

Sustainability of fisherman village in urban area case study : untia fisherman village, makassar, indonesia

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Abstract. Major cities in Indonesia, many of which have a fisherman village in the city area. One of them is the village of Untia in Makassar which keeps the story about relocation history of fishermen's settlement in Makassar city. Initially, this village is very 'friendly' for the fishermen, especially the existence of canals that can be passed by the fishing boat to the front of the each house. However, the sustainability of this fisherman village is threatened by the development of urban functions that are urging towards it. From day to day, this village is segregated with the surrounding area, not only from its function but also from social point of view. This condition will be more severe related to the local government plan to reclaim sea far to the west side, thus threatening the sustainability of fisherman life in this village. How does a fisherman village in an urban area have to survive? The research begins by highlighting the conditions and problems that exist, data was collected by field survey. This data combined with some literatures then analyzed to propose a direction how fisherman's village respond to the surrounding development. Become a Tourism village is a one way for fisherman's village to survive in urban area.

Keywords : Sustainable in architecture, fisherman village, sustainable community

1. Introduction

The coastal area is a unique, where it is a meeting point between land and marine habitats. Communities living in this area are generally fishermen who live on land but the activity is at sea. This live gives uniqueness then appear on where their live, it is traditional fisherman village. In context of sustainable architecture, an area that has uniqueness is worth to be maintained despite being challenged from other aspects, one of which is urban development that often destroy many existing buildings and areas

An example is a traditional fisherman village located in Untia, district of Biringkanaya, City of Makassar, South Sulawesi Indonesia. Kampung Untia is a typical village for fishermen, located in the northern tip of Makassar. Initially this village is far from the city center and only surrounded by empty land and mangrove forest, but in line with the development of the city, this village is currently surrounded by various areas as a result of city development. Even this threat also comes from the sea where the government plans to reclaim the sea that is located not far from this village. The above conditions would threaten the sustainability of Untia fisherman village. If it is not anticipated and prepared, then this fisherman village will not be able to survive.

If this fisherman village lost, it is unfortunate. From the history point of view, Makassar will lose the story about Makassar fisherman that was built 20 years ago, and from the city point of view, the



existence of this village can give characteristic amid uniformity of most urban area. Its natural existence is like an 'oase' among an industrial area that develops around it.

In general, situations like this are common in many Indonesia's cities, villages or areas that have historical value or uniqueness are being crushed by urban development. Though local identity becomes one component sustainability in a city, unfortunately, often unique area or village disappears and then merges with the uniformity of the urban built areas. In principle, the growth of the city is inevitable, but how these changes can still maintain the characteristics of an area would be advantage, either physical or its cultural characteristics.

This research is intended to give solution how traditional village in urban is able to adapt amid growth of surrounding area. Take the case of Untia fishing village as a traditional fisherman's residence that is currently threatened by the development of industrial estate and warehouse in the vicinity. Moreover, another goal is to be one example how to handle existing village in city can adapt to the massive development of the city. As we know, Indonesia is a country with has long coastal strip and it has many fisherman villages in their urban area (such as Bengkulu, Tegal, Pontianak, Demak, Indramayu etc). Then the result of this research can be as one alternative how fisherman village, especially in urban area.

Fisherman village, in general, has uniqueness either from its location (coastal area) or its people activities that are mostly familiar with marine world. This also give the local identity as the characteristic of the area which transform in the building mass or the housing pattern. identity is not focus on the issue of form or particular style but how to manifest itself as a collective work that can reflect the image of a nobleman. Architecture deal not only with physically shelter but also design space for community activity that occur emotional sense. In Sustainable Architecture, sustainability in community also have an important point that's why space for community activities should be provided. Refer to Ardiani [2], there are some principles in sustainable architecture : urban ecology, energy strategy, water, waste, material, community in neighborhood, economy strategy, culture invention and operational management. Here, community in neighborhood means how the community keep the communications among their social relationship.

