The development of Water Front City area as natural disaster mitigation in Majene Regency

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Abstract. West Sulawesi Province is an area that is largely an area that is on the coast of the Makassar Strait, one of which is Majene Regency, the existence of Majene Regency as a city which is largely a coastal area makes Majene regency must make certain plans to overcome the threat of impending natural disasters. The coastal area of Majene city is very prone to natural disasters, especially tidal waves, and it was stated in the Majene RTRW 2012-2032 that Majene Regency also has a level of vulnerability to Tsunamis. in Sulawesi Island there are at least 9 tectonic and structural elements that can trigger earthquakes and tsunamis, namely the paternoster fault where Majene Regency is located. One of the efforts made by the Regency Governments is to develop the Water Front City Area along the coast of Majene City. In the development of the area, in addition to being a form of urban planning that is expected to become a characteristic of the coast of Majene city, it can also be a form of disaster mitigation for Tidal and Tsunami waves. This research is expected to provide an overview of the form of waterfront city development and how to mitigate natural disasters that exist along the coast of the city of Majene

1. Introduction
Indonesia is one of the largest maritime countries in the world, by Indonesia cannot be separated from the multi-access, multi-use, and complex coastal life. The seashore is the origin of human culture and the economy. Many rely on water for life. Humanity is no exception [1]. Based on government regulation number 47 of 1997 regarding the national spatial plan, 516 cities are located in Indonesia, with 216 cities provided by waterfront cities located on the seashore (coast), river, or lake. One of the cities on this beach is Majene Regency.

Majene city beach area is an area located along the Mandar bay; this area has a very beautiful natural tourism potential. In addition, the majene district is also supported by other tourism, both artificial and cultural, owned by the majority of tribes in majene, namely the Mandar tribe. To maximize the existing potential of the majene district government in the 2016-2021 RPJMD will be committed to making culture and tourism a mainstay of sales in order to improve the Regency's economy [2], but problems are still found among others Not optimal management of tourism potential and not yet professionally managed, therefore the district majene has plans to create a waterfront city along the coast. The concept of developing a Water-front City area is an alternative choice for the development of settlements on the seashore as an effort to arrange and improve the quality of the environment as well as supporting the area of economic activity, and the Waterfront City is a large investment [3] apart from being a form to maximize the tourism potential of the majene city coast, the
concept of waterfront city was also developed to meet the mitigation of threatening natural disasters along the coast of the Majene district.

In the BNPB RI strategic plan, Majene Regency is an area in the top 10 regions with the highest disaster risk in Indonesia. Majene Regency is ranked eighth out of the top 10. For this reason, Majene received special attention from the central government, related to 44 districts and cities as stipulated in the preparation of disaster risk 2019-2023 [4] in the disaster risk assessment, there were 8 high-potential disasters occurring in Majene out of 9 potential disasters, including tsunamis, tidal waves and also disasters in the medium category of house and land fires.

The application of the waterfront city area is expected to be able to solve the problems that exist in Majene Regency in terms of environmental clutter, and the rubbish that arises due to the inability of the existing coastal cities so that marine resources can be maximally utilized. The development of the waterfront city area is not only in big cities like Jakarta, and now there are many other regions in Indonesia that have policy directives from the local government who want to manage their coastal areas using the concept of developing a waterfront city, one of which is the Majene Regency.

It is considering the development of the waterfront city area not only as a form to utilize the functions of the coast but also as a form of natural disaster mitigation. It is desirable that this planned reclamation activity could be realized, "City reclamation" is a phrase often used in urban literature, referring to the physical expansion of the region, the increase in abandoned urban zones, and the reclamation of space by groups who lost their rights [5]. Connection with this, the authors feel it is important to conduct a study entitled the effect of the development of the waterfront city area on natural disaster mitigation in Majene Regency as a form to further study what kind of development of the waterfront city area in Majene so as to create a safe, comfortable and can minimize natural disasters.

2. Methodology
This research uses a library research method to explore the understanding of the waterfront city area and its relation to natural disaster mitigation in Majene Regency. Various writings and empirical facts are used as data sources for writing this literature study. Data obtained from literature in the form of journals and books. In addition, in order to obtain data, a location survey was carried out in the waterfront city development area in the Cilallang neighborhood to the Dato environment and conducted interviews with those directly involved with this activity, namely from the Regional Development Planning Agency office.

3. Results and Discussion

3.1. Terminology Waterfront city
The water element that is in the waterfront concept is an element of water that is natural water that is in the form of rivers, sea, canals, or lakes. Then there are also elements of artificial waters, which are artificial lakes and ponds. Then in the area between the coast and the mainland, there are loads in the form of activities such as beach activities, as well as just utilizing water views.

According to Cheung and tang in the article [6], said that the potential of waterfront areas as urban space becomes an important focus in the growth of the Region towards the 21st century. This is in line with the emergence of an awareness of every community of the importance of caring for and maintaining the coastline, as well as rivers.

