

LOCAL WISDOM IN ARCHITECTURE OF VERNACULAR WATER SETTLEMENT OF BAJO PEOPLE IN CENTRAL SULAWESI

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Abstract

Settlements of the Bajo people are formed due to natural and geographical conditions that are very vulnerable to disasters. They build houses in the form of stilts, where part or all of them are above the water, using materials that are easily available in their environment, namely wood, bamboo, silar leaves, palm, and others. Initially settlements were formed by settlers because of the need for shelter and shelter. They choose shelter that can provide security with the family, so that coral islands that are close to the place that gives life are the choices. The group consisted of several families finally built a residential house around the mainland of the coral reef according to their local knowledge. In the development of settlers, there are increasing numbers, so that residential units grow and develop above the sea. The study uses a case study method with a qualitative approach, naturalistic data retrieval and inductive analysis techniques. Settlement architecture forms a one-way circular pattern surrounding the mainland of coral reefs or linear one and two-way where the road or *tetean* serves as access and public space is the center of orientation. Another orientation that is private is the sea so that the rooms in the back of the house face the sea. Settlement centers are mosques or mushollah as sacred and public spaces.

Keywords: local, wisdom, architecture, settlements, waters.

Abstrak

Judul: Kearifan Lokal Pada Arsitektur Permukiman Vernakular Perairan Orang Bajo di Sulawesi Tengah

Permukiman masyarakat perairan orang Bajo terbentuk karena kondisi alam dan geografi yang sangat rentan terhadap bencana. Mereka membangun rumah tinggal berbentuk rumah panggung, dimana sebagian atau seluruhnya berada di atas air, menggunakan bahan-bahan yang mudah diperoleh di lingkungannya, yaitu kayu, bambu, daun silar, enau, dan lain-lain. Awalnya permukiman dibentuk oleh pemukim karena kebutuhan akan tempat bernaung dan berlindung. Mereka memilih tempat bernaung yang dapat memberi keamanan bersama keluarga, sehingga pulau-pulau karang yang berdekatan dengan tempat yang memberi kehidupan adalah pilihannya. Kelompok terdiri atas beberapa keluarga akhirnya membangun rumah tinggal mengelilingi daratan bukit karang sesuai pengetahuan lokalnya. Dalam perkembangan permukiman semakin bertambah, sehingga unit-unit permukiman tumbuh dan berkembang di atas laut.

Penelitian menggunakan metode studi kasus dengan pendekatan kualitatif, pengambilan data secara naturalistik dan teknik analisis secara induktif.

Arsitektur permukiman membentuk pola melingkar satu arah mengelilingi daratan bukit karang atau linier satu dan dua arah dimana jalan atau tetean berfungsi sebagai akses dan ruang publik merupakan pusat orientasi. Orientasi lain yang bersifat privat yaitu laut sehingga ruang-ruang bagian belakang rumah tinggal menghadap ke laut. Pusat permukiman adalah masjid atau mushollah sebagai ruang sacral atau ruang publik.

Kata Kunci : kearifan, lokal, arsitektur, permukiman, perairan.

Introduction

Local knowledge or often known as local wisdom is a series of conventions in society, which regulates the life of both profane and sacred. Local wisdom concerns various aspects of community life including culture, which is hereditary and passed down from generation to generation. This is still found in some local communities in Central Sulawesi with a diversity of cultural life. Central Sulawesi has the longest coastline in Sulawesi, so some people live in coastal areas.

Coastal spaces are almost found in all regions, so that they develop coastal communities inhabit coastal areas and islands. Generally, these people have a livelihood as fishermen so that they build their homes and settlements in places where they can blend and live with a place that can provide life. In general, settlements are not well planned, spontaneous, only as a place of residence for their families if they go to sea. Settlements are built according to the level of their local knowledge, which does not recognize standard or standard norms, as needed at that time.

These Bajo people develop according to the local culture they have as specific characteristics in managing their lives. These habits then developed into customary law that regulates various aspects of life both in social relations, rituals, beliefs, and others. These things are reflected in the form of their lives, both in the physical environment and the social environment of the community as a character, uniqueness and distinctive cultural image in each settlement. The uniqueness of the social environment and the physical environment contains local wisdom which is an attraction and developed as a local value of the settlement itself.

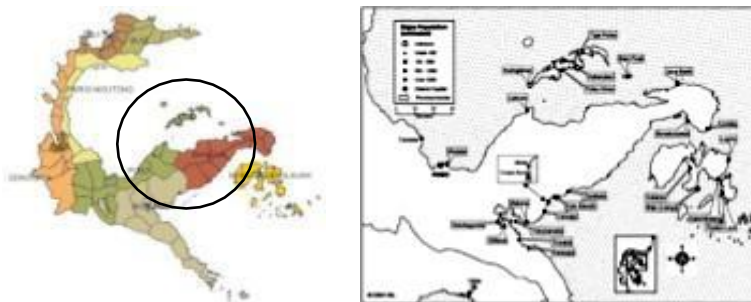


Figure 1. Location of the Case of the Settlement of the Bajo Waters in Central Sulawesi

Source: Bappeda of Central Sulawesi, 2005; Mead and Lee, 2007 in Mulyati, A, 2010, 2011, 2012, 2015





Figure 2. Condition of the Settlement of the Bajo Waters in Central Sulawesi

Source: Field data, 2010-2012; field data update, 2016

Literature Review

Vernacular is the local language, in the architecture of this term to refer to forms that apply elements of culture, environment including the local climate, expressed in physical architectural form (layout, floor plan, structure, details, ornaments, etc.).

