

<sup>1</sup> Aristotulus Ernst TUNGKA, <sup>2</sup> Abdelnasser Ali OMRAN,  
<sup>3</sup> Abdelwahab O. GEBRIL, <sup>4</sup> Woo Suk WAH, <sup>5</sup> Atiek B. SUPRAPTI

## MANADO WATERFRONT DEVELOPMENT CONCEPT AS SUSTAINABLE CITY OF TOURISM

<sup>1</sup> DEPARTMENT OF ARCHITECTURE, UNIVERSITY OF SAM RATULANGI, MANADO, NORTH SULAWESI, INDONESIA

<sup>2-4</sup> SCHOOL OF HOUSING, BUILDING AND PLANNING, UNIVERSITI SAINS MALAYSIA, P. PINANG, 11800, MALAYSIA

<sup>5</sup> DEPARTMENT OF ARCHITECTURE, UNIVERSITY OF DIPONEGORO, SEMARANG, CENTRAL JAVA, INDONESIA

**ABSTRACT:** Urban waterfront development is a well established urban phenomenon in developed countries based on certain concepts and principles. It enhances urban design, quality of life and economic development of cities. The urban waterfront development in developing countries has produced a varied experience. This Paper looks at a recent coastal development in Manado City, North Sulawesi, Indonesia for its development of urban public spaces, commercial developments and its integration with urban development policy of the city. Manado has a coastal border area that extends from coast to coast Malalayang Maasing down the coast and on Bunaken, Manado Tua island and the island Siladen, which now throughout this protected area has been transformed into a total cultivated area with several activities such as: coastal border area districts Malalayang to district authorities other than the area that was already there are also added to the reclamation of new land currently used as a commercial area consisting of shops / malls, hotels and luxury housing. The development of the project will not enhance the quality of urban life and add aesthetic appeal but it reflects certain physical, economic and social problems.

**KEYWORDS:** Manado, waterfront city, sustainable city, Indonesia

### INTRODUCTION

Entering globalization era, Indonesian economic developing need to be advanced, because it can invited new investor and hoped its will develops the advantage area. One of this is waterfront area including coast, river and lakes. Developing of waterfront area was being the new tendency of city facilities development, especially in big city that has obstacle in land and has a big potency on water. Manado City is a city that place in Manado bay (Figure 1), and by geographic city distribution equal with water and Manado bay. One of this distribution project shore reclamation that hopes to be a new business area that could to rise up Manado city's economic, except to empower Manado as waterfront city.



Figure 1. Manado City

So many conflict that occur resulting from this developing coast area, it's because of so many interest from every aspect, include environment aspect,

another city facilities aspect and integration aspect between developing area and existing area. By considering interest conflict, so developing coast area need a whole observation, to bridge the present interest conflict. In this paper is emphasized to overview of idea to develop waterfront area. From this idea, it's hope that could give any input about support application of sustainable developing waterfront area. The purpose of this paper is to analyze the reclamation development concepts that must be considered in the development of reclamation in Manado. These concepts must be developed and designed in this project so that construction can be reclaimed and environmentally sustainable.

### RESEARCH METHOD

Research method is doing observation to literature study from any sources. Collecting data by taking picture and sketch so we can revisualization the result that's hope can answer any problems (Tungka, 2008). The identification data is descriptive in waterfront area. Location research focus is business district area or Boulevard Street on Business (Figure 2)

### RECLAMATION IN COASTAL OF MANADO CITY

Reclamation of coastal to be a very interesting discussion, particularly related to the effects of land use. After the city government in 1990 stated that the position of Manado city is a gateway into the Pacific. Manado is strategically located in the Asia-Pacific, within located in situated on the border between the Philippines, Republic of Palau and the Pacific Ocean.



