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The Settlement Pattern of Galo-Galo Island Fishermen In The Morotai Island District

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Abstrack

Settlements of fishermen are usually inhabited by people whose main livelihood is dependent on the sea, and the building pattern is located on the coast or sea waters; a close relationship between the lives of fishermen and nature is shown by the settlement pattern located on the seashore. Fishermen's settlements are formed from similarities in culture and main livelihoods; other factors shape the character of a fisherman's settlement. This study aims to obtain the character of the fishermen's settlement pattern on the island of Galo-Galo both from the Settlement Pattern, Land Use Pattern, and Road Network Pattern so that it can be the direction and strategy for the sustainable development of fishermen's settlements, especially in communities located on small islands. Fishermen's houses and docks. The land condition of Galo-Galo village is sloping with craggy soil. Land use in Galo-Galo village tends to approach the coast of the fishermen's settlement pattern. Galo-Galo Village also includes other important places, such as landing places for fish catches and places for selling catches. Fish landing sites are usually located near the beach and are used to clean, process, and preserve fish caught by fishermen. Meanwhile, where the catch is sold, it is usually taken directly to the city.

Keyword: *Building, Land, Fisherman, Settlement*

INTRODUCTION

Settlements are commonly referred to as villages or kampongs. The informal camaraderie among their inhabitants inherently characterizes villages or localities. Additionally, the primary economic pursuits in these places revolve around agriculture and fishing (Sarman & Wijaya, 2018) [1]. Fishing communities typically consist of individuals whose primary source of income relies on the ocean and their dwellings are typically situated along the coastline or near bodies of water. The intimate correlation between the fishing community's way of life and the natural environment is evident through settlement patterns around the coastal periphery (Gobel et al., 2023) [2]. Fisherman's villages arise from shared cultural traits and primary means of subsistence. In addition to this, various other variables contribute to the formation of the character of a fishing settlement. The user's text is enclosed in tags. Fisherman's communities are coastal settlements where the primary source of sustenance for the inhabitants relies on marine resources. In addition to that, the kinship pattern is highly similar, and His activities are in perfect harmony with nature.(Aldi H et al., 2019).The development patterns in fishing communities are typically inefficient regarding land utilization and lack integration with security measures. This is primarily due to the absence of building regulations and a need for more public awareness regarding the risks associated with development along the coastline (Sarman & Wijaya, 2018) [1].

Galogalo Island is one of the most populated islands within the Morotai Island district. The island is comprised of a single town, which shares its name with Galo Galo Island. The Galo-Galo Village village is situated near a vast expanse of ocean and serves as the residence for a community of individuals engaged in fishing. The residents of Galogalo village rely extensively on marine catches as their primary source of sustenance. In addition, Galo Galo Island boasts its natural allure, specifically the presence of diving sites and tourism opportunities due to its distinctive white sandy beach. Typically, a fishing community is heavily impacted by the ocean's proximity, which serves as its residents' primary means of sustenance. Geographical variables, such as the location on sloping coasts with sandy beaches and socio-economic considerations, can also influence the fishing settlement. The user's text is enclosed in tags. This research aims to determine the characteristics of the settlement patterns of fishermen on Galogalo Island, including their settlement patterns, land use patterns, and road network patterns. The findings will serve as a guide and strategy for developing

sustainable fishing settlements, particularly for communities residing on small islands. The interplay between social life and the natural environment significantly impacts human habitation. This interaction gives rise to settlement patterns shaped by the availability of natural resources for sustenance (Suci Yulisma, 2022) [4]. Settlement patterns are determined by the arrangement of buildings, which might vary in composition and land use. These patterns also include the layout of roads and other networks the road (Poerwati & Maria, 2020).

METHODS

The research methodology is descriptive qualitative, utilizing data-gathering techniques such as observational methods and direct interviews with fishermen and inhabitants residing on Galo Galo Island. The collected data pertains to information on village settlement arrangements, land use patterns, road network patterns, demographic data, data on fishermen's livelihoods, and data on supporting facilities and infrastructure in the village. The acquired data is subsequently examined based on the predetermined variables.

