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Intercropping House of Wonosobo, A Form of Conservative Architectural Locality

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Abstract. Highland areas are usually identical to agricultural areas, with abundant produce in the form of vegetables. On the other hand, the community's view of the highland area is considered insufficient in meeting the need for fresh fish, considering its distance from the sea. One of the highlands in Central Java Province that is quite widely known is Wonosobo Regency, where one of the areas has the potential to be a tourist area, namely the Dieng Plateau. If seen from a distance, Wonosobo Regency is quite far from the Java Sea and the Indian Ocean; besides being a highland area, its location is in the middle of Central Java Province. As a highland area, Wonosobo Regency differs from other hilly environments, especially in managing water resources in its residential areas. The management of water resources ultimately fosters a conservative environmental architectural design. The research aims to reveal how the process of forming settlements with wise and regenerative architectural design harmonizes the environment. An exploratory qualitative research method is used to answer the research objectives. The research location is in several neighborhoods in Wonosobo Regency, around the bottom of the Dieng plateau. The results of the study show that the design of residential houses in several residential areas of Wonosobo Regency uses the method of intercropping in the "back area," which is distinguished between the water source and the remnants of Bathing, Washing, Toilet (*MCK*) activities. Architectural design is a form of normative local wisdom passed down from generation to generation by the next generation so that the preservation of the " intercropping house of Wonosobo " runs well. In addition to the design of the house, each water distribution channel (water source and toilet residue) that crosses the settlement is also neatly arranged so that it can be well maintained without damaging the environment. Based on the research results, it can be concluded that the design of houses and settlements in Wonosobo Regency is a form of conservative architectural locality.

Keywords: House of Wonosobo, Architectural locality, Conservative

INTRODUCTION

Some highland areas are mostly experiencing difficulties meeting the need for fresh fish side dishes, considering that they are located far from a vast water source for fish cultivation, such as in the lowlands and the sea as the leading producer. This situation differs from Wonosobo Regency, a highland area with abundant water resources. The

abundance of water resources in Wonosobo Regency is supported by the community through maximum management in daily life, both to meet housing needs and other activities. The 1945 Constitution Article 33 (3) states that the earth, water, and natural resources contained in it are controlled by the state and used to the greatest extent for the prosperity of the people.

Water is one of the abundant resources owned by Wonosobo Regency. Water is included in the category of renewable resources based on its type. Christanto (2017) explained that resources are the value or potential of certain life elements. Furthermore, he described the division of existing natural resources, namely "exhausted" and "recoverable or renewable." Based on this explanation, the wealth of water resources in Wonosobo Regency is a form of good community management, so it can recover even though it has been recycled and distributed in residential areas. The wealth of abundant water resources in Wonosobo Regency has an impact on the design of residential houses inhabited by most of the people.

The architecture of residential houses in Wonosobo Regency is designed by paying attention to elements of local wisdom to maintain the harmony of the environment, especially in terms of water resources that pass through each residential area. Local wisdom is considered excellent and correct to last long (Antariksa, 2018). According to Nugroho (2022), in arranging their residences, the people of Wonosobo are trying to adapt to instill local wisdom with several terms as follows: a). *Nggunung*: A name for settlements above 1000 meters above sea level; b) Kulon Kali: A name for settlements in the western part of the (Serayu River; c). *Wetan Kali*: A name for settlements located in the East of the Serayu River, d). *Ngisor Nggunung*: The name of the settlement under the hills, e). *Kerlip*: A name for a settlement with far access, f). *Ndeso*: A name for a settlement that is from an urban area or a highway, g). *Ngota*: A name for a settlement that is in an urban environment, h). *Legokan*: A name for a settlement that is located in a basin area, i). *Péréngan*: A name for a settlement whose land contour is above 20^{o}C.

