

Inquiry of Harm Traditional Building of Toba Batak House Based on Cultural Value of Toba Samosir District

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Abstract— One of the volcanic islands in North Sumatra is Samosir Island, which is in the middle of Lake Toba, which was newly opened in 2003. The island is an attractive island for domestic and foreign tourists to visit. Batak people who live in North Sumatra. Unfortunately, currently there are not too many Bolon Houses and some types of Bolon Houses are even difficult to find and also lack maximum maintenance so that many Bolon Houses can be categorized as damaged. One of the houses that need to be considered is in Simanindo Sangkal District, Jalan Jumban Sitio. In this research, the declining condition of the building will affect the function of the space in the building, because it affects the feeling of comfort, security, and preservation of the Bolon House cultural heritage for the wearer. The condition of this building will not continue to be stable as when it was newly built, one day it will decrease and possibly get worse so that the sustainability of the Bolon House will decrease, so that action is needed to restore it to its original condition or to prevent even worse conditions.

Keywords— Harm traditional, batak house, bolon house.

I. INTRODUCTION

One of the volcanic islands in North Sumatra is Samosir Island, which is in the middle of Lake Toba, which was newly opened in 2003. The island is an attractive island for domestic and foreign tourists to visit. What is also interesting is the existence of a traditional house called the Bolon House which is also a symbol of the identity of the Batak people who live in North Sumatra. Unfortunately, currently there are not too many Bolon Houses and some types of Bolon Houses are even difficult to find and also lack maximum maintenance so that many Bolon Houses can be categorized as damaged [1]. One of the houses that need to be considered is in Simanindo Sangkal District, Jumban Sitio Street.. The problem of the condition and damage that occurs in this building can be seen from the exposure of Light, [2] in the service life can occur various conditions or damage that leads to the decline (deterioration) function of the building performance and impact on the building period, [7], conduct damage assessment on buildings, namely building repairs using the method of replacing old elements with new elements [3].

Bolon House is a traditional house made of wood, so that weathering can occur which can be caused due to the age of buildings, unstable natural conditions, human activities, lack of maintenance, unexpected events (major sources)[5], and pollution, this is a source the artificial power of traditional buildings which decreases its function due to the declining condition of the building. With the declining condition of the building will affect the function of space in the building, because it affects the feeling of comfort, security, and preservation of the Bolon House cultural heritage for the wearer. The condition of this building will not continue to be stable as when it was newly built, one day it will decrease and possibly get worse so that the sustainability of the Bolon House will decrease, so that action is needed to restore it to its original condition or to prevent even worse conditions [4].

Based on the initial assessment conducted on Toba Samosir Island, it was found that the condition of the Bolon House suffered a lot of damage. This is partly due to the lack of awareness of the community and the local government of Toba Samosir Island regarding the existing potential that can be developed in the region. For this reason, a study of damage to the Bolon House is considered quite important, function of this study is to determine the damage that exists in the Bolon House, so that the preservation of the Bolon House will be easier to implement. In addition, this research is also expected to be useful for the people of Toba Samosir to develop cultural tourism on Toba Samosir Island. The development of tourism is also expected to play a role in improving the standard of living of the people.

The resulting research output is in the form of a description of the damage to the Bolon House that will be provided to village officials. These results can be made recommendations for the development of knowledge of the type of damage to the Bolon House building [7].

It is expected that after repairs to the damage, the future value of tourism and tourism objects can be improved on Samosir Island. In addition, the results of this study will also be published in architectural journals and international journals [6].

II. LITERATURE REVIEW

2.1. Cultural and Tourism Conditions

Samosir Regency is one of the gateways to the Batak tribe of origin, namely in the Pusuk Buhit Area, Sianjur District. The Regency is a Batak Cultural Orientation Center, and also a major tourist destination at the level of the Province of North Sumatra originating from across Indonesia and also from abroad [3].

The development of the main tourist area is directed at Lake Toba and its surroundings for natural and cultural tourism. Based on Government Regulation number 47 of 1997

concerning the National Spatial Planning that the territorial space of the unitary state of the Republic of Indonesia with its strategic location and position as an island nation is a natural resource that needs to be managed in a coordinated and integrated manner with human and artificial resources in the pattern sustainable and environmentally sound development based on the Archipelago's Insight and National Resilience [4].

