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THE USE OF SPACE FOR DOMESTIC ACTIVITIES IN STILT HOUSE ON THE RIVERSIDE OF BANJARMASIN CITY, INDONESIA

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ABSTRACT

Dwelling is a place that is most closely related to the daily activities of residents, especially domestic activities. Inside of dwelling there are several spaces to fulfill the needs of human activities that correspond with function of the space. In reality, the function of the space does not determine what activities take place in that space. This research studied the use of space in dwellings, especially on stilt houses on the riverside of Banjarmasin. Field study showed that one type of domestic activity is carried out in various spaces in the dwelling; also in one domestic space, various domestic activities could take place. The existence of houses on the riverside plays a role in the use of space for this domestic activity.

Keywords: domestic activities, use of space, stilt house on riverside

1. INTRODUCTION

The city of Banjarmasin has several rivers both large and small, so it is known as the "City of a Thousand Rivers". This natural condition of surrounded by many rivers, give rise to a culture of living on the riverbanks. The city center is divided by a large river, the Martapura River with a width of more than 100 m. On the riverbanks there are still settlements with dwelling on stilts. The growth of these houses was triggered by the existence of the river as the main transportation route. So the concentration of population developed along the riverbanks (Saleh, 1984). The house on stilts is located on the edge of the land and on the banks of the river.

The people's daily life depend on the river, this can be seen from their way of life and behavior (Nurfansyah, 2006). A dwelling is a social cultural expression that is implied through its domestic activities. Human activity is the most specific manifestations of culture to see the realization of built environment (Rapoport, 2005). Human activity is also a reflection of people's desire, attitude and knowledge of the world as a place to live (Lang, 1987).

Adeokun (2012) states that domestic activities carried out by residents in their dwellings do not depend on the type of space that has been determined, but depends on the placement of objects that support their activities. The stilt houses on the riverbank have different characteristics from the houses on mainland. Specific site characteristics will likely affect the use of space for domestic activities.

There has been a lot of local research about riverside settlements in Banjarmasin with diverse focus. Among them are about the characteristics of settlements and their arrangement strategy (Chair, 2002; Goenmiandri, 2010; Hartono, 2014), the meaning and quality of rivers (Mentayani, 2004; Heldiansyah, 2010; Andini, 2011). From these local researches, none has investigate the use of space for domestic activities on riverside dwellings. Existing research is more focused on the physical condition of the settlements, while research on human aspects with all their

activities is rarely carried out. Therefore, this study attempts to examine the use of space and what factors influence it most.

2. LITERATURE REVIEW

The word domestic shows the house or home from the origin of the word "*domesticus*". The understanding on the existence of domestic space can be seen from the signs in the space in the form of space elements, such as the furniture arrangement, tools and appliances (Schlyter, 1991; Hanson, 1998). The function of space for daily activities such as family room, dining room, bedroom, study room and kitchen is indicated by the presence of equipment in this space (Oseland, 1999). In the everyday context, this domestic activity shows the existence of a human relationship with his place of residence (Monteiro, 1997; Collignon, 2010). Human needs and desires are responded directly by the domestic space. This space is the place where the daily activities of the inhabitants occur.

There are various types of domestic activities. The 6 (six) types of main domestic activities are sleeping, eating, cooking, washing, bathing and storing (Schlyter, 1991). In subsequent developments, domestic activities are increasingly varied so there is a need to classify the types of domestic activities. In this study, the classification of domestic activities is by Monteiro (1997) combined with the types of domestic activity by Ahrentzen (1989) and Kisnarini (2015). The classification of domestic activities in dwellings is as follows:

- a. Household Chores; namely washing dishes, washing clothes, drying clothes and cooking.
- b. Passive Leisure, namely watching TV and relaxing.
- c. Interactive Leisure Activities, namely talking, receiving guests and playing.
- d. Private Needs, namely bathing and sleeping.
- e. Communal Needs, namely eating together

Based on the use of space, Monteiro (1997) divided domestic activities into three groups: 1) integrated activities, activities that can be carried out in one room; 2) rooted activities, activities that are not flexible and only use one particular space; 3) loose activities, which are flexible activities, which can be done in any room. Freedom of using space is owned by residents in fulfilling their activity needs. Loose activities room is the same as Adeokun's (2012) extended space. Certain activities can take place in any room according to the object placement (furniture).