Figure 2. Boulevard Street

Distance from Manado to Davao City, Philippine is about 390 km and to Republic of Palau (Pacific Ocean) is about 750 km. Manado there is also direct flights to Singapore, the Philippines and Taiwan or to other countries directly without going through Jakarta and also there is a ferry boat crossing Manado-Davao. It is so that investors are given the opportunity to invest in this area. The limited land is not result in the development of the region's development. Barriers caused the government to be able to continue to occur in various ways to open the area or land for investment activities. The form of Manado city is also unique in Manado bay. The spread of the city that also follow this bay causing the elongated shape of the city follow the coastline of Manado bay. One suggestion is that by making reclaimed coastal Manado City. It is seen from the geographical shape of Manado City has long coast line as far as 5.9 km, and about 30 percents of the population lives in coastal Manado. Area of Manado is 15,659 hectare and area of reclamation is 67 hectare (BPN, 2010) for the first step construction. Reclamation was built in 1996 until 2000 and still constructing. Manado population numbered 417,700 (BPS, 2010) with a ratio of as many as 201,730 male population and female population of 215,970. Most residents have jobs Manado in trade, services and construction. A total of 97,625 working in the field of trade and services, 19,855 in transportation and communications and construction of as many as 22,290, making a total of 139,770 inhabitants or as much as 33 percent in the field of urban development. Manado has a coastal border area that extends from coast to coast Malalayang Maasing down the coast and on Bunaken, Manado Tua island and the island Siladen. It is now throughout this protected area has been transformed into a total cultivated area with several activities such as: coastal border area districts Malalayang to district authorities other than the area that was already there are also added to the reclamation of new land currently used as a commercial area consisting of shops / malls, hotels and luxury housing (Figures 3, 4 & 5).



Figure 3. Manado Reclamation Area



Figure 4. Stores and home office on the reclamation Area



Figure 5. Mall On the Reclamation Area

#### DEVELOPMENT URBAN

Regional development is achieving regional development goals which include aspects of growth, equity and sustainability of the dimensionless location in space and related socio-economic aspects of the region (Anwar, 2005). According to Todaro (2009), development should also increase the income-oriented economy. According successful development was indicated by three core values namely the development community's ability to meet basic needs, increased self-esteem as a human society, and the increasing ability of people to choose (freedom from servitude), which is one aspect rather than human

rights. It is why Todaro that reinforce the sense that a very large development is not just how to raise people's income every year our other features. Economic development could be understood as the activities undertaken to improve a country's economy and living standards of its people. With the scope of the above, then economic development is generally defined as a process that causes an increase in income per capita population of a country in the long run which is accompanied by improvement of the institutional system (Todaro, 2009). According to Arshad (2006), development should affect income per capita. Income per capita is often used as indicators of development for differences level of economic progress among the developed countries against developing countries (NSB). Accordingly, the income per capita but may give an idea about the rate of growth of welfare in different countries can also describe the change of style welfare distinction that has been going on between various countries. Understanding the history and development strategy has undergone a change, stems from the development strategy that emphasizes economic growth, then growth and employment opportunities, growth and equity, the emphasis on basic needs, growth and environment life, and sustainable development. Development approach today is more focused on aspects of sustainability that aims to maximize human welfare through economic growth and efficiency of capital usage limited and resource constraints and technological limited (Munasinghe, 1995).

#### **THE CONCEPT OF MANADO SUSTAINABLE COASTAL AREA**

Some observation aspect that could help success of developing coast (Figure 3) area is:

##### **1. Theme**

By the theme, developing coast area has a unique that can be different from another coast area. Theme can be taking from specific ecologic, climate, history or culture from this area. The even function of this coast area equal with another coast area by the climate and local condition could influences planning model. Special design reclamation for Manado is design with nature. Boulevard Street was built with follow the shape of seascape and built break water also.

##### **2. Image**

Create image for coast area, water is the main object, so another facilities and service for example recreation, sport medium, home facilities, even restaurant will give specific beauty visual, so coast area can make an beautiful and attractive environment image. In Manado, this aspect have hard challenge because of another bad image that has been inherent in waterfront area, include image of Sario River and Tondano River be the place for collect trash and another bad things.

#### **EXPERIENCE**

Waterfront area has capable to give a excite experience and special ability that based on characteristic and feature of special water. Give access to water and its play area, conservation to flora and fauna live, to enrich facilities that have connection to control water character like channel, pool water control, etc.

#### **FUNCTION**

This aspect describe that developing coast area have to give it's good function like policy of achieve accessibility, park circulation that could fill necessity even in busy condition, to facilitate and to pleasure foot walker, give a wonderful experience for visitor, to make the ecologic area fill the requirement along with appropriate facilities (occupying, recreation, sport, shop etc) and attracting all the time. By now, the reclamation of Manado bay has focused on business and services aspect. It's could be see by shop center on every reclamation area. Some mall/ shopping center that we can met in some reclamation are, like Bahu Mall, Boulevard's Mall, Manado Town Square, Mega Mall and Marina Plaza shopping center. These business areas will be interested for tourism area.