Meanwhile, in this study, the form of local wisdom applied is the taking of design ideas in utilizing water resources so that they can still pass through every residential house and are helpful to support daily activities. The design, by arranging the needs of water sources and normative waste, looks very wise, and it differentiates between clean water distribution channels, bathing, washing, and toilet (MCK) activities, and fish farming sites. Everything is well arranged in one residential house between residents in almost every settlement, especially those far from the city. Interestingly, the design containing local wisdom takes place across generations and is very conservative. Rukayah (2019) explained that natural resource conservation is managing natural resources wisely and utilizing them to maintain them. Likewise, in terms of architecture, he also stated that conservation is an effort to save an object/building as a form of appreciation for its journey or historical value (Rukayah, 2019).

Based on the description above, the architectural locality that was formed in most settlements in Wonosobo Regency with "intercropping" and well-preserved house designs, eventually became a uniqueness. Antariksa (2018) states that local wisdom formed from the past (has past values), or the present or a combination of the two, will have uniqueness. The research aims to reveal how the process of forming settlements with wise and regenerative architectural design harmonizes the environment.

RESEARCH METHODS AND LOCATIONS

This research uses an exploratory qualitative method. Research with exploratory qualitative methods explores and understands the meaning that individuals or groups consider social problems (Creswell, 2018). It is carried out by digging research data through informants with in-depth interviews, then narrating in sequence.

Meanwhile, the research location is in Wonosobo Regency, which is taken from several sub-district environments in the form of houses with local characters. Wonosobo Regency is located in Central Java Province, bordering Temanggung Regency, Purworejo Regency, Kebumen Regency, and Banjarnegara Regency.

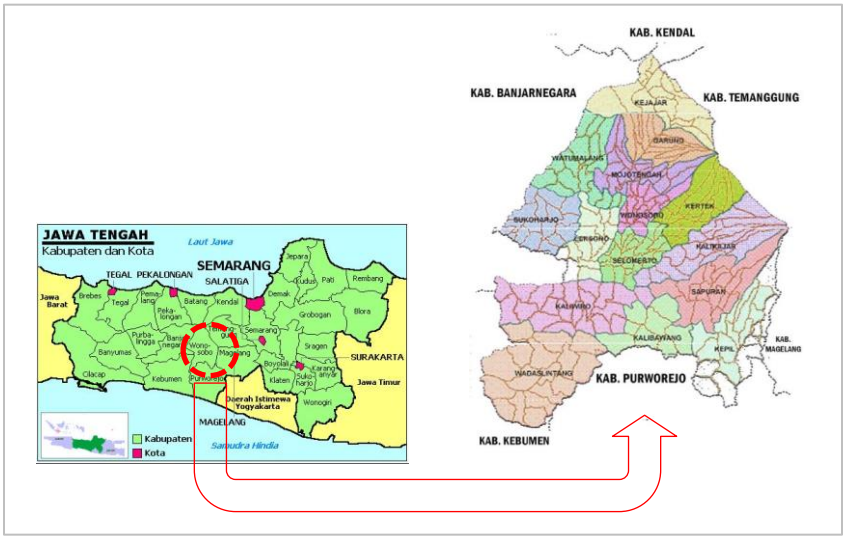

FIGURE 1. Map of Research Location, Wonosobo Regency (from Wikipedia, 2024)

Research data was collected through field surveys equipped with in-depth interview techniques from several sources. Resource persons were selected based on two groups: house owners living in Wonosobo and residents living in the surrounding area. Second, namely immigrants and residents who stop by from outside the Wonosobo area and then live in houses in several settlements for a while. Apart from that, the researcher also experienced being a resident living in the Wonosobo intercropping house environment directly in order to explore and deepen the research.

After data from the field was collected, it was divided into two categories: explanations related to the built environment and the wealth of available water resources, and architectural ideas in the design of tumpeng sari houses in each settlement. The data was then analyzed narratively based on theoretical studies regarding local wisdom, conservative house design, and a sustainable environment. The results of the inductive analysis were then explained into several groups, including distribution channels for clean and dirty water resources with their use in fulfilling daily life and conservative house designs.