3. RESEARCH METHODE

To study the use of space for domestic activities on stilts houses on the riverside, the research method used is qualitative descriptive. This method is expected to reveal the natural phenomenon of the use of space. The context of the study is stilts house located on the banks of the Martapura River, Kampung Kenanga area, Banjarmasin, South Borneo, Indonesia. Martapura River is a river that flows in downtown Banjarmasin. In this area there are still stilts houses on the riverbanks.

Data acquisition is done by field observations and in-depth interviews with residents about the use of space for domestic activities. Observations include sketches and documentation. Respondents are 21 residents that lived on stilts houses on the edge of the land and the riverbanks. The data obtained were analyzed qualitatively to provide a clear picture of the use of space by residents.

4. RESULT AND DISCUSSION

4.1. The Stilt House

The most common type of house found in riverside settlements is house on stilts with construction poles of more than 2 m long in anticipation of the river. There are two types of stilt houses based on their position on the river: stilt houses on the riverbanks and stilt houses on the edge of the land. Stilt house on the riverbanks is above the river body with orientation to the *titian* (path with pole structure) and its back to the river. The stilt house on the edge of the land is located between the riverbank and the mainland. During high tide there will water below the house, but at low tide there will land. The edge of land stilt house is oriented towards the river.



Figure 1. The stilts house on riverside

Generally, stilt house consists of terrace, living room, family room, bedroom, kitchen and *pembanyuan* (the service area inside the house). The family room is side by side with the bedrooms; usually bedrooms are made of several rooms. The living room is made spacious because it usually joins the family room.

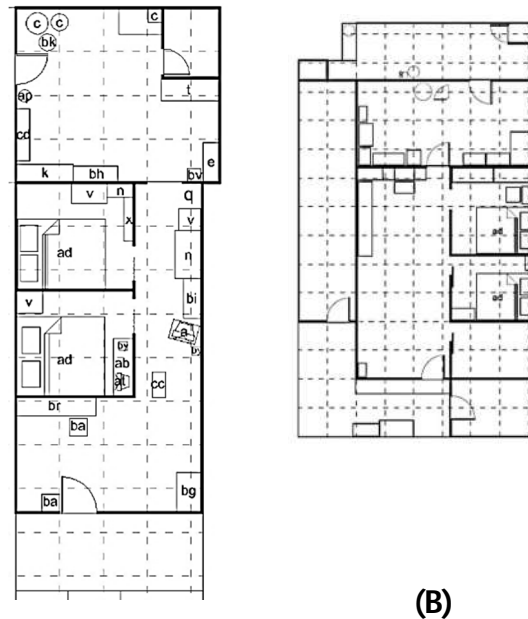
Houses on the riverbanks have *batang* as a service area that connects directly with the river located behind or beside the house. On houses on the edge of the land some have *batang*, and some do not. Those that have *batang* are the houses that are still inundated by water at low tide. The position of the *batang* is in front of the house.



Figure 2. *Pembanyuan* (1), *titian* (2) and *batang* (3)

Most stilt houses have kitchen (*pedapuruan*) in the back area. In this room there is a place for cooking and a place for eating for eating together. Adjacent to kitchen, there is a *pembanyuan* area. This is a wet area that serves as a place to wash dishes and wash clothes, with floor material from ironwood boards arranged loosely that water can immediately falls through the floor so it dries quickly.

Some stilt houses on the edge of the land have *batang* in front of the house, which are used for washing dishes, washing clothes and bathing. The location is far apart, sometimes even far from the house. This is related to the setting of the *batang* of the house's in the past, where the *batang* is on the riverbank, while the house is on the edge of the land. In Kenanga village there are still many houses with patterns like this, because they are decades old and inhabited for generations. The habit of the residents lasts until now.