#### **TO CONSTRUCT PUBLIC OPINION**

To avoid any interest conflict by the public, so developing of coast area should have confirmed by clear and transparency and complete (theme, image, function, cost, ticket, AMDAL), so society can understood about benefit of developing coast area. By the participation of another side, it's can get any support from society, its means that effort to realization of developing coast area. So many public opinion in construct reclamation on Manado Bay which is made a help make a decision of plan design.

#### **ENVIRONMENT ASSESSMENT (AMDAL)**

It needs to be emphasized that developing of coast area must be aim to protect the environment even to use unproductive area. By this reason observation to environment effect from developing waterfront area must be done accurately. This has been benefit to solve the problem and to avoid negative effect that could be rise for the environment. Reclamation case in Manado city has so many communities reaction for the access that can be rise from this project. Specialty about manage the waste, also. Waste is so important because it have solid and liquid. Have to design with carefully and good planning.

#### **TECHNOLOGY ASPECT**

Using and implementation of technology even to choosing substance that will be used, especially relation with waterfront area, bund area, tackling waste, control of water, etc, need to appropriated with water character and location. It is so important

because can influences of security and rely on development for long time.

#### **EXPENSE**

Expense aspect has to give attention because involves fund's problem, even control fund problems. Things that involve in this problem like monetary government's law even with the community response has to account because this things could influenced long life project.

#### **ORGANIZING**

Organizing of coast area must be done by a professional, recall the complexity of the problems that must be handled, begin with organizing facility in good condition, make a promotion so attract to visitor, till doing some coordination with institution involved, even with government and private agencies.

#### **THE MAIN ASPECT IN DEVELOPING COAST AREA**

Some principal aspect that need to be noticed and consider to make any plan to coast area, include : climate, wind direction, ocean flow, water characterized, annual flood, flooded area, Topography, Seascape, Land structure, Landscape, Vegetation, Etc. In planning developing coast area is uniting community territories with nature life, so that area being preservation area so with to support economic of this area. Organizing of arrangement space has noticed. Generally reclamation area in Manado City is business and service area. Separate from community's territory by Boulevard streets, can be arbiter between residence area and business area.

#### **ENVIRONMENTAL IMPACT**

On the reclamation activities, land use and exploitation as a result of coastal reclamation depends on the operators. In connection with this concept of development should be directed to the concept of lasting development. Means development must consider the compatibility between man and nature and the importance of future generations. Legal protection is defined as operating patterns of consumers and producers to run properly so people can enjoy the benefits of adequate utilization of its natural resources. The use of natural resources must be arranged in such a way that provides benefits to each generation. This is a critical note on the implementation of coastal reclamation. The coastal reclamation can provide positive and negative effects on coastal communities and marine ecosystems. These effects can be short term and long-term, depending on the type of impact and the ecosystem and the communities in coastal reclamation areas and surrounding areas. The positive impact of coastal reclamation activities, among others resulted in the quality and economic value of coastal areas is increasing, reducing considered less productive land, the increase in the area, protect the shoreline from

erosion, the breeding habitat of water and power absorption. The negative effects of coastal reclamation activities in the environment include physical effects such as changed oceanography, coastal erosion, sedimentation, turbidity of the water, marine pollution, changed soil water regime, increasing the potential for flooding and inundation of coastal areas. Biological effects, like disturbed mangrove ecosystems, coral reefs and diversity of nature although the field is decreasing. Besides the beach reclamation activities will also result in socio-economic changed such as difficulty of the public entering the area and loss of livelihood of coastal fishermen. Thus the coastal reclamation activities must be implemented carefully and through a very thorough study involving related stakeholders. There are having impacts of land reclamation positive and negative in the community and development in Manado City. Always positive Impacts related to economic life, socio-economic, socio-cultural, while the negative impacts on the environment and religion seriously enough highlighted by the experts. Impacts in detail will be submitted in two parts, directly visible positive impact associated with the Employment Management and economic growth. In the beginning before the reclaimed coastal community livelihood activities focused on professional workers and fishermen, because the area is generally occupied by the laborers who work in development activities in the City of Manado. Occurrence of impact on coastal reclamation work field where population expansion began in the commercial sectors and services.

