

THE IMPACT OF THE LAND RECLAMATION CENTER POINT OF INDONESIA ON FISHERMAN'S INCOME IN BONTORANNU VILLAGE, MARISO SUB-DISTRICT, SOUTH SULAWESI

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Abstract.

Land reclamation has become one of the alternatives to utilize marine areas for increasing land productivity. In the capital of South Sulawesi, Makassar City, the Center Point of Indonesia (CPI) project involves land reclamation as an effort by former governors of South Sulawesi in collaboration with private sectors to enhance the city's economic infrastructure. This research aims to analyze the impact of CPI land reclamation on fishermen's income in Bontorannu Village, Mariso Sub-district, Makassar City, and the efforts of fishermen in coping with reclamation that affects their income. The study employs field research using qualitative methods with data collection techniques such as observation, interviews, and documentation. The researcher proceeds with qualitative descriptive data analysis upon gathering all information and data. The findings indicate that there is a significant impact caused by the reclamation, namely a decline in income among fishermen in Bontorannu Village, Mariso Sub-district, due to difficulties in accessing fishing grounds, leading many fishermen to switch professions.

Keywords: Impact, Reclamation, Fisherman, Income.

1 Introduction

Indonesia is known as a maritime country, with the majority of its territory consisting of sea rather than land [1]. This God-given advantage is naturally utilized by the Indonesian people as much as possible. As a result, livelihoods based on the sea dominate in Indonesia, with fishing being one of the primary occupations. Since their work depends on the sea, most fishermen choose to live in coastal areas. Therefore, when the sea tides rise, fishermen and nearby coastal residents are directly affected [2]. This has prompted the government to consider land reclamation as an alternative to prevent the adverse effects of rising tides.

Chapman (1982, as cited in Asbullah, 2003:10) states that reclamation is generally a process aimed at land use for specific purposes. Reclamation is the process of utilizing uneconomical land for various purposes, such as housing, agriculture, or tourism. This reclamation is carried out through soil conservation,

freeing arid land, water resources, valley drainage, and tidal projects [3]. Marine Ecotoxicology explains that reclamation is the process of creating new land from the sea using the simplest method of filling the area with large amounts of stone and/or heavy cement, then adding clay and soil until the desired elevation is reached [4].

Land reclamation is carried out to expand land area for suitable activities in the region and to be used for coastal conservation. According to Law No. 27 of 2007 concerning the Management of Coastal Areas and Small Islands, Article 1, reclamation refers to activities conducted by individuals aimed at increasing the utility of land resources from environmental and socio-economic perspectives through enclosing, draining, or other land management techniques [5]. With reclamation, it is hoped that the lives of coastal residents will improve due to increased safety for nearby communities.

The Center Point of Indonesia (CPI) is a well-known landmark and hub in Makassar City. The mega project Center Point of Indonesia (CPI) in South Sulawesi, initiated by Syahrul Yasin Limpo, was originally called Equilibrium Centre Park (ECP) in 2009 and was intended to be a business, tourism, and education center in Makassar City [6].

According to Lukman (2021), the area was initially inhabited by underprivileged residents. However, government attention toward the local community has been lacking. For example, land used as a livelihood by residents of Mariso District, who worked as shellfish fishermen, has now been converted into a construction site. The growing issue of waste disposal in the Losari Beach area has led to various conflicts due to land conversion, as areas once used for community housing have now become construction zones [7].

The construction of CPI in South Sulawesi has had both positive and negative impacts. One of the positive effects is that it has spurred rapid economic growth in the city. However, there are concerns that the Center Point of Indonesia (CPI) project may also have negative consequences. The development area was once inhabited by residents who were primarily low-income shellfish fishermen along Losari Beach, as well as small traders.

Based on previous research, the economic condition of the coastal communities in Mariso was more stable before the CPI land reclamation project began. The income from fishing in the coastal areas was relatively stable. Residents of Lette Village, Mariso District, who predominantly worked as fishermen, are likely to experience the effects of reclamation or landfilling. Large-scale reclamation activities must be managed through coastal reclamation planning to avoid new problems, including environmental sustainability issues, such as reduced marine biodiversity, and social conflicts arising from lost livelihoods and declining

incomes among coastal communities. Therefore, integrated development planning is needed that not only focuses on environmental aspects but also considers the social and economic aspects of the community. This way, the socio-economic impacts on the community can be anticipated and addressed by the government as the policy maker (Mustaqim, 2015) [8].