The image of the locality of an area often conflicts with urban development due to different interests. Economic interests often view the image of the locality as an obstacle because the image of the locality is related to the conservation effort. Instead, both should be able to go side by side. Urban development continues while from the side of conservation should participate also in the rhythm of development. Communities in conserved areas must economically enhanced to avoid disparities with other developing regions. It also avoids the alienation of conserved areas with the surrounding area from economic point of view, which can lead to social spatial segregation.

Areas that have a local identity are worth to be preserved. Physically the pulse of change / development on every building should be stopped, but the pulse of life of its community must still live. From the side of urban development, preservation area will be relatively look what it is, but that appearance is actually have attractiveness, especially in recent urban developments that mostly appear uniform. Refer to Antarksa [1] preservation in buildings and areas provides an attraction for an area. From tourism point of view, the attractiveness of an area is an object that can be marketed. Refer to Hadiwijoyo [3], objects and attractions are divided into three objects : nature, social culture and special interests. Moreover, Hadiwijoyo states that rural tourism is a type of tourism with the aim to show object and attraction of village life. It also show special characteristics of social community, nature and culture, so have the opportunity to be as an object for tourists. In development of tourist destination, we should develop also its tourism components : attraction, accommodation, facilities, transportation and tourism infrastructure.

2. Methodology : Procedure of the Case Study

This research is a qualitative descriptive, the method used in analyzing the condition of Untia's Village is by field survey conducted in the period of April 2016 - November 2016. Some data obtained directly from the location include interviews with related stakeholders such as community and local

government officer. Basically, the analysis is done on three aspects, first, related to the condition of basic infrastructure, where it is to determine the existing problems related to the basic function of Untia village as housing. Second is an analysis related to the government's plans especially around the area of Untia. Finally, it is an analysis related to the potential of Untia Village especially from the tourism side, what objects are likely to be developed.

The result of these three analyzes became the basis for directing how the Untia Village respond, especially on the development of the surrounding area.

3. Discussion

The Untia Village was built by the government of Makassar and fisherman began live there in 1998. This village lies on area of 12 ha on the coast of Makassar Strait, precisely at the northern part of Makassar city, see in figure 1. The location is about 12 km from popular Losari Beach near city centre. Case Area : Kampung Nelayan Untia, see in figure 2.



Figure 1. Map of Indonesia

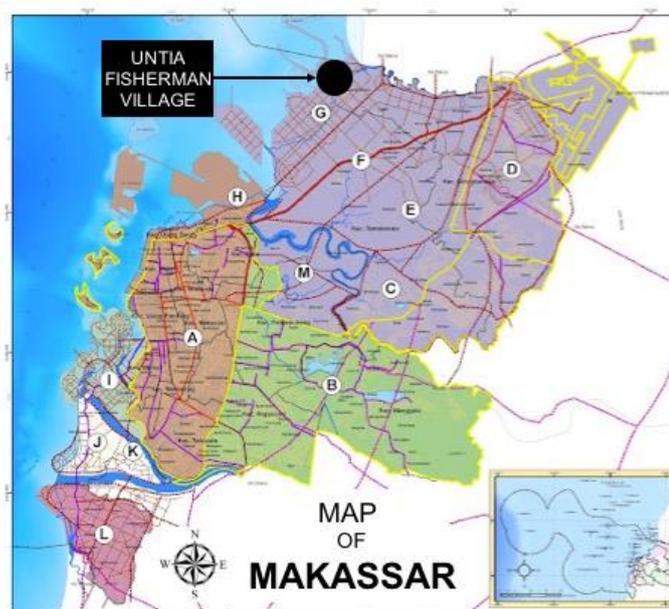


Figure 2. Location of Untia Village in Makassar

The aerial view of Untia village in Makassar can be seen in figure 3. At that time, with a road that is still limited, the location of this village feels remote in the suburb. Fishermen who live here are originally come from the island lae-lae as a result of the government's plan to relocate the fishermen from that island. They were placed in the wood stilt house measuring 6 x 6 m. There are approximately 335 lots/houses with a linear pattern of houses. The houses on stilts have an empty room at ground level which is intended for storage dan preparation room for fisherman before/after catching fish.