#### **POSITIVE IMPACTS**

Population, especially the younger generation began to be adsorbed in the service sector and trade especially in coastal reclaimed area was created as the business 'Boulevard on Business' at Manado coastal. Increase the employment of the impact on people's income increases. Other positive impacts of the reclaimed coastal areas opened many rural people came to seek employment Manado. It is profitable for the local community from the illegal occupancy requirements and the employee continues to rise. Many turned to the room rental, retail shops and the workers who worked in the trade and services on the boulevard area would significantly influence the economic growth of urban society.

Other positive impact of involve increasing the selling price of the land. With the occurrence of reclaimed, the land sale prices have increased due to the need for more land is needed a good feeling and by entrepreneurs and rural communities want to have a T that came home to stay. The increase in selling price of land is of course the effect on the community. The changed of pattern land ownership continue to occur

as land prices increase. The positive impact of direct support by increasing the amount of effort and product efforts and the emergence of various efforts in the vicinity of a good reclamation project the grocery store, small shops, and culinary dining houses. This impact on the workforce in trade and services sector as a result of reclaimed coastal areas opened as the Boulevard, and known as the Boulevard on Business.

The other impacts of a rise in taxes and taxes provided the merchants to the city government. In the real impact of the reclamation activities not only impact on society, but the city government, an increase of Revenue District (PAD). Request permission effort, erecting a building permit, permission of course the location is very profitable as a result of the city government held reclaimed. In the field of direct taxation was increasing motor vehicle parking tax to consumption tax, where services, entertainment, health, and various businesses continue to enrich and increase the income of Manado City. The emergence of a hotel, a café in the vicinity of coastal reclamation is very influential to increase people's income and Manado City Government. Especially in coastal reclaimed area grows a good pub and discotheque entertainment.

The positive impacts of the guidelines that reclamation activity to make the area a "boulevard on business" highly qualified as highly profitable extended Manado city government. The value of the land sale and the continuing rise is directly related to the impact of land use and ownership of community land. With the occurrence of reclaimed and inclusion in the City of Manado investor would result in increased demand for land requirements. This is a growing impact on the selling price of land in the boulevard (area reclaimed the beach). With the increase in selling price is of course an impact on improving living standards and welfare of the community as a result of the occurrence increase income.

#### **NEGATIVE IMPACTS**

Increasing environmental pollution is a negative impact of the reclaimed beach, let alone most of the activity development of both pre construction and construction is not carried out a study with real environmental impact analysis. Not effective implementation of environmental impact analysis (AMDAL) in the coastal reclaimed area to clarify the environmental crisis from further negative impacts do reclaimed coastal Manado City. Continue to occur as a result of the environmental crisis reclaimed beach activities are legal problems in the field of environmental law. Coastal reclamation activities that damage the environment is happening because of

legal factors, especially in the areas permission not forward aspect of the environment. Indonesian environment as an ecosystem that consists of a variety of areas, each as a substance that covers the social aspects of cultural, economic, and physical, with a pattern different trends between the subsystems of each other, and with the support of different environments. Coastal reclamation activities have not been arranged in such a way that still impact on the environment. Coastal reclamation activities of any kind must be based on the competitive environment closely related support in improving coordination and balance subsystem, which also means improving the performance of the subsystems.

The importance of the rule of law (law enforcement) in the areas of environment requires every citizen to follow every direction of the law related to environmental problems. There is no serious environmental handling in coastal reclamation activities are common symptoms of the negative impacts of development on the environment. The collaborative evidence is that the news about environmental damage often appears in the newspaper. Coastal sea water everywhere was much polluted. Coastal sea water does not meet the clean and healthy environment, while the sea water into the ground. Various prevention of environmental pollution continue to just run, while the development of regulation and the tools of law looks very static environment. In addition, the legal position (standing) for the plaintiffs are still very weak. Environmental crisis as a result of coastal reclamation is a serious problem that should be addressed by the government to further development occurred. It is a balance between positive and negative impacts.