Comparing the dwellings and all other buildings of the people. Related to their environmental contexts and available researches they are customarily owner or community-built, utilizing traditional technologies. All forms of vernacular architecture are built to meet specific needs, accommodating the values, economies and ways of life of the cultures that produce them (Oliver, P, 1987 in Mulyati, 2012; 2013).

Vernacular architecture is often called populist architecture. Vernacular shows on something original, ethnic, people and traditional architecture. Forms in the form of shelter, indigenous architecture, non-formal architecture, spontaneous architecture, folk architecture or traditional architecture. Reflections on vernacular architecture can be seen in human dialogue with the environment, responsiveness to the environment, limitations of material, culture and technology and in the context of social relations. The existence of buildings or the environment is always covered by physical and socio-cultural environmental factors because it is born in the network of human life (Oliver, 1987; Leach, 1997 in Mulyati, 2011; 2012; 2015).

In general, vernacular settlements consider the physical conditions that surround them in addition to social- economic-cultural-religious elements, and influence their characteristics. A very strong aspect of the specific needs in the cultural environment. The social structure influences the special character of residential, settlements, villages from different cultural environments. The ritual tradition of a society influences spatial organization in a village. Likewise, the marriage tradition, and other traditions, influence the layout and development of villages in a society. Specific characteristics of socio-cultural society will produce specific vernacular architecture (buildings, settlements, villages) (Oliver, P., 1987).

The environment is built by the relationship of the element relationships within it and has a certain pattern, has a certain structure. The relationships formed between humans and the physical environment are fundamentally spatial,

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separated and united in and by space. Therefore, the characteristics, social and culture of an environment are reflected in its spatial order. Space is a three-dimensional space that surrounds humans, relationships between elements within it form a certain order and are called spatial organizations (Rapoport, 1977; in Mulyati, 2011; Mulyati, 2012; Mulyati, 2013; Mulyati, 2015).

The spatial aspect is an in-depth element in the space structure, because space is a surface aspect, while spatial is the structure within it, which reflects the characteristics of space (Bacon, E, 1967; Hiller, 1989; Mulyati, 2015; Mulyati, 2017). Space is always related to human reality and life, where humans against artifacts form 'spatial culture'. Spatial culture is a particular spatial structure that reveals the order of relations between artifacts based on the principle of social order. The alternating relation between social order and spatial physical order reflects that at certain moments the spatial order is influenced by social order, and vice versa. Humans are very decisive and reflect the uniqueness of a settlement, especially in the vernacular settlement architecture.

Uniqueness will be seen in the way humans behave towards the environment that is the space of human life (Madanipour, 1996). The behavior of human space has a certain system, and influences the spatial order that is formed as a place of life (Waterson, R, 1990 in Mulyati, 2015). Individual, group and community differences produce different concepts and forms of space (Rapoport, 1969; Haryadi and Setiawan, 1995, 2006, Mulyati, 2015). Forming the environment is the result of human thoughts and behavior. Each ethnic group has a unique image about its environment, because the behavior of each ethnic group is also typical. Formation of the environment is not only due to unique climatic and environmental conditions, but also the behavior of the ethnic group itself. Based on these issues, the question arises: what is the application of local knowledge to the residential architecture of vernacular waters of the Bajo people, especially in Central Sulawesi.

Methodology

The study uses a case study method with a qualitative approach, naturalistic data collection and inductive analysis techniques. The data is obtained through in-depth interviews with people who live or who know the history of the formation of coastal settlements and islands.

Therefore this study uses various literature to find out the concept of the formation of residential architecture. The locus that became observations were the islands and coastal settlements scattered in Central Sulawesi, namely Kabalutan island, Sambujan island, Labuhan Bajo and Labuan village.

Results and Discussion

Local Wisdom is a series of conventions in society, which regulates the life system both profane and sacred. Local wisdom concerns various aspects of community life including culture, which is hereditary and passed down from generation to generation. Central Sulawesi has the longest coastline in Sulawesi, so some

people live in coastal areas. Generally, these people have a livelihood as fishermen so that they build their homes and settlements in places where they can blend and live with a place that can provide life.

In the development of settlers, there are increasing numbers, so that residential units grow and develop above the sea. A collection of living houses forms a linear line around the cliff. Settlements consist of rows of houses (very dense on the mainland of the archipelago) connected by roads or *wooden bridges (tetean)*. Settlement units form spatially between houses living around public spaces, namely roads, mosques, schools, village halls, stalls, washing baths, and playgrounds. Settlers' social interactions are carried out on the front porch of houses, paths and public spaces in the neighborhood. Other interactions are usually done when they are looking for fish. The sea also functions as access between environmental units and playgrounds for children and living space for settlers. Residential is a private space so that the front porch and road are public spaces.