As a symbol of the Batak community's identity, there are several types of Bolon Houses, namely Bolon Toba House, Simalungun Bolon House, Karon Bolon House, Mandailing Bolon House, Pakpak Bolon House, Angkola Bolon House. Every house has its own characteristics. As one of the attractions in Indonesia, Bolon House must be preserved and can be used as a source of regional income [5].

2.2. Cultural Value of Bolon House

Home building, divided into three parts or what is called the banua trinity, namely banua tongga (under the earth) for the foot of the house, banua tonga (world) for the body of the house, banua ginjang (lion in the sky) for the roof of the house. This shows that Batak people are very obedient to traditional customs in respecting their existence as creatures on earth.

Rumah Bolon (big house) has a square shape and has a model like a stilt house with a height of about 1.75 m, so that residents or guests who want to enter the house must use a ladder located in the middle of the body of the house and guests or residents of the house must bow to walk to the stairs, signifying that someone must respect the host by bowing when entering. Sibaba ni aporit (respecting homeowners). The Bolon House is supported by supporting poles supporting every corner of the house including the floor of the Bolon House, and has a curved roof on the front and back shaped like a saddle. Rumah Bolon does not use nails, only uses ropes to tie together house materials fastened to wood so that the framework of the house is not loose or collapsed one day.

Rumah Bolon has open space without rooms. The inner space is divided according to the Toba Batak family kinship structure. Therefore, the house is divided into jabu soding, jabu bona, jabu tonga-tonga, jabu sukat, jabu plate slap, and mushrooms. Jabu bona and jabu slap the plate are on the right side, jabu soding and jabu sukat are on the left side. Near the door lies Jamhur, while the kitchen is located between jaabu tonga-tonga, jabu bona, and jabu soding and each jabu has a different function.

2.3. Factors Causing Wood Damage and Weathering

Based on the nature, the factors that spur the process of degradation of cultural heritage objects from wood materials can be divided into two, namely internal and external factors. Internal factors that affect the damage and weathering of objects include: the quality and type of materials, building technology / structure, location / position of buildings such as the nature of the subgrade and geographic location. Buildings made of poor quality materials will quickly suffer damage. While the type of material will affect the durability of buildings, for example buildings made of stone (temples) will

be stronger than buildings made of brick or wood in the same environmental conditions. While building structures that are made with good technology will contribute significantly to the durability of buildings from mechanical and physical damage factors. The nature of the land on which the building stands, also affects the sustainability of building materials.

Soil which has the nature of being susceptible to water factors, the carrying capacity will easily decrease, causing unstable building conditions. To minimize internal factors, it can be done by restoration or conservation. While external factors that affect material damage and weathering include physical factors (temperature, humidity, rain), biological factors (insect microorganisms), chemical factors, natural disasters, and human factors. High temperature and humidity and always changing at any time will cause unstable condition of the object, which can eventually cause cracks, breaks, curves and so on. In terms of shape, degradation that occurs in wood building materials can be divided into two, namely damage and weathering. Damage and weathering have almost the same meaning, but technically the term can be distinguished. What is meant by damage is the process of change that occurs in cultural heritage objects that are not accompanied by changes in physical and chemical properties. While weathering is a change that occurs in objects of cultural heritage accompanied by changes in physical properties (disintegration) and changes in chemical properties (decomposition).

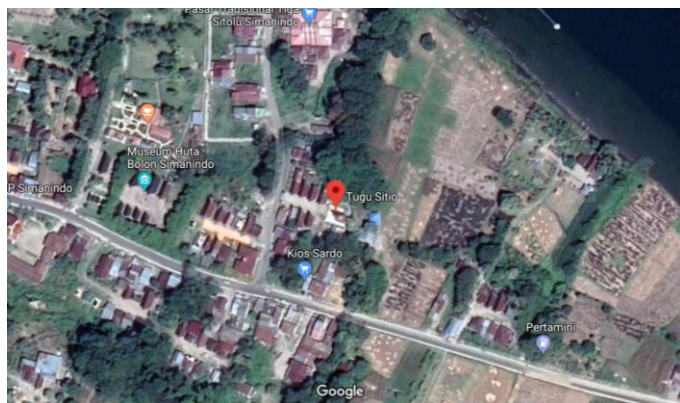


Figure 1. Map of Simanindo Sangkal District locations



Figures 2. House Bolon

III. METHODS OF RESEARCH

This research focuses on the damage to traditional buildings and their lighting. The research used is a qualitative research with descriptive method that aims to make a systematic, factual and accurate description of the facts, and the characteristics of the population of a particular area. The scope of this research is a description of the Study of Damage to Traditional Buildings and the Illumination of Toba Batak Houses Based on Cultural Values in Toba Samosir Regency.