(A)

Figure 3. Floor plans for houses on the edge of the land (A) and on the banks of the river (B)

In addition to stilts house, there are also other elements of settlements, namely the *titian*, *batang* and pier. *Titian* is a connecting circulation path that is used by the people to reach their houses, to go to the river, or as a channel of interaction among the people in the village. The *batang* is a rectangular place with a raft (floating) or pole (stage) structure, with wooden floors but not roofed. The dock is a mooring facility for water transportation (ships, *kelotok*, *jukung*, speed-boat) to load/unload cargos or fot embarkation/debarkation of passengers.

4.2. Use of Space for Domestic Activities

4.2.1. Washing Clothes

Residents of stilt house do laundry not only in one room, but also various spaces that connected to water sources. The main room for washing clothes is *pembanyuan*. This room is usually located at the back of the house, directly connected to the kitchen, but it can also be in the front of area the house connected to the *batang*. *Pembanyuan* form is the same as the *batang*, but it is inside the house, some with roof and some without. For houses on the riverbanks, *pembanyuan* connected directly to the river. Whereas on stilt houses in the mainland the *pembanyuan* are not connected directly to the river, but it certainly is a place for water source in their daily lives. There

is a fixed element in *pembanyuan*, namely the water faucet from the river or PDAM and the semi-fixed element in the form of a basin and container for water reservoirs.

Respondents in Kampung Kenanga mostly used the back *pembanyuan* for washing clothes activities (29%). Other room that is widely used is the personal *batang* (24%). Houses on the banks have a *pembanyuan* and *batang* at the back. House on the edge of the land has a personal *batang* in front of his house, and *pembanyuan* can either be in front or at the back. For respondents who do not have a personal *batang*, they will use neighbor's *batang* for laundry activities (5%). This *batang* is used together with other neighbors. Some also use bathroom (10%) and a kitchen (with washing machine-5%) as a laundry room. In addition some also use the terrace (5%), because the water source is on this terrace, usually a tap for water pumped from the river or from other clean water source.

The activity of washing clothes can be done in several spaces, not only in one particular room. According to respondents, the most important factor is the ease of getting water for washing activities.

4.2.2. Drying Clothes

Respondents in Kampung Kenanga were more likely to use private *titian* to dry clothes (33%). Some of the original houses in Kampung Kenanga on the edge of the land with orientation towards the river, have private *titian* from the house to the communal *titian* adjacent to the riverbank. *Pembanyuan* are also used as a place to dry clothes (29%). Respondents who use *pembanyuan* as drying area are the ones living on the riverbank and those whose houses are directly adjacent to the public *titian* but still have a large house. *Pembanyuan* for drying clothes do not have roof, only with enclosed walls. There are also respondents that use the terrace (19%) for drying clothes, if they assume that the laundry will dry quickly when placed on the terrace. In addition there are also respondents who dry laundry using two spaces, either alternately or directly used by both, namely the terrace and personal *titian*. Respondents who have yard in this area are very few because they are on the riverbank. If they have a yard, they dry the laundry in the yard.

Based on the explanation above, there are various spaces that can be used by respondents to dry clothes, namely the yard, terrace, front *pembanyuan*, back *pembanyuan*, private *titian*, public *titian*, and private *batang*. It can use only one space, but also use a variation of two spaces. Each area varies in space usage.

4.2.3. Cooking

All residents of stilt houses use the kitchen for cooking. Only one respondent in Kampung Kenanga also use terrace for cooking. This is done while managing the shop where they sell.

4.2.4. Eating

Some respondents have a dining room equipped with dining tables and chairs or just a low table for floor seating. In addition, meals can also be done in various rooms. The use of space for meals varies greatly.

Most respondents in Kampung Kenanga use kitchen as a place to eat (33%) by providing either a table for meals or none at all. In addition there were also respondents who used the family room (19%) and combination of family and living room (14%). For respondents who have large house, they have their own dining room (14%). There are also respondents who use the terrace and bedroom as their place to eat (15%). This happens when there is several family units in one house; they eat based on their family groups and the bedroom is used as a space to eat. When buying food from merchants passing in front of the house, the terrace and living room are used as a place to eat.

