Floating Market In Muara Angke

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Abstract. Developing the marine economy as the prime mover Indonesian maritime development is the focus of Muara Angke’s fisheries as one of many regions with the biggest fisheries market in Indonesia. Infrastructure in fisheries distribution from producer to consumer is still being an obstacle until occur economy and fisheries distribution degradation in Muara Angke. Developing Floating Market is being a solution which focusing in seashore tourism economy, which is one stop recreation, where the tourists can buy both cooked and uncooked fisheries and can enjoy the sea recreation and beautiful Indonesia. The author examines and analyses Muara Angke district, that being the location of the design and research culture study of fishermen and characteristic study of existing Floating Market in the world as a reference in designing. Floating Market must be able to facilitate fisheries distribution infrastructure, either for direct consumption or export outside and creating space that can be felt by society and supporting maritime value of the maritime state that embodies the concept of Indonesia as the global maritime axis.

1. Introduction

1.1. Background

As a capital of a country, DKI Jakarta is a province with the most population with many kinds of tribes in Indonesia. Each of tribe group has different styles and cultures. There are six areas consist of five districts and one sub district, only one area which has physics boundary between land and sea, which is North Jakarta. This condition is very different from the other areas in Jakarta. North Jakarta has the history since the coming Netherlands government to Indonesia, which caused by its boundary to the sea.

Others, when we talk about the existing activity in North Jakarta, related to the sea, is fisheries. This fisheries is about many fishermen who live and have activities as a fisherman catching fishes. The sea products are both marketed in the auction center and the traditional market. It is known that many markets are on the land, because most of Jakarta areas are land. Although North Jakarta is at the sea side, the market trading is still on the land. From the fact, market areas are not merely on the land, they can be also on the sea. Moreover, when we discuss about Urban Acupuncture, which has the purpose to release the stagnant or degradation area into more vital, both new function and others. One of these seashore areas
researched is Muara Angke. Since long ago, this area is a fishermen residences, traditional market is on the land, which enables the acupuncture action is carried out. One of them is building a project to facilitate how the fish are marketed. Muara Angke is able turn into recreation area. This is the aim of the urban acupuncture action.

Muara Angke, a part of North Jakarta, has one harbour which functions as fisheries area. Many of Muara Angke residents work as fishermen and fish mongers. Because of its condition, there are a lot of fishing boats at Muara Angke. Therefore, Muara Angke has the trademark of its fishermen and which has lasted since forty years ago. Most of Muara Angke economy itself comes from trading sea products. Besides the sea products, they also build fish embankments. However, this fishing activity causes basic problems, such as the waste of sea shells, which are marketed to Muara Angke Fish Market. The waste of the fish causes bad smell, and the lack of hygiene in Muara Angke. Moreover, because this location is at the sea side, it also gets flood from the sea which flooding most of the areas. The government issued Muara Angke RDTR 2030 to deregulate Muara Angke. In RDTR 2030, Muara Angke will become strategic area because it connect Muara Angke with the reclamation area and Pantai Indah Kapuk. However, it will eliminate some parts of the areas which causes both the loss of fisheries characteristic and the decreasing of the economic.

Through Urban Acupuncture, it is expected to be able to both set back and increase the economic of Muara Angke, as well as create a new job field, and return the trademark of Muara Angke. Therefore, I design a Floating Market project. With this project, I hope it can be one of the solutions and be a part of tourism economic source at the seaside in North Jakarta. Besides, this project is expected to be a magnet to Jakarta residents, as well as Indonesian, and also to the International people.

1.2. Problem Planners

What programs and activities are needed to be suggested to maintain the culture of Muara Angke? What market is needed in Muara Angke? How to carry out the project with local value of Muara Angke without ignoring the surrounding environment? What structure and materials used to construct on the sea?

1.3. The Purposes of The Project

The purpose of each project has a definite architectural achievement. The purpose of the Urban Acupuncture project is: As a form of safeguarding local values against the deregulation of the Muara Angke RDTR 2030. As a Jakarta Government Program development project as a place of recreation and economy. To increase the income of the people of Muara Angke because of the lost fish market as the biggest economic source. Become a more accessible place. Making Muara Angke a magnet for both local and international tourists. Become a means of information activities and economic, social, cultural and recreational development.

2. Methods

In executing the project research, the author do literature studying, the datum collection through electronic media (article, website, journal) which discuss about Urban Acupuncture, culture, market, and space, especially outdoor. To be able to comprehend the project and its problem of local residents, the author does the field survey to collect existing datum about the area and the chosen spot, so that can be both analysed and become a guide in doing the design.

