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# Coastal Environmental Degradation as Communal Space, Impact on Social Fishermen Community Life at North Galesong

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**Abstract**— Coastal as a transitional space between the sea and residential areas has a very vital role for the coastal region. The coastal has multiple functions both for the environment and the local community livelihood. But lately, the beach as communal space was gradually reduced its range because of activities of the community built permanent houses or villa around the area, and abrasion that occurs in the rainy season every year is slowly eroding coastal areas. The condition have an impact on the beach as a communal space. The research objective is to determine the function of the beach as a communal space optimally and problems that occur at this time and its impact on the environment and society activities. By knowing this, it will be found a solution to restore the function of the beach as usual is as a safe and comfort communal space. The method used was qualitative rationalistic. The results showed patterns of use of the beach as a communal space and referrals to anticipate beaches unfavorable conditions as a communal space.

**Keywords** – Environmental Degradation, Coastal, Communal Space, Fishermen.

## I. INTRODUCTION

Back Ground The coast is created naturally, a transitional space between land and sea, and become a safety settlement of sea water intuition, flood and tide. The beach has multiple functions both for the environment and the local community livelihood. For community, beach is a communal space that have social and economic value. As space with social values, beach used for socializing, working, playing, and resting. Beach became the center of social activities of fishing communities. In addition, there are other activities also took place on the beach like shipbuilding, ship repair, recreation, fish auctions, etc. But lately, the condition of the beach unfavorable due to a variety of environmental problems that arise and it affects on the community social life.

Problem, to day the beach in the coastal area of North Galesong has environmental problems that impact on the society activities. Natural conditions in recent years is less friendly to the physical coastal environment, heavy rainfall, strong winds and huge waves caused flooding and abrasion in settlements, besides, uprooting trees, damaging buildings, as well as drainage channels in the coastal area. Another aspect is the awareness of the public and local governments that are still lacking on the cleanliness of the environment, especially in landfills that cause garbage piled up everywhere. This gives rise to social problems for the people who use the beach. Beach which is the center of fishing community activities to be more quiet, and the width of the beach is shrinking as a result of the condition.

Those problems led to the research question, how the role of the coast as a communal space and the impact of environmental degradation on the beach to the fishermen social life.

Purpose of the study was to determine the usefulness of the coast as a communal space for fishing communities around the coast and the impact of environmental degradation on fishermen's social lives.

## II. LITERATURE REVIEW

### A. Environmental Degradation

Environmental degradation can be interpreted as a decline in the quality of the environment caused by construction activities. Environmental degradation is basically caused by the intervention or excessive human intervention to the existence of the environment. Change ecosystems often called the degradation of ecosystems. Degradation in an ecosystem can then cause a decline in ecosystem function ecologically and economically. One cause a significant decrease in most ecosystems are human. This happens when humans use natural resources for their welfare [1].

Environmental degradation is the deterioration of the environment through depletion of resources such as air, water and soil; the destruction of ecosystems and the extinction of wildlife. It is defined as any change or disturbance to the environment perceived to be deleterious or undesirable [2].

Approximately 80% coastal area have controlled by private, belonged industrialist. They are without restraint modify the coastal area included building establish with reclamation [3].

Sea Level Rise (SLR) will contribute to increased shoreline erosion rates. Erosion is the physical movement of sediment away from the shore via wave and current action. SLR has the capacity to exacerbate erosion by promoting offshore transport [4].

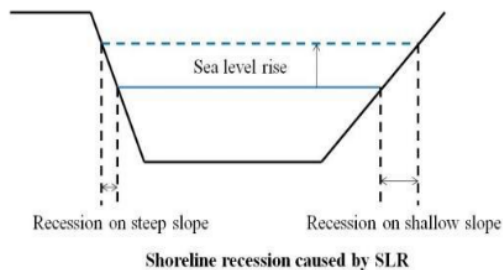


Fig.1. Shoreline Recession caused by SLR

### B. Coastal

The coastal (beach or shore) is on the waterfront area that is affected by the high tide and low tide. Land area is an area located above and below the soil surface begins from the boundary line of the highest tide. The beach is a geographical form that consists of sand, and there is a sea in coastal areas. The beach area became the boundary between land and sea waters. Here's a picture of the beach [5].