RESULTS AND DISCUSSION

The housing arrangement in fishing towns includes stilt houses, houses on the land, and houses on the water. However, as the population grows, the need for land increases while the available land for constructing buildings decreases. Occasionally, we encounter irregular human settlement patterns and observe a general need for more quality in constructing structures. The building's orientation does not align with the beach. The land use pattern is limited to essential utilities, whereas the road network pattern is characterized by irregularity. (Suci Yulisma, 2022). An ideal settlement has nature, individuals, shelter or housing, social conditions, and natural and artificial connecting networks as its key components. All of these aspects are interconnected and indivisible within a single residential space. (Iskandar et al., 2022).

1. Analysis of Settlement Patterns

Fishermen's settlement patterns generally follow the coastline, are homogeneous, and are more closed. There are several patterns of fishing settlements in Indonesia: linear patterns and cluster patterns (Yasa, 2016). Generally, the settlement pattern follows the shape of the natural contour and clusters. It is based on the influence of flat land ownership (Wijaya et al., 2018). Galo-galo village is located on Galo-galo Island. It is a small island and consists only of the village, whose name is taken from the island's name. Administratively, Galogalo Village is in South Morotai District, Morotai Island Regency. The topography of Galogalo Village is sloping and surrounded by the sea and all its natural resources and environment. The formation of fishing settlements was created by nature and the surrounding environment (Suci Yulisma, 2022)

The fishermen's settlement pattern in Galo Galo Village, Morotai Island Regency, has unique and exciting characteristics: it is a fishing village and lives on an island. The settlement pattern does not follow the coast but is located in the center or the middle of Galo Galo Island. The settlement pattern of this village tends to be linear because it follows the direction of the road. However, people's houses are built close to the beach to make it easier for people who work as fishermen to launch boats and carry out daily fishing activities. It also makes it easier to quickly access the sea because it is a place for fishermen to catch fish.



Figure 1. Building Orientation

The orientation of the buildings in Galogalo village facing each other follows the road pattern while the other orientation faces towards the sea. The livelihood factor dramatically influences the pattern of building orientation in the village.

2. Analysis of Land Use Patterns

Galo-galo village is located on a small island with an area of approximately 35 km². The condition of the land in Galogalo village is sloping with rocky soil. Land use in Galogalo village tends to be close to the coast because most of the people's livelihood is fishing. Livelihoods are the main factor forming fishermen's settlement patterns (Poerwati & Maria, 2020) In the coastal area, people use the land to moor their boats.



Figure 2. Boat mooring

In the coastal area, people use the land to moor their boats. Apart from that, there is a pier or harbor which functions as a place to dock their boats when going home from sea. Apart from that, the pier is also a place for fishermen to gather when they want to go to sea. The pier is also a place for social interaction between fishermen and the community in exchanging information related to marine conditions. The pier is also a place for ships to come and go to and from the city because the Galao-galo fishing settlement is on its island and separate from the main island. There are basic village infrastructure facilities such as clean water, places of worship, cemeteries, schools, electricity, village offices, and rubbish dumps.