The phase that must be carried out is the study of building damage by observing the Bolon House and interviewing several respondents in order to obtain the results in the form of an object description of the types of damage that occur in the Bolon House. The stage of this research is carried out to complete the data needed to know:

1. Cultural value, location and history of Bolon House
2. Function of Bolon House, Bolon House type used
3. Structure, Construction and Area of Bolon Houses
4. Material used in Bolon Houses
5. Users, i.e. who are the users of bolon houses

Furthermore, observations of the research object in the form of the types of damage that occurred, including parts of:

1. Banua tongga (under the earth) for the foot of the house
2. Banua tonga (world) for home bodies
3. Banua ginjang (lion in the sky) for the roof of the house

This study uses simple tools in the form of pencils, measuring instruments, and paper, so that later obtained valid damage results that can be categorized into types of damage that will be divided into 3 (three), namely:

1. Heavy Damage, which affects the building from the side of the function of the room which if still in use will result in damage to other parts of the building
2. Moderate damage, which affects the building in terms of the function of the space which if still in use will disturb the feeling of comfort for the occupants in carrying out daily activities.
3. Minor Damage, which affects the aesthetics of buildings, but does not affect the function of space.

The research conducted is based on 5M observations, namely man power (human), Money (money), Machine (machine), method (method), Material (material) and environment (environment), so it is known the type of damage that is useful in providing Bolon House government regarding the tourism potential of the Toba Samosir region.

IV. ANALYZE AND RESULTS

For the Batak people, house bolon looks like a buffalo. This house was built by mutual cooperation by the Batak community. This house was erected without using nails, the Batak building was erected using pegs as binding parts of the building and roof straps using ropes made from palm trees / or usually the results of fermentation of these plants are made palm wine by the surrounding community.

In ancient times, the Bolon House was the residence of the kings in North Sumatra, in the form of a stage with round poles about 40 cm in diameter as a buffer. On the left and right sides of the house there are carvings depicting breasts as a symbol of fertility (odap-odap). There are also lizard carvings

as a symbol of the guard and protector of the house (boraspati). The walls of the house are 15 cm thick boards decorated with red, black and white simalungun ornaments that display cosmological and philosophical views of the Batak culture.

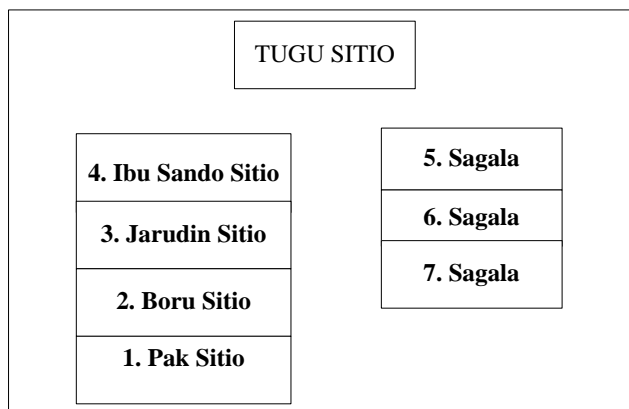
A typical carved Batak called a gorga is an ornament that contains a mystical element repelling reinforcements. Carved gorga is placed on the outside wall of the house. Generally, carvings are in the form of animal paintings such as lizards, snakes or buffalo. Rice and buffalo symbol neck attached at the end of the roof ridge, tied by a rope hanging two tatabu (pumpkin containing magical ingredients) called tanjung banu which serves to ward off lightning and fire.

Previously, the number of families who lived in one Bolon House consisted of 4 or more families, usually a house with a gorga carving in front of the house added value to the price of the Bolon House. And it's also unique to process wood into parts of the house using only axes made of stone. For maintenance of wood from Rumah Bolon, it still uses a simple method by polishing or rubbing wood with diesel oil. In addition to care in the house by way of the broom and floor mats.