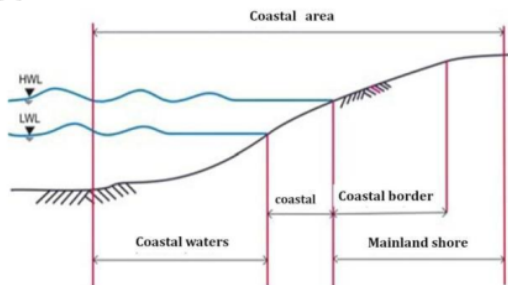


Fig.2. Definition Beach (coastal areas) for purposes of coastal management [5]

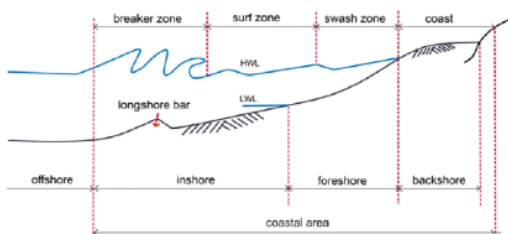


Fig.3. Definition of beaches for coastal engineering purposes [6].

Based on the second picture above shows that the communal space that will be discussed is the beach or foreshore and backshore, at the area fishermen's activities take place.

### C. Communal Space

There are several theories have been put forward by experts on communal space. The theory and the concept is as follows : Communal space is a space that holds social events and used for the entire community or communities [7]. Communal space provides the opportunity for people to meet, but to make it required some catalyst. The catalyst may be an individual who brings people together in an activity, discussion or a common topic. A public open space will attract people if there is activity and people can see [8].

The social value of public space is wide ranging and lies in the contribution it makes to 'people's attachment to their locality and opportunities for mixing with others, and in people's memory of places'[9]. Places can provide opportunities for social interaction, social mixing and social inclusion, and can facilitate the development of community ties.

There are several criteria about the communal space as follows [10] :

1. The space in which people interact, perform a variety of activities are shared and shared, including social interaction, economic and cultural, with the main emphasis on social activities, become a place of community interaction communal activity where there is a variety of activities, a space where people share space and time to activities.
2. Space held, managed and controlled jointly either by public institutions or private dedicated to the interests and needs of the public. That way it can be concluded that the communal lounge has a public nature.
3. The space is open and visually and physically accessible to all without exception.
4. In this sense, the communal space is defined as an open space / outdoor who have ease of achievement and be visible or easily seen. Aspects of accessibility and visibility This includes the support functions of the communal space.
5. The room where people got freedom on the move.

### D. Fishermen

In coastal areas usually inhabited by people who work as fishermen, there are many defines about fishermen, first, fishermen as a group whose life depends directly on the sea. They generally live on the seaside, a neighborhood close to the location of activities [11]. Second, that group of fishermen inhabiting housing estates where a group of houses in a specific region with an area inhabited by fishing communities have largely fishing livelihood of at least 60% of the population there, processing and subsequent sale [12]. The fishermen residential areas equipped with infrastructure, adequate facilities for the survival and livelihood of the fishermen and families. Three, defines fishing as people who just do the work, such as making nets, transporting tools / equipment into the boat / ship, transporting fish from the boat / ship was not included as a fisherman. But engineers, cooks working on fishing vessels entered as fishermen [13].

## III. METHOD

This research is a field study aimed at obtaining information and data directly from the location associated with the object to be studied. This type of research is carried out research behavioral mapping. Behavioral mapping is described as a way to uncover patterns of the space created as a result of the reciprocal relationship between man and space, embodied in the form of sketches and diagrams about an area where human activity. The aim is to describe the behavior of the map, identifying the type of behavior frequency, and shows the link with the behavior of a specific form of design. There are two ways to do that mapping behavioral Place and Person Centered Mapping. For this research used Place Centered Mapping is a method of observation to determine how human behavior or a group of people take advantage of, using or accommodating behavior into a situation of time and place. In other words, the attention of this technique is a specific place both small and large [14].

Research is purposive sample, extracting data using observation and interview techniques. The selected study

sample are the groups of fishermen who were conducting activities on the beach, both of which are working, resting, or just socialize with fellow fishermen. The research sample basing on joint activity were observed at a particular time. Observation of activities carried out in the morning until the afternoon. The results of the interviews will be cross checked with the information obtained from the village clerk for the validity of the data.