There is also respondent who only use the living room as a place to eat (5%), this is to be near their shop on the terrace.

4.2.5. Washing the dishes

As with the activity of washing clothes, the activity of washing dishes is mostly done in spaces that are directly connected to water sources. Most respondents in Kampung Kenanga used the back *pembanyuan* for washing dishes (43%). Other space that is widely used is the private *batang* (19%). Some connected to front *pembanyuan*, some are not. If they do not have a back *pembanyuan*, the respondent will have a front *pembanyuan* (14%). Sometimes the terrace of the house is used as a front *pembanyuan* (5%). Another room used for washing dishes is a kitchen with sink, and bathroom. The average of respondent use one room to wash dishes, but some use two spaces, namely the terrace and private *batang* or the back *pembanyuan* and private *batang*.

4.2.6. Bathing

Bathing activities are the same as the activity of washing dishes and washing clothes that require water to meet those needs. Most respondents in Kenanga Village used private *batang* for bathing (24%). There are many private *batang* along the public *titian* in front of the residential area. Previously, *batang* function as a place for berthing boats before the existence road. Now, it is used for bathing and washing. The second most used room for bathing is bathroom (19%). Gradually there is a change in the habits of residents in Kampung Kenanga to not bathe in the river, especially for the third generation (grandchildren), namely girls who have not bathed in the river anymore. First and second generations still use the *batang* for bathing.

Pembanyuan is also used by residents to take a bath (14%). Besides that, it can also be done in the terrace (5%) and neighboring *batang* (10% - if the respondent does not have a private *batang*). Some respondents also use two spaces alternately according to their wishes as a bathing place, such as *pembanyuan* and *batang*, terraces and *batang*. Sometimes, it can also be in three rooms, namely bathroom, *pembanyuan*, and *batang*.

4.2.7. Sleeping

Sleep is an activity that requires calmness and comfort to rest. Occupants of the stilt house use the bedroom at night, while using other rooms for napping during the day.

Respondents mostly use the bedroom and family room for sleeping (33%). If there is no family room, the respondent uses the combined family and living room (29%). There are respondents that use bedroom and living room for sleeping (14%). The kitchen is also used as a sleeping area (5%). Sleep is not a private activity that must be in a closed room separated from the public. If the room supports sleep activities (the air in the room is not hot), then the respondent use it as a sleeping area.

4.2.8. Watching TV

Watching TV are passive recreational activities carried out by residents in their homes. It can be done alone or with other family members. Most respondents use family room as a place to watch TV (48%). The second most room used is the combined family and living room (19%). There are also those who watch TV in the bedroom (10%) and also in the kitchen (5%). The kitchen is the most frequently used for domestic space so that the TV is placed in the kitchen. Watching TV sometimes is not only in one room, but it can be in two rooms, namely the bedroom and the living room, and the bedroom and family room. The placement of semi-fixed element of TV determine of space used for watching TV activity.

4.2.9. Relaxing

Relaxing is also passive recreational activities. This activity can be done in various spaces. Most respondents use the terrace as a space to relax (33%). The terrace in Kampung Kenanga faces the Martapura River. Usually they sit around relaxing on the terrace with other family members. The terrace that is used can be the terrace of the house itself, or the terrace of the family if their house is in the back layer not facing the river. Another room used is a family room (14%), if they want to relax without being disturbed by others. There are also respondents who relax in the living room (10%), while opening the door wide without worrying about being disturbed by others. The goal is that the wind from the river can enter the living room freely, making it comfortable to relax. The combined family and living room is the same as this living room (5%), which is directly connected to the outside, namely the communal *titian*. The other space used is back *pembanyuan* (5%), kitchen and dock (5%). If the respondent feels bored at home, then sometimes in the morning or evening will relax to the nearby dock.

Relaxing activities are carried out by respondents not only in one particular room. It can be in several quarters according to the wishes of the respondents, namely the terrace and family room, terrace and dock, as well as the kitchen and dock. It can also be in three rooms, namely the terrace, family room and dock.