3. Discussion and Result

3.1. Comprehension

Urban Acupuncture is a philosophy or approach to address social, economic and urban culture, and improve environmental quality of the city. Urban acupuncture uses small-scale interventions to transform urban contexts into larger ones. In designing the Floating Market, Urban acupuncture chosen is a local socio-economic culture. Culture is communication. The culture of the Muara Angke community is mostly fishermen, catches are marketed to local communities and outside the Muara
Angke area, both in small and large quantities. The women work as peel shells, shells will be sold to the Muara Angke Fish Market. Therefore, the design project was taken by marine trade activities. The container needed is the market. Floating Market that can answer all of the above needs.

3.2. The Location of The Project

Muara Angke is located on the coast of North Jakarta, a fishing village whose activities are fishing and marketing fish catches. Indonesian BMKG research, waves coming from Northwest, West and Southwest. Wave height of 0.25 m - 0.75 m', maximum limit of one meter. Therefore, the North coast can be used for beach activities. The wind blows from the Southeast to the Southwest, speeds of around 4-46 km / hour. Generally in the South from East to Southeast around 7-37 km / hour. The temperature in Muara Angke is 30.20 °C, air pressure is 1009.20 mbar, air humidity is 66.80%. The growth of the fishing population from year to year is higher.

Problems in Muara Angke, survey results and location data collection: The point of pollution is very high. Increased sea levels often cause flooding, disrupt community activities. Irregular infrastructure causes pollution and smell and decreases the fish economy. RDTR 2030, deregulating several parts of the Muara Angke region, caused the following changes: The loss of the fish market as a marine economic resource for the economy of the local cultural community. Job loss. With the new RDTR, making the Muara Angke reclamation area become a more strategic area that connects Muara Angke to PIK. Can increase the economic potential as a tourist area and fishing trade.

3.2.1. Wave Location

In the research of Indonesian BMKG, the fetch that can be arisen the wave coming from North West, West, and South West. The wave is between 0.25 meter and 0.75 meter to the maximum limit of one meter. Therefore, the Northern seashore can be use for seaside activities.

3.2.2. Wind Direction and Speed

The wind blows from Southeast to South West with the speed about 4 to 46 km/hour. Whereas generally in the South from East to Southeast is about 7-37 km/hours. The temperature in Muara Angke is about 30.20°C, and the air pressure is about 1009.20 mbar with the air humidity about 66.80%.

3.3. The Growth Population of Fishermen

The quota of the growth population of fishermen from year to year is getting higher. It is proved that the growth of the fishermen economy is increasing every year.
3.4. Site Analysis

The transportation to direction from Bandara Soekarno-Hatta to the site by car. The transportation convenience is able to bring in the tourists from the overseas and domestic to the site. Many buses routes to Muara Angke prove that Muara Angke is a public node transportation. The location is in the TOD area, 500 m pedestrian distance from the public transportation node to the location is still convenient if included greening is provided. The road in Muara Angke is a local road and very strategic, because it is on the border between Muara Angke and PIK which is a reclamation area, so tourists can find out the path to the location without traffic signs. LRK 2030, the Muara Angke port near the floating market location, will be designed as a fish distribution to the cold loading and storage building. The operational time for loading docks in the morning and evening, so as not to interfere with the floating market activities that will be designed.

Position of the location of the North Sea coastline, then in the design of buildings pay attention to the conditions and local climate (tropical). Aspects of air circulation is very expected to reach a level of comfort for the visitors to enjoy the beauty of the sea, view and wind. The aspect of the sun, using a saddle-shaped roof, so that in the room get indirect light. Achieving coastal tourism destinations and visitors can enjoy the beauty of the Java sea, some buildings are directly above the sea and along the coastline are designed promenades.

The Basic Massing Form observes macro and micro locations. At first, the quadrilateral form was arranged in a row along the coast, so that it was in the form of a rectangle. utilizing nature with water elements, the public area as a place for water shopping and recreation. The market is a floating market, so the shopping pattern is on the promenade path above the water, at the end of the promenade is made a node to gather the end, the roof cover is made waves like waves in the sea. Promenade along the coastline is more used for eating, drinking and watching if there are performances.

3.5. The Floating Market Design Concept

The Muara Angke Floating Market is closely related to the sea level, so that both the height of the floor piel and the building structure must be resistant to ocean waves. the data obtained, the tide level reaches 1.5-2 meter. Therefore, all buildings use implant structures into the ocean floor. Depth along the coast of Muara Angke only reaches about 2 meters (the result of reclamation).

Floating Market is designed for visitors to shop on the water, can also enjoy seafood, the beauty of the sea scene and recreation. This Floating Market Design can combine Muara Angke market culture with the Floating Market design. The location is near the sea, for visitors every step can see and enjoy the sea. the roof is saddled and shaped like waves crashing against the reef, and using the space frame as a roof frame. This is used to control the effects of sunlight entering the building and the flow of rainwater. Buildings are more outdoor to maximize natural air. Aeration in buildings using cross ventilation. natural lighting of the building by using wide openings and can see the beautiful panoramic sea. Therefore, natural light is given a hollow canopy, so that the beam of sunlight on the canopy provides a sense of aesthetics in space.