Figure 3. Map of Untia village
(base map : Google Earth, 6 Sept 2017)

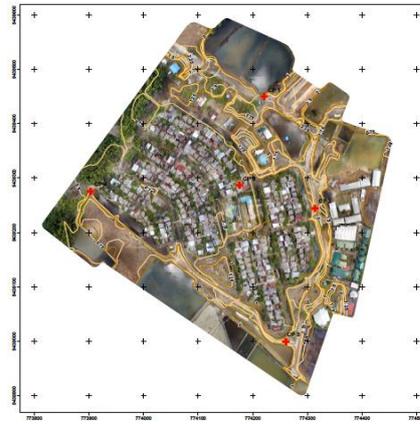


Figure 4. Map of Untia village overlay
with contour (aerial photo, Oct 2016)

a. Infrastructure and changing conditions

As a residential area, from the beginning Untia village are already provided with some infrastructure facilities such as school, mosque, clinic and community hall. It was also provided with basic infrastructure such as raw water that flowing to every house and have a good drainage channel to accommodate runoff from all areas of the village. Every house also has a simple septic tank to receive liquid dump from each bathroom.

The village has roads with a width of 2-4 m that connect all the houses in the village to each other. Although wide, the road is only used for pedestrians, bicycles and motorcycles, not for cars even until now. As mention before, the unique of this village is the existence of canal as wide as 6 m that connects the fishing boats from the sea enter to be moored to the front of each fisherman house. Due to the existence of these canals, the village also has many bridges to keep the road between boats and pedestrians crossed safely.

The uniqueness of this village is also because it has many green areas, from mangrove forests to green areas along the roadside and canal, and also green private area on each homeyard. All of this makes the village looks green and natural. The composition of land use in this village is :

Table 1. The composition of land use in Untia Village

Zone	Area (ha)
Housing Lots	4
Road	2
Water Canal	2
Facility Building	0,5
Green Area	2,5
Pond	1

Based on data of 2016, the population of this village is 2,077 people with average income ranging from 1-3 million / month.



Figure 5. The condition of Row of Stilt Houses in Untia's Village and the water canal that have sedimentation problem cause water cannot flow properly

At the moment, extreme changes take place in this village :

1. The coastal of untia have suffered heavy sedimentation in recent years. This condition makes fishermen no longer able to enter the boat through the canals, even should moored their boat away from the village. Furthermore, the channel becomes more often dry than filled with water, not infrequently even a place to dispose of waste. Even if there is water, the water is trapped so stagnant to be a source of disease.
2. Potable water that from the beginning supplied by Makassar Watersupply Company, but in recent years its debit has weakened. Even if the water flows, it is not sufficient to support daily domestic needs of every house. As a result, every house should buy potable water from outside the village (some houses have shallow water well but the water is brackish and not health as potable water).
3. The growth of new functions around Kampung Untia: residential, education and industry, so the area around the village is getting busy.
4. Currently, only 50% of all villagers still live as fisherman. Specifically, this situation change need of daily activity space, for example, the stilt house which its ground level used as a warehouse now is converted become living room, many stilt houses then change become a two storeys houses.

b. City Spatial Planning

Refer to spatial plan of Makassar City 2015 - 2034, most areas of Biringkanaya sub-district are planned as industrial. warehouse and residential areas. To support the plan, several facilities have been built such as fishery port that located adjacent to the Untia village.

Moreover, in this area is also planned a reclamation land with area up to hundreds of hectares. It is intended for Fishery/Maritime Industrial Zone.