Data analysis using the technique of categorization (this similarity analysis), that perform overlapping technique of mapping and classifying the results of behavioral response that is similar based on the results of interviews. Results of the analysis of the overall data displayed in the form of diagrams or patterns that give a picture of a reciprocal relationship with the behavior of the occupants in the room forming communal space.

#### IV. RESULT AND DISCUSSION

##### A. Location

The study was conducted in the Galesong beach, North Galesong distric, Takalar, South Sulawesi Province, Indonesia. Here is an overview of the study sites.



Fig.4. Map of Indonesia (source Google)



Fig.5. Map the North Galesong District (Source; Google)

There are many specific function of the beach along the North Galesong costal line, picture below show these condition.



Fig.5. Specific Function of North Galesong Beach (source; google)

##### B. Social Activity on the North Galesong Coast

Function of The North Galesong coast is a public space that has social and economic value. As a social space takes place citizens activities every day, from morning until afternoon. Users beaches generally are men and children. As a social place, ongoing other activities related to each other and mutual support, such as working, resting, playing and fishing. Based on field observations, the diagram below shows the daily activities of people on the seashore.

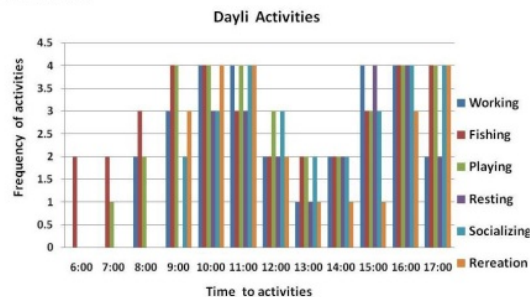


Fig.6. Frequency of Fishermen Activities at Sea Shore

Playing and working while socializing is a daily routine those are performed by the children and the fishermen on the beach. The following figure show activities are carried out on the beach.



People working, resting, playing, fishing, recreating, and selling fishes on the beach in North Galesong



Parking boat and gear net on the beach in North Galesong

Fig.7. Various Activities that Take Place on The North Galesong Beach



Shipbuilding and Ship Repair



Fish and Seaweed Drying

Continuation Fig.7. Various Activities that Take Place on The North Galesong Beach

The coastal is a public area where various activities take place. These activities form a routine and familiarity, unity and togetherness among them more closely intertwined. This is supported by Carr., that public space is the space of the commons, public open spaces are the vertices and the means of social communication binder to create interaction among social groups [15].

The seashore becomes the center of activity for men and children. Although the extreme conditions of the air at the beach but did not deter the fishermen and children's activities at the site. Men do not choose a place where they can not perform activities related to work. They do not require a lot of special requirements to perform daily activities. The main thing is that the place has room for activities, while working they also do social interaction. These condition was supported by Wollongong City Council research, that men need place to work that provides an opportunity to come together, work together, and interact with others in the neighborhood informally. These activities also beneficial for mental health and well-being, and can avoid idleness, boredom and isolation [16].

On the beach, the fishermen and children generally work and play in small groups, between 3-7 people. According to Lang, communal space provides the opportunity for people to meet, but to make it required some catalyst. The catalyst may be an individual who brings people together in an activity, discussion or a common topic. A public open space will attract people if there is activity and people can be seen [8]. Similarly with Kimball Young, social interaction is the key to all social life. Therefore, no social interaction there can be no life together. Social interaction is a dynamic social relationship, which involves the relationship between individuals or groups of human beings [17]. Humans as social beings have a desire to communicate with each other, exchange of experience, releasing all errors and tension due to work / full day activity, this activity can be done together. To the settlements scale can be done in the square, being at home can be done on the terrace [18]. Conditions expressed by the experts above also occur in fishing communities in northern Galesong. They make the beach as the center of activity for working, playing while interacting with each other.

The existence of the coast as a communal space where people can do work to support himself and his family life, is important. It is in accordance with Sujarto who saw the importance of housing environment for fishing communities where they can find three main needs in the settlements, one of which related to the job, is the place to carry out its activities to earn a living in order to ensure the existence of life [19].