1. Architecture related to Natural and Environmental Conditions

Aquatic community settlements are formed due to natural and geographical conditions that are very vulnerable to disasters. They build their houses in the form of stilts, where part or all of them are above the water, using materials that are easily available in their environment, namely wood, bamboo, silar leaves, palm, and others. Initially settlements were formed by settlers because of the need for shelter.

They choose shelters that can provide security with their families, so that coral islands and coastal areas that are close to places that give life are the choices. The group consisting of several families finally built a house according to their local knowledge around the mainland of the cliff in the middle of the sea and approached the coastal land.



Figure 3. Variety of forms settlement architecture of vernacular of Bajo people

Source : Results of analysis based on field studies, 2011; data updated, 2016

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The development of settlers is increasing, so that settlement units grow and develop above the sea and along the coast. This collection of residences forms a linear line around the cliff, sea and beach. Settlements consist of rows of dwelling houses (very dense in parts of the mainland islands and coastal land) connected by roads or wooden bridges (tetean). Settlement units form spatially where houses live around public spaces, namely roads, mosques, schools, village halls, stalls, washing baths, and playgrounds. The sea is not only a space for life but also as a playroom and access between environmental units for settlers using canoes (*lepa-lepa*). Residential is a private space so that the front porch and the road are public spaces.



Figure 4. The Bajo settlement formed by natural and environmental conditions (a,b,c,d)

Source : Results of analysis based on field studies, 2011; data updated 2016

2. Architecture related to Settlers' Social Interaction

Settlers in their daily lives will interact, both with the settlers themselves and their environment. Social interactions are generally carried out on the front porch of houses, paths, teteans and public spaces in the neighborhood. This situation is usually crowded in the afternoon, small children play and mothers chat while caring for children. Other spaces used as interaction spaces are washing baths, which are found in environmental units. Interaction occurs when they bathe, wash and take clean water for the needs of settlers in each home.

Other interactions are usually done when Bajo 'sea' search for fish. Usually they do this work together in one boat or different boats. They will go to a place or location based on their instincts and natural guidance which will get adequate results for their family life. The activity usually takes place during the day and returns the next morning. The limited land on the sea land also functions as a playroom for children. Usually they do it while looking for fish, so use a canoe (small boat or *lepa lepa*). Each child carries a boat, if they have the desired results, then they swim while joking as children do. This habit is carried out in the afternoon or evening after returning from school.



Figure 5. Social interactions carried out by Bajo (settlers) both at sea(a), on the road(b), washing baths(d) or weekend markets that are carried along the road and tetean(c)

Source: Results of Analysis based on field studies, 2011

3. Architecture related to Physical Conditions of Settlement Space

Settlements consist of a collection of houses equipped with environmental facilities such as village halls, mosques or mushollah, schools, auxiliary health centers, washing baths, water tanks and roads or teteans as access. Between houses there is a space that is usually used as a place to repair canoes (small boats), as well as in the back rooms of houses facing the sea. In a wider space used as a place to make or repair a larger size boat.

As large settlements occupy sea or coastal land, so houses with stage shapes use pole height that varies according to the depth of the sea and tides. In island settlements, residential houses have poles as high as $\pm 4-12$ m, while coastal settlements usually have a lower height of $\pm 3-5$ m. Under the house is usually used as a place to maintain fish, because it deals directly with sea water. Residential and sea houses are connected by the back of the house called lego-lego or additional space. This space is not only as access to the sea but also as a resting room, a place to store the results obtained during the sea, and fishing equipment.

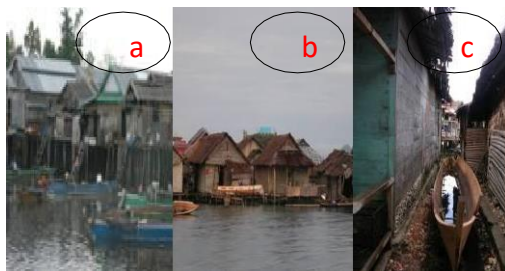


Figure 6. Physical Conditions of Settlement Space, Lego-lego or back room as access from residential houses to the sea (ab) and intermediate spaces as well as additional space as a place to make and repair boats(c)

Source : Results of Analysis based on field studies, 2011

Conclusion

Local knowledge still plays an important role in spatial formation of vernacular waters, especially in the islands and coastal settlements. Spatial settlements form a one-way circular pattern surrounding the mainland of a coral reef or linear one and two-way circular where the road or tetean functions as access and public space is the center of orientation. Another orientation that is private is the sea so that the rooms in the back of the house face the sea. Settlement centers are mosques or mushollah as sacred spaces and public spaces.

In coastal settlements, the spatial forms a linear line along the coast, consisting of groups of houses, where the teteans and roads function as access to the shore. The road is a public space and orientation center, while the sea as a living space is also a center of private orientation.

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