Mubyarto (2012), the income of coastal communities is generally the lowest compared to other inland populations. If this is further compounded by a reclamation project, the income of coastal communities will decline even further [9]. Asmita (2016) states that the welfare of fishermen is largely determined by their catch, often referred to as catch production. The quantity of fish caught directly affects the income they receive, allowing fishermen to meet their daily needs. This means that the basic needs of fishermen are available and affordable to all, which ultimately reduces poverty levels [10].

Therefore, a deeper study is needed to examine the effects of land reclamation on the economic changes experienced by the residents of Mariso District, particularly in Bontorannu Village. As a result, this research aims to analyze the decline in fishermen's income in coastal areas due to the construction of the Center Point of Indonesia project in Makassar City, Mariso District.

2 Literature Review

2.1 Reclamation

Definition of Reclamation. Ali Maskur (2008) as cited in Moch. Choirul Huda (2013), land reclamation is the process of filling or adding material to an area that was previously water, with the aim of creating land that can be used for various purposes such as infrastructure development or residential areas [11]. According to Law No. 27 of 2007, reclamation is an activity carried out to enhance the benefits of land resources from environmental and socio-economic perspectives through methods such as dredging or filling over land or rock, land conversion, or drainage.

According to Afni A (2017), Coastal reclamation can be carried out by private companies in the form of Limited Liability Companies (LLCs), regional or municipal governments, state-owned enterprises, partnerships between private companies and regional or municipal governments, or collaborations between private companies and state-owned enterprises [12]. The land resulting from reclamation will be used for constructing commercial or public buildings (Mohammad Said, 2019) [13].

Reclamation Purposes. According to Chapman (Asbullah, 2013), coastal reclamation is conducted with the following objectives: 1) to acquire new land that can alleviate the pressure on land demand in densely populated urban areas; 2) to revitalize water transportation, thereby reducing the burden on land transportation; 3) to create opportunities for high-value development; 4) to enhance maritime tourism; 5) to increase regional revenue; 6) to boost economic growth in both coastal and urban areas; and 7) to improve the socio-economic conditions of the community [14].

Land reclamation primarily seeks to convert contaminated and underutilized aquatic regions into functional land suitable for residential developments, commercial enterprises, retail spaces, and recreational sites [15]. Similar to other developmental initiatives, reclamation endeavors are driven by a commendable objective: to enhance community welfare from an economic perspective, to gain societal acceptance by aligning with local needs and cultural values, and to ensure environmental protection [16].

The Impact of Reclamation on Marine Ecosystems. According to Law No. 27 of 2007, individuals carry out reclamation to enhance the benefits of land resources from an environmental, social, and economic perspective through landfilling, land drainage, or drainage systems. Specifically, land reclamation means creating new land in the sea, as defined by Jim Wilson in his article **New Land in The Water: Economically and Socially, Land Reclamation Pays**. Referring to Law No. 27 of 2007, several factors must be considered and maintained during land reclamation, such as the sustainability and continuity of the community's livelihood, as well as technical requirements during the reclamation process.

Lumain (2003) as cited in Hegel Tumbel et. al (2019), land reclamation can impact the lives of those living near reclamation sites. This land conversion will certainly affect the lives of nearby residents, both in terms of living conditions and the economy. The impacts may be both positive and negative. In this regard, the government is expected to regulate and minimize the negative effects of land reclamation [17].

Land Reclamation as the Center Point of Indonesia. The CPI development project is a collaboration between the Ciputra Group and the city government, covering an area of 157 hectares. In addition to being used as residential land, the area will also serve as a business hub, educational facility, and culinary center [18].

2.2 Fishermen

Definition and Role. Kusnadi (2009) as cited in Fanesa Fargomeli (2014), fishermen are defined as people who live, grow, and develop in coastal areas, which are border or transition areas between land and sea. Fishermen engage in activities to explore, manage, and utilize coastal and water resources as the core of their livelihood, often influenced by the seasons. According to the Encyclopedia of Indonesia, fishermen are individuals who actively catch fish, either directly, such as by using nets, or indirectly, such as ship helmsmen or captains [19].