The Lumban Sitio building environment is a sitio-tio family settlement building that has been passed down from its ancestors. The map of the Lumban Sitio village settlement looks flush face to face with a wide opening in the middle and there are two entrances / gates or so-called bahal in the north and south.



Figures 3. Existing Condition of Bolon Lumban Sitio House



Figures 4. Plan of Settlement of House of Bolon Lumban Sitio

In determining what factors cause building damage, first look at the characteristics of the damage. In general, the resistance of traditional buildings to the influence of environmental factors is very dependent on the type and quality of building materials used and environmental factors. The lower the quality of the materials used, the faster the process of degradation leads to the process of damage and weathering which is finally totally destroyed.

Wood is categorized as organic material which is hygroscopic (easily absorbs water) and sensitive to the influence of environmental conditions. Understanding that needs to be done will be the nature of the basic ingredients used in traditional houses, weathering / damage agents and mechanisms, as well as how to deal with the problems faced in an effective and effective manner.

From the results of observations made, there are several factors caused by human activities that significantly create a wooden building to be damaged, namely:

a. Income Factor

Economically, with relatively low economic conditions obtained only from farming, of course the ability of residents of these settlements in realizing improvements in their residential environment is very unlikely. Survival needs, such as clothing and food, are the top priority for residents in allocating their expenses. So according to them, the living conditions in a poorly maintained and dirty environment have provided comfort and satisfaction for residents to occupy this environment.

b. Land Ownership Factors

From the results of observations made, the ownership of the building is hereditary, most residents do not care about the condition or condition of the dwellings they live in. So if there is damage to the dwelling, the occupants do not care because they feel it is not their responsibility. Of course the longer the condition of the residence will get worse because it is not maintained.

c. Occupant Behavior Factor

Lack of awareness from the public about the importance of maintaining assets and feeling comfortable are one of the factors that cause damage to buildings.

4.1. Scale of Building Damage

According to the Decree of the State Minister for the Environment (1996), the effect of structural and non-structural damage:

1. Damage to the structure can endanger the stability of the building or collapse, for example damage to a column peg can damage the building.
2. Damage to non structure does not endanger the stability of the building, but can endanger the occupants, for example the collapse of the partition wall does not knock down the building, but can injure the occupants.

The degree of structural damage according to the Decree of the State Minister for the Environment (1996):

1. Minor damage that is damaged that does not endanger the stability of the building and can be repaired without reducing its strength.

2. Medium damage that is damaged that can reduce the strength of the structure, and to restore to its original condition must be accompanied by additional reinforcement.
3. Severely damaged is damage that endangers the building and can knock down the building.

From the overall observation, the Bolon House building in Lumban Sitio is still in the category of slightly damaged and partially damaged. At the location of the research study, there were no visible conditions that could be said to be heavily damaged.

4.2. Potential contained in the Region

1. Economic Potential

From the study conducted, it is known that the condition of the building that occurred damage can still be repaired and used as a daily residence or can also be used as a homestay for visitors who want to stay sometime in the area. This can increase the source of community income.

2. Potential History and Culture

Bolon House is a historical cultural heritage that is still preserved in Toba Samosir Regency. The existence of the Bolon House building which is a potential for cultural tourism in the Toba Samosir area has a very good impact on the existence of maintaining local culture. With the condition of the building made of wood, and the formation of a house on stilts, by not using nails and tied with pegs and rattan, the walls are made of wood carved with gorga carvings and batak patterns which are very interesting.

V. CONCLUSION

In carrying out the maintenance / preservation of the traditional Bolon House building that needs further attention is the condition of the building. In carrying out inspection and damage assessment, it is first seen damage that occurs in buildings, diagnoses damage to buildings and analyzes existing damage, documenting all damage to the Bolon House. From observations and inspections of the building conditions carried out in the Lumban Sitio Bolon Family House building, it can be seen that the building is in a condition that can be categorized as mild damage in several places, namely damaged, which does not endanger the stability of the building and can be repaired without reducing its strength. And in other places, especially in the area of foundation have moderate damage, which is damaged that can reduce the strength of the structure, and to restore to its original condition must be accompanied by additional reinforcement in some places.

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