The study of buildings and neighborhood of Mahmud cultural village

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Abstract. West Java Province in Indonesia has some cultural village that still survive in modern society today. One of indigenous villages that survive and have a special uniqueness is Mahmud Cultural Village located near the city of Bandung. The development of technology and economic improvement of the community, as well as the growth of urban areas can affect the pattern of life of indigenous villagers that will affect the sustainability of indigenous villages. The purpose of this study is to identify, to know and to understand the buildings and neighborhood of Mahmud cultural village in West Java. This research uses descriptive method through survey and field observation. The results showed that the community in the Mahmud cultural village has largely begun to abandon the old tradition related to the construction of traditional architecture of residence, this is evident from the addition of space in buildings and the incorporation of materials from bamboo or wood with brick or brick material for the wall residential home. The house is no longer a stage. Only a small part of the traditional architecture of the residence and the Jami mosque are still sustainable following the values of local tradition.

1. Introduction
Indonesia's cultural heritage is very diverse. The architecture of indigenous villages is one of the cultural heritages that need to be preserved. West Java is one of the provinces in Indonesia which has about 8 cultural villages with Sundanese cultural characteristics that become its trademark [1].

The traditional village of Mahmud in Bandung regency is one of the traditional villages with Sundanese-Islamic culture. This village is visited by many pilgrims, both from the local environment and from outside the village of Mahmud who want to make a pilgrimage to the sacred tomb. Mahmud village occupies a separate location with other villages. The boundaries surrounding Mahmud's village are the Citarum River. The village of Mahmud also occupies a rather low plateau. Nevertheless, the place has never experienced a flood. In the view of the Mahmud community, it is blessing land that became the origin of the village. Geographical conditions did not close the opportunities Mahmud residents communicate with people outside Mahmud village. The cultural influences outside the traditional village of Mahmud influences the fading of local cultural values, especially related to Sundanese architecture and Islamic values that are in harmony with nature.

Concerns about the extinction of Mahmud village architecture in West Java in the future, need the research related to cultural heritage especially regarding the spatial structure and environment of Mahmud village which is then documented in digital form. Documentation architecture in digital form is expected to be easily accessible by the public. Cultural values are expected to remain appreciated by the community so that it remains sustainable.
The purpose of this research is to identify indigenous cultural village architecture especially about building and environment pattern of Mahmud cultural village in West Java, for the preservation of cultural heritage that can be passed down by the local people to the next generation.

*Kampung adat* or cultural village is a settlement of people who have certain traditions values so that physically formed environment and building with certain rules are rich of meaning. The Sundanese cultural village in West Java has an environmental spatial concept that divides the area of indigenous villages into several areas such as ancestral grave or tombs that are considered sacred by indigenous peoples, residential areas, public buildings and sacred buildings, and the rear of the public bathroom & toilet, *balong* (pond) and so on [2,3,4]. Studies on Sundanese traditional village are mostly done on traditional Sundanese villages such as Baduy traditional village [4,5].

2. Research Methodology

The research was conducted by descriptive method through surveys and field observations at Mahmud Cultural Village in Bandung, West Java.

The data were analyzed by descriptive approach to answer the research problem. Conclusion is prepared to answer questions about the design of buildings and neighborhood in Mahmud Cultural Village that are still in harmony with nature.

3. Results and Discussion

Mahmud cultural village is one of the villages located not far from the city of Bandung, so it can be said adjacent and vulnerable to the entry of the outside culture to this village. The traditional village of Mahmud has the distinction of being a traditional village with Sundanese cultural values and Islamic values with its sacred tomb. So until now this village visited by many pilgrims.

Traditional settlements that look exotic and attractive from the outside, actually save dilemma problems in it, especially for its inhabitants. Along with the technological and economic development of the community, there are changes in their lifestyle that affect the sustainability of environmental patterns and customary dwellings in a traditional village. For indigenous villagers, the order of space will change as needs change [6].

The land surface in Mahmud village is made up of land and rice fields, with details: housing area and yard of about 40%, rice fields about 47%, and dry farmland, fields and moorings about 13%. Soil conditions are so fertile with abundant produce, so it can meet the needs of local residents without having to bring in from outside. In addition, around the village there are many bamboo trees that can then be used as raw materials for wicker such as cubicles and flooring 'palupuh', which is widely used as one of the materials to build a house.

Mahmud villagers have the opportunity to communicate with outsiders because (1) the ease of transportation and the availability of access roads and bridges connecting Mahmud village with locations outside of Mahmud village even with the city of Bandung, (2) communication and electronic media as well as print media that accelerate information from outside entry into the village, (3) visits of pilgrims from other areas that make people familiar with the outside world.