### *C. Decrease of The Coastal Quality and Impact to The Society Activities*

Beach conditions in the District of North Galesong not supported by coastal conditions should be safe and comfortable for the activity. Some of the problems that arise in the area of the beach is the abrasion. Abrasion occurs almost in every wet season, that scrape the surface of the west coast makes the beach area more narrow than before.. Abrasion also knocked down trees that originally

grew lush and initially serves as a barrier, shade, air conditioning ultimately impact on increasing the temperature around the coast. This condition is exacerbated by the amount of garbage that pile up in the coastal area and the drain channel conditions to the beach leading to malfunction and experience the good handling.

The bad condition undergo in the United States, Scavia et al., said, that have been attributed to degradation of coastal ecosystems by human activities. The direct impacts of human activities on the coastal zone have been more significant over the past century than impacts that can be directly attributed to observed climate change (Scavia et al., 2002; Lotze et al., 2006). The major direct impacts include drainage of coastal wetlands, deforestation and reclamation, and discharge of sewage, fertilisers and

contaminants into coastal waters. Extractive activities include sand mining and hydrocarbon production, harvests of fisheries and other living resources, introductions of invasive species and construction of seawalls and other structures [20].



Fig.8. Beaches are experiencing abrasion and environmental conditions of the housing sewer

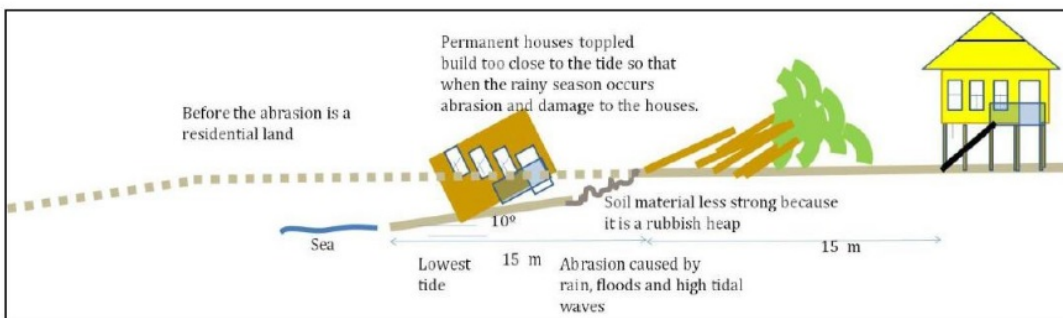


Fig.9. Environmental degradation in coastal areas

Decreasing of The Coastal Quality make people especially fishermen are reluctant to carry out social activities on the beach, they look for other alternatives to carry out their activities, such as the home yard, streets, open spaces around the house, etc. Beaches that were once crowded with a variety of fishing activities, but now, to be on the wane because of the condition. Work while socializing activities such as boat repairing, fish drying, and fish gear repairing is no longer always done at the beach, but it can be done on the home page, as shown in the following picture:



Fig.10. Alternative location for working by Fishermen

The following graph shows the frequency distribution of fishing activity in the settlements .

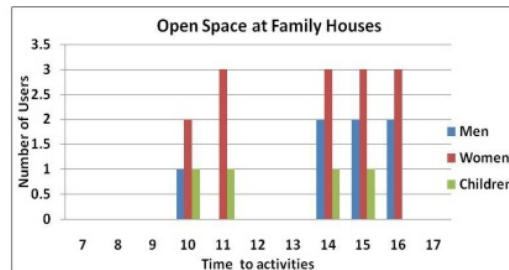


Fig.11. Activity Frequency is Done by Fishermen Community in Family Houses

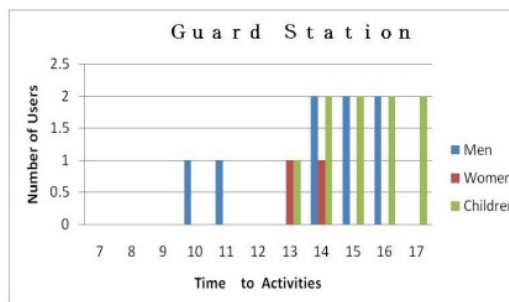


Fig.12. Activity Frequency is Done by Fishermen Community at Guard Station (*pos ronda*)