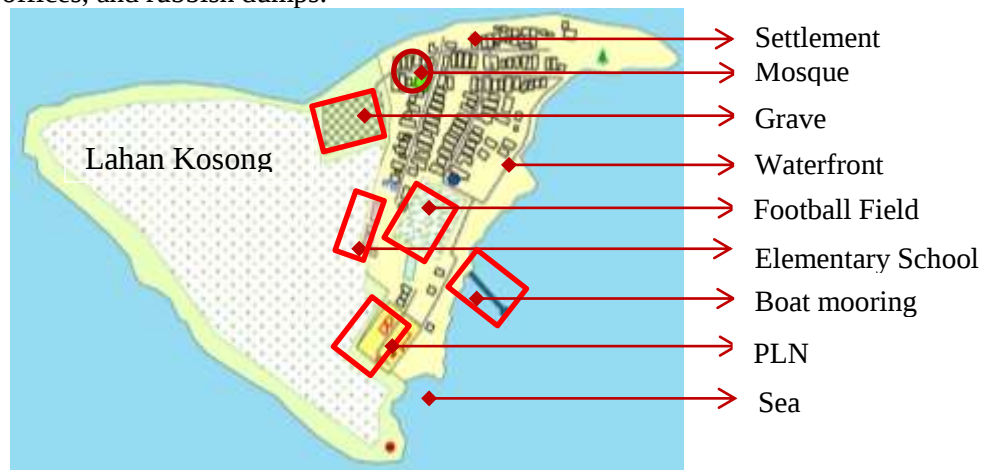


Figure 3 Basic Facilities and Infrastructure and Land Use Patterns

On the coast of Galo-Galo Village, the community uses land for agricultural areas but on a limited scale. Namely, by planting coconut trees, breadfruit trees, and also banana trees as small islands, the land in the Galogalo village is not permitted to be used as mass agricultural land. Meanwhile, the community uses the remaining empty land for burial areas, waste management, and public space areas, where the community uses fields to gather if there are activities requiring many people's capacity.