Systemically, fishermen form a social category that constitutes a social unit. They also possess cultural values and symbols that guide their daily behavior. These key elements are important for connecting fishermen with other communities, as most coastal communities rely on altering and utilizing the potential of marine resources for their livelihoods. Law No. 31 of 2004 defines fishermen as "people whose livelihood is catching fish" [20].

Fisheries are a vital subsector of agriculture, playing a special role in national development through the production of animal protein food boosting fishery exports for agricultural industrial growth and increasing foreign exchange. Geographical and hydrographic factors, as well as fish species diversity, must also be considered [21].

Fishermen and Their Income Levels. The income of fishermen is uncertain because it is a profession that generates direct results after a catch is made [22]. If fishermen go out today, they will enjoy the results of their catch the same day. Since their income depends on their catch, it cannot be said that fishermen are always able to meet their daily needs. When the tide is high, fishermen are often unable to venture far out to sea.

According to Monintja and Yusfiandasyani (2001), in meeting their livelihood needs, fishermen and coastal communities are constantly faced with harsh natural conditions, requiring them to have strong physical endurance. Older fishermen, whose physical condition begins to deteriorate gradually, reduce their time at sea and often take up other work that does not require as much physical strength [23].

The Impact of Reclamation on Fishermen's Income. Land reclamation projects can potentially impact fishermen's income. Due to changes in the environment, the surrounding marine life can be affected by land reclamation. The use of water areas can alter the condition of the local marine ecosystem, which in turn affects fishermen's catches. Marine life that inhabits areas beneath the reclaimed land will inevitably lose its habitat. This can lead to a decline in fishermen's income, as their source of livelihood is directly tied to the sea [24].

Fishermen's Income Based on Previous Studies. According to previous research,

the development of the Center Point of Indonesia (CPI) has caused coastal communities to experience a decline in marine catches. Coastal communities have seen a reduction in their income, as the drop in marine harvests forces them to spend more on obtaining fish and other marine products.

2.3 Center Point of Indonesia

Definition of Center Point of Indonesia. The mega-project Center Point of Indonesia (CPI) was originally called the Ecolibrium Center Park (ECP) in 2009. Located on the western side of Makassar City, South Sulawesi. This beautiful area is a hub for business, tourism, and education. It was a flagship project initiated by Syahrul Yasin Limpo and Agus Arifin Numan during their terms as governor and vice governor of South Sulawesi from 2008 to 2013. The area boasts various facilities, including business centers, tourism, educational institutions, and residential areas. Another unique feature of this area is the construction of a mosque that has become a new icon for both Makassar City and the Center Point of Indonesia.

Purpose of the Center Point of Indonesia Development. The development of CPI aims to accelerate the city's economic growth by offering an alternative tourism destination. It also seeks to contribute significantly to the increase in the city's income and enhance the region's primary interests.

Center Point of Indonesia as the Economic Center of Makassar. Due to its strategic location as the gateway to Eastern Indonesia (KTI), Makassar City is well-positioned to develop its economy smoothly. This is supported by adequate infrastructure such as flyovers, ports, and an international-class airport [25].

This project, a collaboration between the city government and Ciputra Group, focuses not only on residential areas and educational facilities but also serves as the city's economic hub. Although CPI is still under construction, the enthusiasm of the city's residents toward the project is enormous. The architectural beauty of CPI attracts many people who come to take photos at its iconic corners or simply stroll around to enjoy the scenery. As a business center, CPI will require a large workforce for the construction of various facilities such as offices, hotels, malls, restaurants, campuses, housing, tourist areas, and industries for goods and services.

3 Research Method

The research conducted field research and document studies by directly investigating the field to search for and discover the facts about the impact of land reclamation, known as the Center Point of Indonesia (CPI), on the income of fishermen along the coast of Makassar. The approach used to analyze the collected data is the "people's economy" approach, which aims to assess the impact of reclamation on the fishermen's economy as part of the local population.

A random sampling (probability sampling) technique was used to collect subjects randomly from the population. The rationale for using random sampling is that all population subjects are homogeneous, meaning they all have the same status to be considered as research samples.