RESULTS AND DISCUSSION

Houses in Wonosobo Regency have a very unique character. The uniqueness of the design of residential houses in Wonosobo Regency cannot be separated from the local wisdom that grows and develops. The geographical condition of Wonosobo Regency, which is uneven and with different contours, makes the community wiser in arranging their residential environment, especially in terms of water resources management. This study will examine several water source design, management, and distribution categories.

FIGURE 2. Clean Water Distribution System for Consumption and Clean Water Flowing, in the Back, and also Dirty Water Drain in Front of the House

The first part will review the direction of the water source and the rest of the discharge from the bathing, washing, and toilet (MCK). Every house in a residential environment in Wonosobo Regency has two water distribution channels, the first of which is clean water. Clean water as a source for fulfilling cooking needs and toilets sourced from the local Regional Drinking Water Company (*PDAM*), is usually distributed using a special pipe that enters through the back of the house. The water source is distributed in one channel, which is then distributed at several faucet points according to the design of each residential house. However, most of the designs are similar, that is, the location between the bathroom, kitchen, and toilet is not far apart or close to each other. Clean water will flow through distribution points (faucets) in each house, while the rest of the use will be collected in one pipe point through infiltration or directly out in the city (water channel in front of the house, on the side of the highway).

FIGURE 3. Clean Water Distribution System Flows for Toilet, from House to House

The house design with a wise and normative character is the most exciting thing. Most of the houses in Wonosobo Regency cultivate fish with pond media, usually placed on the side, back, or front. The design of the pond location in the houses that cultivate fish is divided into two sides; at least a third of the area is under the house. While the rest of the wider area is outside the house, its existence can be seen in this case. Meanwhile, the third is designed to be right above the toilet, with an adjustable area. Please note that in the toilet itself, there are two sources of water flow; the first is clean water for personal hygiene purposes while in the toilet. The water in question is sourced from *PDAM* so that it can be turned on according to needs only for washing. In addition to clean water for washing purposes, one more stream flows continuously from outside the toilet, passes inside, and comes out to the pond just below it.

FIGURE 4. View from the Inside of the Toilet Visible Outside of the Pool (Lower Third)

Uniquely, in the design of the house, there is no closet, but it is replaced by a footrest that is right above the flow of clean water from outside the toilet to the fish pond. This means that the remains of human digestion that have carried out activities in the toilet will flow with the current to the fish pond. The fish pond is located just below the toilet, or a third of its area that overhangs and is hidden inside. This makes home design wisdom the norm, where the rest of human digestive waste becomes farmed fish food. So that the rest of the digestion, that is, fish food, will not appear on the surface of the pond in front of the house. It can be said that the fish carried out the filtration process when approaching the pond area that overhangs right under the toilet.

FIGURE 5. View of the design of one-third of the fish pond jutting inward, positioned directly above the toilet

The last is the water distribution from the fish pond to the city center before each house. If viewed as a whole, the water flowing in the city is not murky, even though it is dirty and unsuitable for consumption. Thus, the water flow in the city hall looks clear after being filtered by farmed fish. The design of such a residential house eventually becomes specific and is used in a regenerative manner by the Wonosobo Regency Community. The design of residential houses in Wonosobo Regency can reflect conservative actions, through the locality of its architecture.

FIGURE 6. City Dirty Water Drain Looks Clear and Abundant

CONCLUSION

Based on the results of the research, it can be concluded that most of the settlements in Wonosobo Regency have abundant water resources. The community can adequately manage the abundance of water resources in each settlement by using a residential house design that prioritizes the value of local wisdom, later known as the "intercropping house of Wonosobo." The description that can be explained from the term intercropping house of Wonosobo includes: a). A house with local architecture that pays attention to conservation elements, b). It is a combination of simple, wise, and normative residential houses with the use of water resources that cross them c). Designs that evoke past values for new generations, and d). It is a form of conservative architectural locality. The intercropping house of Wonosobo is a form of architectural preservation, and the built environment can be exemplified by the arrangement of residential environments with past values.

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