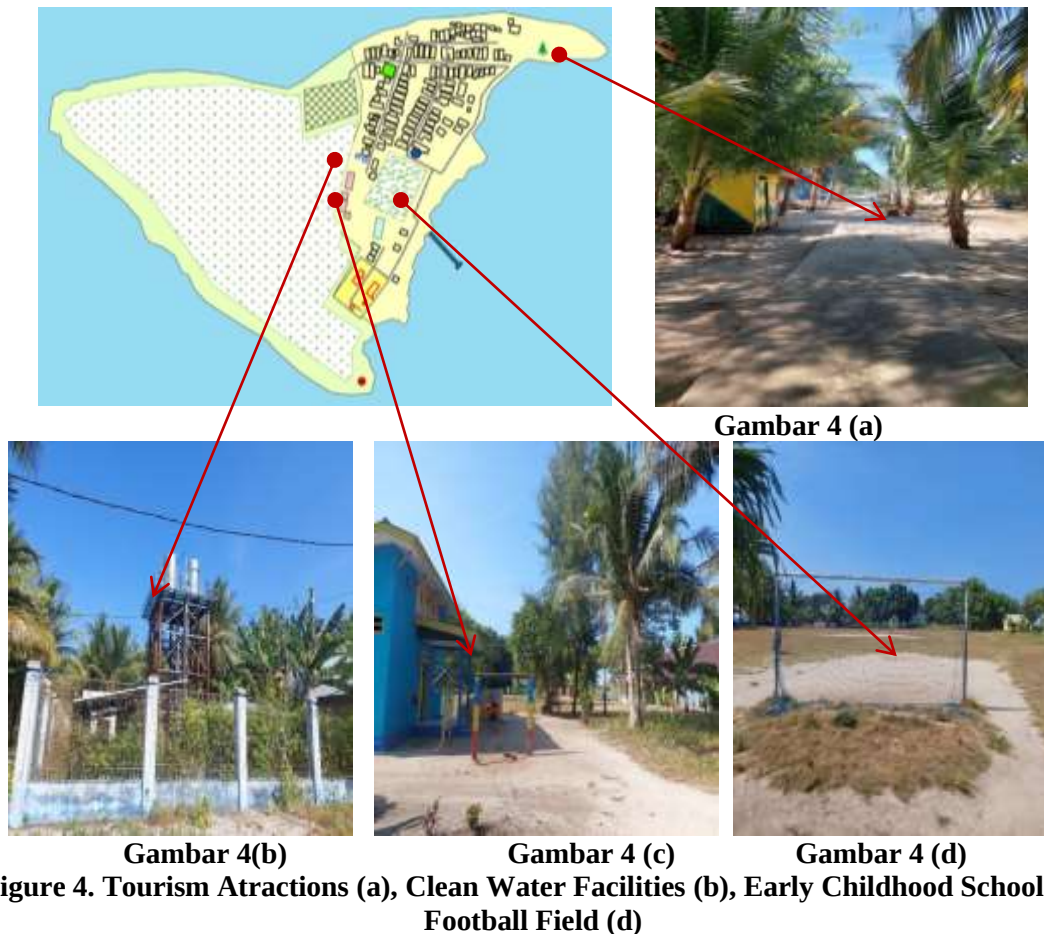


Figure 4. Tourism Attractions (a), Clean Water Facilities (b), Early Childhood School(c). Football Field (d)

The Galo-Galo Fishing Village is renowned for its thriving salted fish industry. In order to make salted fish, the villagers utilize the land on the rear verandas of their houses as drying areas, extending this practice to nearly every household in the Galo-Galo village. The distribution pattern of salted fish is impacted by the community's skill set in managing it. The user's text is (Poerwati & Maria, 2020). In addition to the physical attributes of the fishing town, Galo Galo Village boasts a vibrant social and cultural milieu. The fishing community in this village possesses distinctive traditions and customs, encompassing many social gatherings, including weddings. The daily existence of Galo Galo Village is heavily reliant on the sea and the abundance of fish, influencing the community's social and cultural fabric. This person catches fish for a living. In addition to the residences and piers used by fishermen, the settlement pattern of Galo Galo Village also encompasses significant locations such as fish landing sites and fish marketplaces. Fish shipping stations are typically situated near the coastline and serve as facilities for the cleaning, processing, and preservation of fish obtained by fishermen. Typically, the location where the catch is sold is directly transported to the city.

3. Analysis of Road Network Patterns

There are three types of roads in Galogalo village, namely public roads or main roads, alley roads, and footpaths. The cluster network is a type of road in Galogalo village where the main road links residential areas consisting of RT 1-RT 5. Galogalo village does not have four-wheeled transportation because the island's condition is minimal, so only vehicles have two wheels. The road pattern in Galogalo village is spinal. The spinal pattern is a road pattern that spreads to a central area and then develops and forms branches by connecting with other environmental roads. The community usually uses this circulation pattern as a social space for interacting(Suci Yulisma, 2022)



Figure 5, Alleyway Pattern (a). Age Road Pattern/Primary Road (b), Footpath Pattern (c)

The linear road network pattern is a link between other road networks. Galogalo village has only environmental roads as the main road; apart from that, there is a network of connecting roads between regions to form a network pattern. The network pattern connects several roads to points from the corner of a road to other roads. The road network can act as a link when people carry out their activities and as a means of communication between residents (Poerwati & Maria, 2020)

CONCLUSION

Fisherman's settlements are formed from similarities in culture and main livelihoods, which shape the character of a fishing settlement. Galo-galo village settlements tend not to follow the coastline but have clusters and sloping topographic conditions. The shoreline is used as a place to moor boats, and because of the minor land conditions of the island, the land is only used as a residence for maritime activities; this is because the community's main livelihood is as fishermen. In Galogalo village, there is no mass agricultural land due to limited land conditions, and the community's agricultural land is on another island. At the same time, the home gardens are only planted with coconut trees, bananas, and breadfruit trees, but in minimal quantities.

The Galo-Galo Fisherman's Village is famous for its salted fish business. Therefore, it produces salted fish by using the land on the back verandahs of residents' houses as an area for drying fish and spreading it to almost every house in the village. The village has three types of roads: public roads, roads main roads, alleys, and footpaths. The village does not have four-wheeled transportation because the island is tiny. The spinal pattern is a road pattern that spreads to the center of the area and then develops and forms branches by connecting with other environmental roads.

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