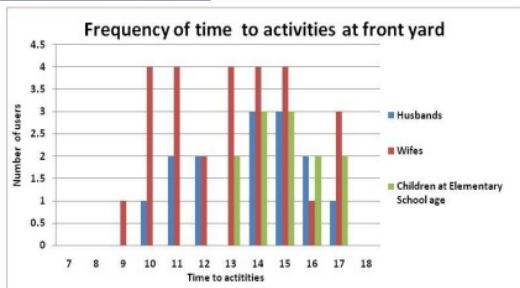


Fig.13. Activity Frequency is Done by Fishermen Ckcommunity at Front Yard

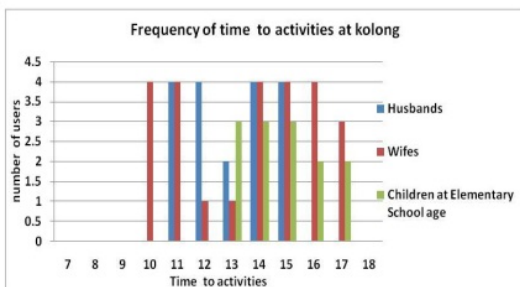


Fig.14. Activity Frequency is Done by Fishermen Community in under House (Kolong)

The graph shows that people today use more space for activities other than the beach. The activities carried out in these places have less social value because it is usually only done individually rather than in groups. This will lead to the reduction in the intensity of meetings between them which ultimately affect the attitude of mutual cooperation and unity. All of above reviews need to be anticipated to make the beach back as the central communal space for the fishing community. Because of the things, Sea shore need to be done betterment condition. We need to make the beach convenient, safe, and roomy for the activity. Technically that need be done are making the barrier, reforestation, and increased public awareness around the beach to the cleanliness of the environment, especially for waste disposal. Manufacture of barrier made in the area of coastal water as a breakwater before heading to the beach. Plaster concrete wall was made to strengthen the coast or coastal border. Reforestation is done mainly on the coastal border area boundary. This is important because border beach area is reserved for security and preservation of the coast. The trees serve as shade, air conditioning, and softening the air from the sea, as well as a deterrent intuition sea water to settlements. Besides that, improvement of drainage channels leading to the beach should be given treatment, so that dirty water into the sea is not too polluted [5]. The following picture shows that efforts to improve the coastal environment more conducive conditions for its users.

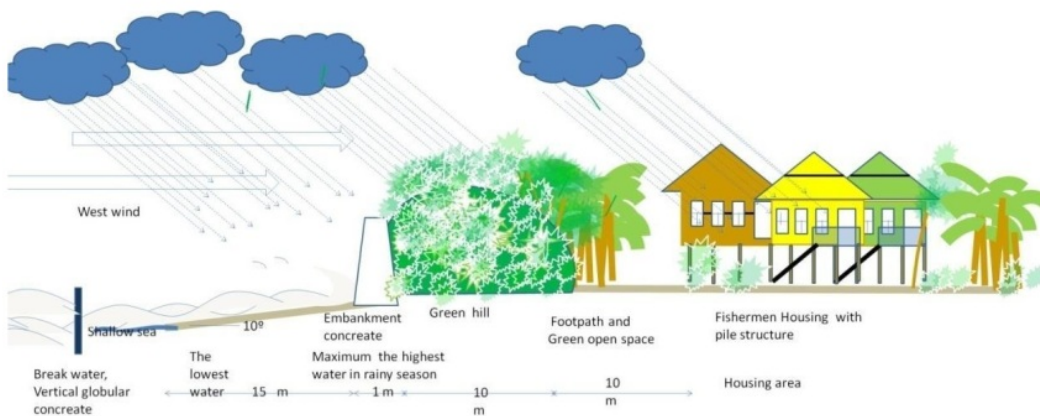


Fig.15. Planning Layout for Making Coastal Area More Conducive as a Communal Space

**V. CONCLUSION**

The beach is a communal space in the main fishing settlement, in addition to having social value also economic and recreational value. However, due to environmental problems in the region led to the communal space narrowing, as a result of society seek another alternative as a communal space. But some communal space are created by community in conflict with allotment, so that it can endanger the user, like road. to create coast conditions be safe and comfort, and roomy to do activities, then it need many efforts to prevent abrasion and enhancing environmental quality beach, as giving wave

breakers, embankment, vegetation, and provide the garbage disposal, and increase of public awareness and improving the environment hygiene.

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