back. Conversely, some stilts in front house shorter than the rear stilts. The purpose of difference kind of size of stilts is to make the surface of the floor is flat but not disturbing the site.

Inner Baduy buildings using knock down system that consists of several separate parts. This system makes it easy to work and fix it because it can be done separately. Building materials derived from the natural surroundings, i.e. bamboo, wood, stone, palm fiber, thatch grass and the like.

They live in nature, therefore, they are trying how to maintain and preserve nature properly

because nature is believed to have supernatural powers. They use the wood sufficiently, large timbers for the main construction building only. They cook using a stove and firewood which obtained from dry twigs from the old tree which is not productive. They have to choose old tree before they cut it for building.

To design building for inner Baduy people, they must not only consider the function, the climate and the topography but they must understand the beliefs and taboo. Both aspects are two main consideration for Inner Baduy people in build a building.

Inner Baduy building design relies on an understanding of the social, beliefs and environment which influence the structure and form of building and settlement. Their building represent a simple design based on simple structure and natural materials. All of Inner Baduy building design is primarily concerned with function of a simple home and responding to the nature.

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