The concept of this project focuses on outdoor concepts that rely on natural aeration where the air most comes from the sea. To maximize the concept of floating, the concept of out-door and air circulation is the most important. for that, the front and back of the building are open so the air flows well. The left and right sides of the building are made of hollow glass to give a spotlight effect that comes from the sun be-cause the roof uses an open space frame. The floor to floor le-vel is 5 meters, so the spotlight is not directly on the visitors.

Because it has several functions both as an area of shopping, eating and recreation. then the dining zone and some shopping are inside the building, while the market and recreation zones are in the middle of the sea using canopy and membrane construction. The area for trading marine products directly from boats is carried out in the water recreation zone, so that visitors can enjoy the sea and attract visitors to the water recreation node.

Saddle-shaped roof with a long overstek, sunlight does not directly enter the building but still get natural lighting. The entrance is divided into two parts; pedestrian entrances and vehicles. The
pedestrian entrance is at the west side of the sea area, so it can attract pedestrians to enter the building. Drop-off point for the car, located on the south side, the dropoff canopy is made together with the second floor, forming a pattern which is a space. Warehouse zone near the parking area, facilitate loading and unloading. Through the main entrance, visitors can reach the dining area, promenade to the recreation area.

The outdoor atmosphere, on the floating deck, visitors can directly buy sea products from boats that come from the sea, and can sit freely while enjoying food and seeing the panoramic views of the sea and the surrounding buildings. Visitors can take photos, a mediator area for jet ski recreation and fishing. This area is surrounded by water so that visitors can feel the natural atmosphere, especially the sea. In this area, visitors can see all the buildings and activities held in the building, especially in the building promenade.

Promenade area, piel building with promane floor has a difference of ± 1.20 meters high, serves as a casual seating area while enjoying panoramic views of the sea and sea recreation activities while enjoying food from food/restaurant kiosks. There is a stage in front of the sitting area, functioning as an amphitheater, can be used live music performances or performances presented at night. also provided a playground or children's play area adjacent to the amphitheater, parents while enjoying food and watching their children.

The atmosphere of Promenade at night, there is live music with spot-lights as a decoration from the back stage, visitors can dance and sit. Lighting from inside the building gives a beautiful reflection on the surface of the sea water. A spotlight that leads to the sky gives the excitement that accompanies live music at night. Building interiors. Restaurants on the first and second floors. the roof is made high, thus maximizing air circulation and lighting. With the height of the roof, the lighting and natural air flow can enter the maximum, coupled with the many holes in the roof. Dining activities are carried out on the second floor, eating while enjoying views of the sea. Dining room The restaurant on the second floor, using a canopy with a glass cover, aims to provide natural vibrations in space. Lighting during the day uses natural lighting and at night uses artificial lighting attached to the roof structure.
Floating Market Structure uses a floating structure foundation. The structure of buildings on land uses skeletal structures and chicken claw foundations. The roof of the building uses a frame of space and roof plana, and the roof of the knot uses a membrane frame with a WF steel column structure.

4. The Conclusion and The Suggestion

a. The Conclusion

Urban Acupuncture is held in areas of stagnation, death, or degradation. In this case, Muara Angke underwent economic degradation and threatened to lose the culture of fishiries because of the relocation of areas on the coast to Tanjung Lesung.

The Floating Market Project is the solution to answering urban acupuncture in Muara Angke by using fishiries culture in Muara Angke as part of the project. Activities in this project, using fishiries and coastal culture, such as boats, fishing, enjoying the sea, eating and drinking, and others. To achieve the objective of Urban Acupuncture, a floating market is made, which is expected to bring the region to life. The building is built on water and the mass of the roof is made waves so as to make the impression attractive and dynamic, the activities are expanded outside which is connected to the sea. Floating Market uses an outside concept created to maximize the atmosphere that gives the impression of being united with nature.

b. The suggestion

Determining the urban acupuncture project in Muara Angke, first review the problems in Muara Angke. Conduct interviews with local residents. Understand the local culture and see the potential in the region, so that the Muara Angke area can be conserved, developed and revived. To be able to revive the activity of the area, the idea arose to build a Floating Market in Muara Angke, considering that Indonesia was a Maritime State. Buy and sell fish can use boats (see the city of Pelembang, Banjarmasin). Traders may be from local fishermen or from outside the region. The buyer is a shopping area while recreation. Thus creating Floating Market building with an interesting atmosphere, beautiful, clean and comfortable, so Muara Angke alive and victorious. The author realizes, still has many shortcomings, to sharpen the design of projects that can be built, enjoyed and improve the economic return of the fishermen.

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