According to Breen and Rigby in the [7] article, Waterfront city has two types, based on the type of development and function as follows:
1. Based on the type of development, waterfront can be divided into 3 types, namely:
   a. Conservation is the arrangement of historic waterfronts that still exist today and need maintenance or conservation to continue to be enjoyed by the community;
   b. Redevelopment is to reuse old waterfront functions that still exist today and continue to be used for the benefit of the community by revitalizing or reconstructing existing facilities.
3. Development (development) is to build and create a waterfront to meet the needs of people and cities by reclaiming the beach.

2. Based on its function, waterfront can be divided into four types, namely:
   a. Mixed-used waterfront, which is a combination of the use of coastal space, such as settlements, offices, restaurants, markets, hospitals, and/or cultural sites.
   b. Recreational waterfront, are all waterfront areas that provide facilities and infrastructure for recreational activities, such as parks, playgrounds, fishing grounds, and facilities for cruises.
   c. The residential waterfront is housing, apartments, and resorts that are built on the water's edge;
   d. Working waterfront, are commercial fishing grounds, cruise ship repairs, heavy industry, and port functions

3.2. Administrative Description
The planning area of the Majene Waterfront City Development Strategic Plan is located in Banggae and East Banggae Sub-districts of Majene Regency, which includes parts of Pangali Ali, Labuang, Lembang, and Baurung Sub-Districts. The planned planning area is 17.4 hectares.

This is determined by considering the Region has a thematic character unity, which is a coastal area with different development characters, namely; for public spaces, the development of road corridors and tourist areas. The area is an expansion of new land that has the potential to develop quickly because it has an attraction located on the coast. Areas including disaster-prone. The planning area is included in the area that requires proper planning with tight controls—in the development of the waterfront city area, divided into 3, among others.

Segment I will be revitalized, consisting of the Water City Center (Plaza), Microbusiness (sidewalk), pedestrian areas, integrated fishing areas, and residential areas.

Segment II will be structured in the area of Environment, and public space in Labuang to Parappe, including road and pedestrian structuring, public boat/boat arrangement, public space arrangement (Anjungan park), and structuring of the Sandeq Race start location.
Segment III will arrange the area of the Environment and public space in Labuang to Parappe, including the arrangement of roads and pedestrians, the arrangement of ships / public boats, the arrangement of public spaces (Anjungan park) and the arrangement of the starting location of Sandeq Race [8].

3.3. Development of City Water Front and Disaster Mitigation in Majene Regency

In its current development, the waterfront area of the city has been running but related to the budget that is not yet sufficient, the government of Majene Regency is currently in Segment I and Segment 3, members pay attention that the government will continue to focus on improving development to effectively mitigate natural disasters.
The level of vulnerability of natural disasters in each segment, especially high waves, is mentioned in the Majene 2012-2032 RTRW document. Majene Regency has a level of vulnerability to tsunami disasters, on Sulawesi Island, there are at least 9 tectonic elements and structures that can trigger earthquakes and tsunamis namely faults Pastenosfer where Majene Regency is located.

The development of the area is planned by the government to build a monitoring tower in the future as well as an evacuation route. For now, evacuation routes have been made in several places. Based on the Final Report Documents of the Water Front City Area of Majene Regency for the related waterfront city area, an evacuation route has been made in Cilallang area [9], which is accompanied by road construction in the form of the landfill, as well as in sector 3 an evacuation route has been made which is accompanied by roadworks connecting segments II and segment III.
In addition to focusing on managing tsunamis and high waves, the Majene district government, in this case, Bappeda also focuses on disaster management of land and house fires, at this time the government has been trying to make arrangements for the existing areas along the coast that look dirty to make it more organized, the arrangement of slums is also a matter of great concern by the government towards the development of the waterfront city area, some of the parts that will be arranged are mainly in a segment I, because a few years ago this area was hit by a fire disaster that devoured almost partly large houses of residents who were there, because of the irregularity of existing homes.

But a new problem arises, there is a rejection of the reclamation and development of the waterfront city area of the students, because they do not want to damage the marine life on the coast, and they are afraid that this development will displace the fishermen in the Cilallang coast, the development of the area This waterfront city has been carried out in a previous study and does not damage marine life, as well as housing residents will not be evicted but will be arranged more neatly, Majene Regent Fahmi Massiara added, if what was planned would not kill the community environment around. Because the
plan will do a number of protections against the daily activities of the community, especially the fishermen [10]. The emergence of different perceptions causes the development of the waterfront city area currently hampered because investors are reluctant to invest, this is caused by the news that this distortion that the development of the area will damage and cause polemic in the community in the Cilallang environment.

4. Conclusion
Based on reference sources regarding the development of the waterfront city area and its relation to disaster mitigation in Majene Regency, it can be concluded that the purpose of the Majene Regency Government in the framework of developing this area is not only being a tourism object but also as a form of handling natural disasters for tsunamis, high waves and even to the possibility of house and land fire disasters, besides meeting activities are needed in an open forum between the government and the community to discuss together related to the waterfront city area and its relation to natural disaster mitigation, so that a common perception of the development of the waterfront city in Majene, as a form to advance the area towards a better.

References

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