The population of Mahmud village is about 200 heads of households occupying an area of 4 hectares, with the majority of the population working as farmers.

Currently there are still villagers Mahmud who try to continue to maintain the authenticity and beauty of the environment around the village. This can be seen clearly in buildings such as houses, mosques, langgar, tomb complex, all of which are still made with the architectural style of traditional Sundanese buildings. The buildings are made using wood materials and woven bamboo walls (chamber/bilik).

The village community of Kampung Mahmud is not much different from other traditional Sundanese villages, which are clumped. The location of their houses lined up and lined facing each other along the village or village road. To the west of the village is the Ageung Mosque, and on the front page is a wide field as a yard or a playground where children play. To the
east and at the western edge of the village there is the Ancestor of the Ancestral Tomb of Mahmud village (see figure 1).

The houses were built in groups and ordered at the southern part of the new Citarum River. In addition to residential houses there are other buildings that schools ‘madrasah tsanawiyah’ located near the entrance of village. One mosque located in the western part of village. One public building (bale) that has a function for pengajian, but also used for place to receive guests, and place of meeting or community meeting (see figure 1).

The house looked clumped, with no provisions governing the direction of the houses. Generally their houses are lined up against each other along the roads and small alleys. The distances between houses are very close together or even stick together. Short distance between houses is used as a road. The size of the house varies according to the area or the narrowness of the soil. From the observation generally the original house building is composed of the south-east and the orientation of the house to the northeast or facing the new Citarum River. Their homes are generally equipped with traditional wells; in addition, those who do not have their own wells are available in two places, RT 02 and near the sacred graves (see figure 1).

Means of connecting from one place to another in the form of roads and small alleys. The main road in Mahmud Village is paved wide enough to allow four wheeled vehicles. This main street is located in the middle of village. The paddy fields are located north of the new Citarum River.

![Figure 1. Spatial pattern of Mahmud village environment.](image)

![Figure 2. Jami Mosque in Mahmud village.](image)
Jami mosque building built with the construction of houses on stilts and Bale which is a new building was renovated around August 2001, however the construction and form follow the shape of the house in Mahmud village is the stage house. This building is a public mosque in the neighborhood of Mahmud Village. Figure 2 shows a wooden building with a two storey floor. Wooden columns to support the framework of the house, as well as a window shaped wood panel with blinds and grille model. Overall this mosque building still maintains the design that is in harmony with the environment and uses local materials (wood and bamboo) are widely found around the neighborhood (see figure 2).

The buildings of the house in Mahmud village have different characteristics from the other house (see figure 3) which is the building plan of L-shaped house. It has the shape of the roof of suhunan jolopong (straight roof or gable roof) that is roof form consisting of two roof areas. Both areas of the roof is separated by a ridge line (suhunan) in the middle of the house building. The shape of the roof of this suhunan jolopong is now in Mahmud village many have been replaced with the form of roof jure or limasan (suhunan pondok) good for the house with the architecture is still original and permanent building. The shape of the house according to the location of the front door of this house, known as the pongpok open house is a house that has an entrance in the direction parallel to one end of the stem of suhunan. When viewed from the face of the house that looks visible area of the triangle roof of the house. House building materials include clay roof tile for roof; woven bamboo (bilik) for ceiling and wall; wood for house poles; wooden boards for floors or walls; bamboo can also be arranged for the floor; natural stone for the foundation of the house (umpak) which is made in the form of square with size about 40 x 40 cm². Finishing the house generally use chalk paint / wall paint.

Figure 3. Citizens' house in Mahmud village.

Figure 4. Changes in building materials at citizens' house in Mahmud villages.
Figure 4 shows the physical condition of one of most new homes in the Mahmud village that has changed from the original, the form of a house is not on stilts and using a new material that is still in harmony with nature for the environment for example a half-brick wall as high as one meter combined with woven bamboo (bilik), and floor made of ceramic. The reason for this material change according to occupants to provide comfort for residents and the age of the building can be more durable.

4. Conclusion
The results of this research show that in the traditional village of Mahmud - West Java - Indonesia, the local community has largely changed the pattern or layout of their house, and has begun to abandon the old tradition related to the development of traditional architecture of residential houses, although the building materials used are still in harmony with the natural environment in the village. This can be seen in the form of houses that are no longer in the form of stage, the addition of space in the building and the combination of materials from bamboo or wood with brick, or full brick material for the walls of houses. Only a small part of the traditional architecture of the residence and the Jami mosque are still sustainable following the values of local tradition.

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