4.2.10. Receiving Guests

Most respondents in Kampung Kenanga receive guests in the living room (52%). In Kampung Kenanga, there are still many dwellings with large dimension with complete rooms, legacy from previous generation. On the other hand, there are also dwellings with smaller dimensions and do not have living room. To receive guests, there is a combined family and living room (33%). In addition, receiving guests can also be on the terrace (14%), depending on the needs of each respondent.

4.2.11. Chatting (Socializing)

Chatting or socializing is an active recreational activity carried out with members of the house or with neighbors. Respondents in Kampung Kenanga mostly used terrace for chatting (48%). Although not so large, it is directly connected to the public *titian* bordering the river. Other spaces used are family-owned terraces (14%), public *titian* (19%) and the combined family and living room (5%). Chatting can also occur in two spaces such as terraces and *titian*, as well as family rooms and family terraces.

4.2.12. Playing

The activities of children's playing can be done anywhere, in dwellings or outside. This activity is carried out by children or grandchildren of residents. Children playing can be done in the family room, terrace, private *titian*, public *titian*, dock and *batang*. Most playing activities are carried out in the public *titian*.

4.3. Types of Domestic Activities in Each Room

a. Domestic Activities in the Living Room

Based on the name, the living room serves to receive guests. This space is directly connected to public space. In reality, respondents use the living room as a space for other domestic activities, such as eating, sleeping, watching TV, and relaxing. Eating activities are sometimes carried out by respondents in the living room while watching people passing in front of their house. Residents usually sleep in the living room during the day. If the weather is hot, respondents prefer to sleep in

the living room which is directly connected to the outside by opening the door, so that the wind from the river can freely enter. This also causes the living room to be used as a place to chat and relax by residents.

b. Domestic Activities in the Family Room

The family room is a gathering place for all residents of the house. Various activities carried out by residents in this room, namely playing, eating, sleeping, watching TV, and relaxing. The family room is the most unfettered space compared to other spaces.

c. Domestic Activities in the Combined Family and Living Room

In Kampung Kenanga, several respondents had a family room that joined the living room. They do not have separated family room or living room. This space is directly connected to the public. Domestic activities in this room are eating, sleeping, watching TV, relaxing, receiving guests, talking and playing.

d. Domestic Activities in the Bedroom

The bedroom is a private space to rest and to sleep. In the bedroom you can also eat, watch TV, and relax. Eating is carried out in bedroom where there are several families (heads of households) in one house. Provision of food is by each family so that they eat in the bedroom separately. The sleeping room is the residence for the family, so various activities are carried out there.

e. Domestic Activities in the Dining Room

There are only two domestic activities in the dining room: eating activities in accordance to the function of space, and watching TV. This additional activity is supported by the placement of semi-fixed elements, such as television in the room.

f. Domestic Activities in the Kitchen

The kitchen is a place to cook. All respondents use the kitchen for cooking. The kitchen is also used for various other activities, such as washing clothes, washing dishes, eating, sleeping, watching TV, and relaxing. The kitchen is used as a place to wash clothes by using washing machine, and washing dishes using a sink and water from the tap. The kitchen is used as a place to eat because it is near the place to produce food, it can be equipped with dining tables and chairs, or just low table on the floor. Sleeping was also carried out by respondents in kitchen, especially those who were on the banks of the river. The position of the kitchen at the back of dwelling is connected to the river, so it is cooler than other rooms. In addition, the kitchen is not connected to public areas so that residents can rest comfortably. Usually the kitchen will be equipped with temporary bed that can be stored after using. This coolness of the kitchen makes residents use it for relaxing.

g. Domestic Activities in *Pembanyuan*

Pembanyuan is a space connected to water supply. In this room there is usually a water reservoir in the form of a container or basins containing water. In stilt house, *pembanyuan* is found in the front area of the house or in the back area. The main activity in this space is washing dishes, washing clothes, and bathing. Respondent also use this space to dry clothes and relax.