The techniques used for data collection and support in solving the two identified research problems are:

Observation: The researcher visits the research location to directly observe the behavior patterns of fishermen after the land reclamation at the CPI.

Interview: The researcher conducts interviews with the fishermen selected as samples, including both boat owners and those working as fishers at sea.

The data processing technique involves identifying, classifying, and grouping data according to the requirements to answer the research questions. The analysis technique used is qualitative analysis, where the processed field data are analyzed using words or sentences to clarify the meaning of the data, which then forms the basis for concluding.

4 Research Findings and Discussion

The land reclamation project is essentially a government policy aimed at improving the community's welfare by utilizing available resources. Fishermen, being directly affected by coastal reclamation, are among the most impacted groups since the coastline is where they dock their boats, which are essential for fishing, and most fishermen live along the coast.

4.1 Description of the Research Location

In research, location descriptions are used to explain the conditions of the research area. Administratively, the fishing settlement that serves as the research location is situated in Bontorannu Village, Mariso District, Makassar City, South Sulawesi Province. Geographically, this village is located near the Makassar Strait. Astronomically, it is positioned at coordinates 5°09'47.90" S and 119°24'24.00" E (5°09'46"S 119°24'17"E). The village covers an area of 0.18 km² and is bordered as follows: to the north by Mattoangin Village, to the south by Maccini Sombala Village, to the west by the Makassar Strait, and to the east by Tamarunang Village. Below is the map of Bontorannu Village, Mariso District.

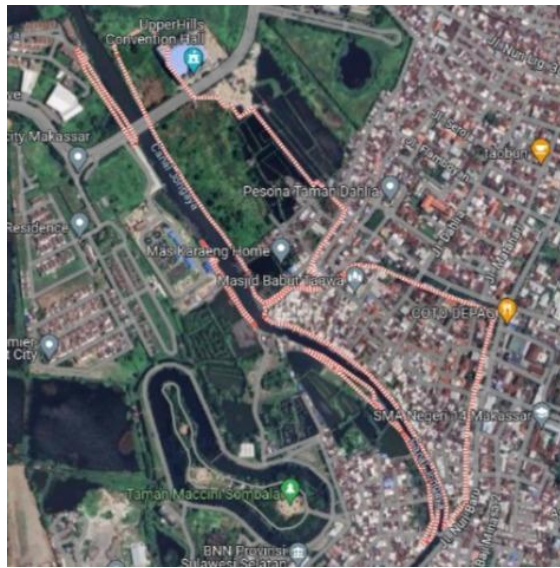


Fig 1. Research Location

4.2 The Impact of the Center Point of Indonesia Land Reclamation

Table 1. Average Daily Income of Bontorannu Fishermen Every Month in 2014

Month	Average			
	Production (Kg)	Production Value (IDR)	Production Cost (IDR)	Income (IDR)
January	56	571.428	150.000	410.71
February	57.73	576.666	163.333	413.33
March	58.66	586.666	150.000	423.33
April	61	610.000	150.000	460.00
May	57.66	576.666	146.666	363.33
June	60.66	607.000	146.666	460.00
July	59.66	596.666	143.333	453.33

August	61.33	613.333	136.666	476.66
September	59.33	593.333	143.333	450.00
October	59.66	596.666	150.000	450.00
November	60.66	606.666	150.000	456.66
December	61	610.000	143.333	466.66

Source: Data from Bontorannu Village, Mariso Sub-District

The data was collected from the local sub-district in Bontorannu village. The table shows the average daily income of Bontorannu fishermen for each month in 2014. Before the project, the income of the fishermen ranged from approximately 300,000 to 400,000 IDR, with the highest income recorded in August at 476,000 IDR, and the lowest in May at 363,000 IDR.