Figure 6. Development area surrounding Untia village
(base map : Google Earth, 6 Sept 2017)

Refer to Makassar Spatial Planning 2015-2034, Untia Village would be surrounded by Industrial area, seen in Figure 6. These new areas development are viewed as a strategic area, whether viewed from the provincial scale or from the city scale. This plan makes the Untia's village located in the middle of those strategic areas, and obviously changes condition of village, not only from physical aspect but also its non physical aspect. Physically, Untia Village can be an enclave area in the middle of industrial and warehouse zone.

c. What community want

Facing those change conditions, what Untia's people need is primarily :

1. Enough Potable water supply.
2. Due to sedimentation, fisherman difficult to moored their boat then they need more longer pier
3. Revitalisation for canals in the village

d. Untia village and its tourism potentials :

There are several object potentials that make the village different from other villages:

1. The wide canal surrounds the village has uniqueness. Although it is not currently used by fishermen boat but the canal path that follows the pattern of the village is quite interesting.
2. The green area beside the canals creates a natural ambience in this village, see in figure 7.
3. Mangrove forests along the coast is also quite interesting for tourism object.
4. Stilt houses of the fishermen, though it appears so simple but precisely there show fisherman culture and reflect the activity of fisherman's life.
5. Fisherman boats that are parked on the pier, giving a unique view of the culture of the people who are familiar with the sea.



Figure 7. Green area along canal gives natural appearance in the village

From the issues above, there are some points that should be highlighted :

A. Environmental Issues :

1. Coastal sedimentation is getting worse.
2. The potential of fish resources in coastal areas tends to decrease, especially if the reclamation has been implemented.

B. Infrastructure Issues :

1. Supply of potable water is priority
2. Longer pier for fisherman's boat (due to sedimentation, the existing pier become less functional)

C. Social Economy

1. The fishing profession is getting difficult to compete with other professions (Industrial worker). This change is cannot avoided unless Untia community can improve their income without lay only on fishing activity.
2. Income of village community needs to be improved, so as not differ too much with the social condition of the surrounding community. This is to avoid untia village become spatial segregation area especially from social point of view.

D. Tourism Potential

1. Untia village has the potential to become a tourist village, not only because it has several attractions but also this tourism activity can help the community to improve their income.
2. Untia fisherman village is interesting as culture and historical tourist destination
3. Stilt house, village pattern, canals are interesting 'man made' object for tourist.
4. Mangrove forest and green area along the canals are also interesting natural object for tourist, especially for area in the middle of industrial zone.
5. Fisherman activity and boats moored in the pier are interesting as culture object for tourist.

4. Conclusion

Sustainability of fishermen Untia's village, if we see it from point of view the fishermen profession, is difficult to maintain due to the pressure of development around it. The appearance of Industrial area adjacent is clear threatening for fisherman profession. However, a potential point is a uniqueness of Untia's village, especially in the presence of canals and buildings. This uniqueness is potential object to be explored as a tourist attraction without leaving the main function of Untia's village as a residential area

So that the Untia village can remain sustain :

1. Untia Fishermen Village can be directed to 3 main functions :
 - a. Residential function that can specifically as thematic residential
 - b. Recreation function, related to the historical, culture and natural (mangrove forest) tourist destination
 - c. Supporting functions related to the presence of warehousing and maritime industry areas surrounding such as provides culinary/food area centre to support workers.
2. The village of Untia can be directed like a 'pocket' of tourism within the city. Being a tourist attractions both local and city scale. From the local scale, visitors are the people around him who are not far away. While the scale of the city, the target visitors are local tourists (Makassar) or tourists from other cities.
3. The village should provide support facilities which located in area that is not reduce the privacy of the village community.
4. Revitalisation is needed in Untia Village :
 - Potable water supply should be improve debit and quality
 - Priority stilt house should be renovated
 - The water canal must be revitalized, but its function is more for recreation than for fishing boats (due to severe sedimentation, it becomes unfeasible to connect water from the sea to canals without a long 'man-made' embankment)ire protection, canals and green space arrangement,
 - Community empowerment to improve quality human resource in the village.

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