The *pembanyuan* used to dry clothes usually is partially roofed, so it is still exposed to sunlight. There is also *pembanyuan* covered with a roof made of zinc so that the solar heat can still enter. This area is also used as a place to dry partially dried clothes. Relaxing activities can also be

carried out in *pembanyuan*. This was done by respondents who were on the banks of the river. The *pembanyuan* area deals directly with the river. In the afternoon the *pembanyuan* area is shaded by the house, so it is comfortable sitting around on the floor. The *pembanyuan* is usually used in the morning until noon. In the afternoon there is no activity related to water so the floor is dry. There are also those who furnish it with benches and tables.

h. Domestic Activities in Batang

The *batang* is above the river. The main activity related to water is washing clothes, washing dishes and bathing. In addition, the *batang* can also be used by children as a place to play, both in the private *batang* and the public *batang*.

i. Domestic Activities in Terrace

The terrace does not only function as a connecting space between inside and outside, it is also used for domestic activities such as washing clothes, drying clothes, washing dishes, bathing, eating, receiving guests, relaxing, talking, cooking and playing. Water-related activities are carried out on terraces that are directly connected to the river (the river bank house faces the river) and the availability of water taps (the water on the front porch flows more smoothly than the rear). Respondents use the terrace as a place to eat because it is cooler than inside the house. Receiving guests, relaxing and talking are sometimes done on the terrace while watching people passing by, or while greeting neighbors who pass by. The terrace is a safe outside space for children to play, still under parental supervision.

4.4. Domestic Activities and the Use of Space in the Stilt House on the Riverside

Based on the explanations in sections 4.2 and 4.3, one domestic activity can be carried out in several spaces. In addition, in one domestic space can be used for several domestic activities, not only activities that are in accordance with the function of the space. More details of space usage for domestic activities are presented in the following table.

Table 1. Domestic activities and the use of space

Type of Activities	Type of Space														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Washing Clothes	√						√	√	√	√	√				
Drying Clothes	√								√			√	√		√
Cooking	√						√								
Eating	√	√	√	√	√	√	√								
Washing dishes	√						√	√	√	√					
Bathing	√							√	√	√	√			√	
Sleeping		√	√	√		√	√								
Watching TV		√	√	√		√	√								
Relaxing	√	√	√	√			√		√					√	
Receiving Guests	√	√		√											
Chatting	√			√								√			
Playing	√		√	√									√	√	
location	inside the dwelling										outside the dwelling				

Information:

1. Terrace	2. Living room	3. Family room	4. Living+Family room
5. Dining room	6. Bedroom	7. Kitchen	8. Bathroom
9. <i>Pembanyuan</i>	10. Private <i>Batang</i>	11. Neighbor's <i>Batang</i>	12. Private <i>Titian</i>
13. Public <i>Titian</i>		14. Dock	15. Yard

From the table above, it can be seen that one domestic activity can be done in several spaces. As Monteiro (1997) found, there are loose activities, namely activities that have room flexibility, can be done in the corresponding space. In this research in Kampung Kenanga, domestic activities turned out to be not only inside the dwellings, but also outside.

When talking about the use of space, as revealed by Adeokun (2012), there is an extended space in dwellings due to domestic activities supported by the existence of objects. In this research in Kampung Kenanga, extended space for domestic activities is not only in the spaces inside the dwelling, but also outside. The thing that supports outside activities is the existence of a river that influences the atmosphere of their living space. River as a natural resource, supports domestic activities related to water. In addition, the existence of the river provides a cooler atmosphere and different views from the land. Activities that require coolness and view, will look for spaces that are directly related to the river, such as on the terrace, living room, combined family and living room, back *pembanyuan* and dock.

5. Conclusion

From the research on the use of space for domestic activities in the stilt house on riverside, it can be concluded as follows:

- One type of domestic activity can be carried out in more than one room.
- One domestic space can be used for various domestic activities.
- Domestic activity is not only done inside of dwelling but extends outside of dwelling as well.
- Water-related activities, including service activities, are not only done in the service area at back of house, but can be done in other domestic spaces that are related to the water element, even though they are in the front area of the house.
- Domestic activities do not only depend on the objects that support these activities, but are also supported by the atmosphere generated by the river as a residential site.

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