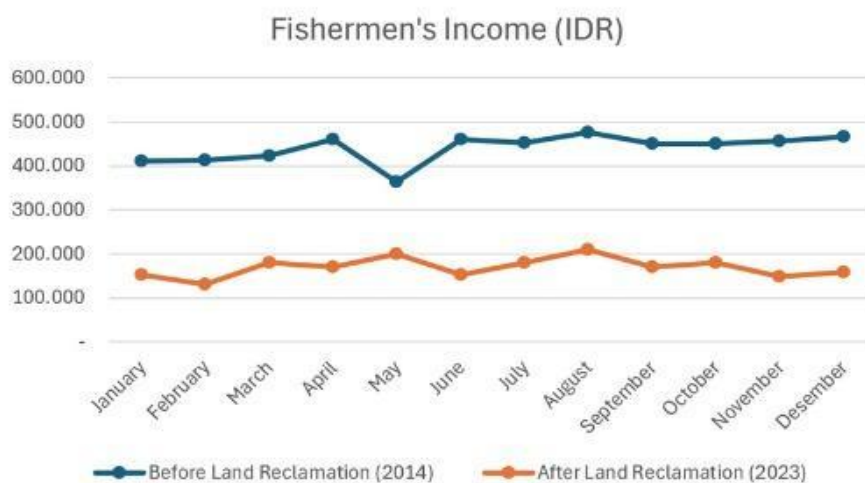


Fig 2. Data Before the Land Reclamation and Interview Results

Changes in the Number of Fish Caught. Based on interviews with fishermen in Bontorannu Village, Mariso District, Mulyadi and Indar stated:

"Now, our income is unpredictable, sometimes a lot, sometimes little. The fishing grounds have been filled in for the CPI. The types of fish caught are still the same,

but the quantity has decreased. The fishing process is no longer like before; we have to go further out, fuel costs have increased, and it's harder to catch." (Mulyadi-Indar, May 9, 2024).

From this statement, it can be inferred that fishermen are experiencing negative impacts, particularly the reduction in their catch, especially for those whose fishing grounds have been covered by the Center Point of Indonesia development. This is due to the increased distance to reach fishing areas, which results in higher fuel costs.

Changes in Income. Due to the reduction in catch caused by the reclamation of fishing grounds and the increased fuel costs for boats, there has been a significant decline in fishermen's income as a result of the land reclamation for the Center Point of Indonesia. This was also expressed by coastal residents in Bontorannu Village, Mariso District, Suardi Dg. Sikki:

"Initially, income was good, but after the reclamation, it dropped significantly, to a deficit. Before, we earned around 200 to 300 thousand rupiah per day, but now after the reclamation, income is unpredictable, and we've lost a lot. Fuel costs have increased; we used to need 1 liter, but now it's around 2 liters because the distance to fishing areas is about 4 miles." (Suardi Dg. Sikki, May 9, 2024).

Shift in Fishermen's Occupations. The head of the neighborhood and also the head of the fishermen in Bontorannu Village, Mariso District, stated that there has been a decrease in the number of active fishermen since the development of the Center Point of Indonesia, with some fishermen changing their professions due to the unfavorable conditions for continuing as fishermen.

"There used to be about 200 fishermen, but now maybe only 70 are still active. Those who have other skills switch to other professions, while those who can only fish remain fishermen." (Yusuf - Neighborhood Head/Fishermen's Head, February 28, 2024).

Fishermen who change professions often become stonemasons, construction workers, or pond laborers. Yusuf also mentioned that clam collectors have almost disappeared.

Environmental Changes in Fishing Areas. "The environmental impact is significant. The water used to be clear, but now it's murky and polluted because of the waste from companies involved in the reclamation." (Mulyadi-Indar, May 9, 2024).

They stated that the development of the Center Point of Indonesia has caused pollution in the fishing areas. Waste disposal and land reclamation are contributing

factors. This pollution has also led to a decrease in fish populations, as they cannot survive in polluted and murky waters.

5 Conclusion

Based on data gathered through diligent observation and in-depth interviews conducted by the researcher, it becomes evident that following the land reclamation for the CPI project, there has been a notable decrease in income among fishermen, occasionally resulting in negative earnings. This underscores the significant impact of land reclamation (CPI) on fishermen's income in Bontorannu Village, Mariso Sub-district.

In response to these challenging conditions, a considerable number of fishermen have opted to transition to professions such as stonemasonry or construction work to sustain their livelihoods. Consequently, the fishing community in Bontorannu Village, Mariso Sub-district, has experienced a sharp decline, with approximately 70 individuals remaining actively engaged in fishing after the implementation of CPI.

Thus, it is evident that CPI has not only altered the livelihood structure of fishermen but has also significantly affected their community as a whole, with many choosing to leave behind occupations that have been part of their lives and traditions for years.

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