Other negative impacts are associated with socio-cultural and religious problems. With the occurrence of business on the boulevard on reclaimed coastal areas to the emergence of powerful new culture of western cultures that are harmful for development of society, especially the younger generation. This negative impact is felt in the social and economic life of people who are lives in reclamation area.

#### **CONCLUSIONS / SUMMARY**

Manado City condition as city bay is great potency to develop by professional, but keep look at another technical things that have been describe previously. Coastal reclamation is the process of recover from the loss of or a condition that is less useful, and attempts to make the land eligible for building.

Coastal reclamation can also be addressed within the framework of the process of cleaning an area that suffered environmental damage that can be used for human needs, such as building for enrich development.

Therefore, development should be directed to the tourism and economic development at coastal reclamation Manado. The use of integrated coastal area is one of the development concepts to the attention of sustainable, because the orientation of business conducted over reclamation areas.

#### REFERENCES

- [1.] Alex de Sherbinin, A., Carr, D., Cassels, S. & Leiwen Jiang, L. (2007). Population and Environment. Annual Review of Environment and Resources. 32: 345-373.
- [2.] Anwar, A. (2005). Ketimpangan Pembangunan Wilayah dan Perdesaan : Tinjauan Kritis. P4Wpress. Bogor
- [3.] Arsyad, L. (2006), Ekonomi Pembangunan, Yogyakarta : STIE YKPN.
- [4.] BPN. (2010). Data Pertanahan kota Manado.
- [5.] BPS. (2010). Manado Dalam Angka 2010.
- [6.] Burbridge, P.R., Dankers, N., Clark, J.R. (1989), Multiple-use assessment for coastal management, Coastal Zone, 1: .34-45
- [7.] Cendrero, A. (1989). Mapping and evaluation of coastal areas for planning, Ocean and Shoreline Management, (12)5/6: 427-62.
- [8.] Cendrero, A., Diaz de Teran, E. (1989). Coastal zone management, Ocean and Shoreline Management, (12)5-6: .463-73.
- [9.] Charlier, R.H. (1987). Planning for coastal areas, in Wolff, F.C. (Eds), Geology for Environmental Planning, Geological Survey of Norway, Trondheim, 2: 12-24.
- [10.] Mitchell, J. (1982). Coastal zone management, a comparative analysis of national programs in Borgese, E.M., Ginsburg, N. (Eds), Ocean Yearbook III, University of Chicago Press , Chicago, IL, pp. 258-319
- [11.] Mongeau, D. (2001), Public access to the beach: a selective bibliography. Reference Services Review 29(1): 81-88.
- [12.] Munasinghe, M. (1995). Making Growth more Sustainable, Ecological Economics, Vol. 15. Pp 121-124.
- [13.] Murray, G. (2007). Constructing Paradise: The Impacts of Big Tourism in the Mexican Coastal Zone. Coastal Management. Apr-Jun. (35)2/3: 339-355
- [14.] Sachs J.D, Mellinger A.D, Gallup J.L. (2000). The geography of poverty and wealth. Sci. Am. 284:70-75
- [15.] Salm, R.V., Dobbing, J.A. (1989). Coastal zone management, planning and implementation in the Sultanate of Oman, Coastal Zone , 1: 72-77
- [16.] Sandars, T.C. (1970). The Institutes of Justinian with English Introduction, Translation and Notes, Meanwood Press, Westport, CT
- [17.] Sorensen, J., Brandani, A. (1982), An overview of coastal management efforts in Latin America, Coastal Zone Management Journal, (15)1:1-26.
- [18.] Todaro, M. (2009), Economic Development, 10<sup>th</sup> edition, Prentice Hall, USA.
- [19.] Tungka, A. (2008), Typology Architecture in Waterfront City; Case Study : Reclamation Area in Manado City, Proceeding On Coastal Planning, Architecture and Tourism, October, Manado, North Sulawesi, Indonesia.



ACTA TECHNICA CORVINIENSIS – BULLETIN of ENGINEERING



ISSN: 2067-3809 [CD-Rom, online]

copyright © UNIVERSITY POLITEHNICA TIMISOARA,  
FACULTY OF ENGINEERING HUNEDOARA,  
5, REVOLUTIEI, 331128, HUNEDOARA, ROMANIA  
<http://acta.fih.upt.ro>