

# Level of Facilities Utilization on the Pontap Fishing Port, Palopo City

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## Level of Facilities Utilization on the Pontap Fishing Port, Palopo City

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### Abstract

This study aims to provide an overview of the utilization of existing facilities at the Pontap Fish Landing Base, Palopo City, South Sulawesi Province, including basic facilities, functional facilities, and supporting facilities. This study conducted data collection and direct observation at the Fish Landing Base from February to July 2022. The analysis found that the utilization rate of facilities such as docks, harbour ponds, solar sack sealer-fishermen, and water reservoirs exceeded 100 %. Utilization of other port facilities such as water depth was 88.33%, land uses were 18.15%, while ice factory facility with utilization was 99.98%. From these results, it can be said that the level of utilization of existing facilities at the Pontap Fish Landing Base is already in the very high category for some facilities. Based on this research, it is strongly recommended to develop facilities to increase the fishing port class from the fish landing phase (Class D) to the coastal fishing Port (Class C).

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### Keywords

Pontap fish landing base, existing facilities, utilization rate.

### Introduction

South Sulawesi, as a province surrounded by the sea, has a vast potential for fishery resources, so it requires capture fisheries facilities and infrastructure, especially fishing ports, in the context of utilizing these resources. South Sulawesi capture fisheries potential is 620,480 tons/year, with details; Makassar Strait with a potential of 307,380 tons/year, the Flores Sea with a potential of 168,780 tons/year, and the Gulf of Bone with a potential of 144,320 tons/year (Hatta, 2007).

In order to optimally and sustainably utilize fishery resources, it is necessary to have a fishing port. According to Law no. 45 of 2009 article 3, fisheries development aims, namely (1) to improve the standard of living of small fishermen and fish farming; (2) to

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increase state revenues and foreign exchange; (3) to encourage expansion and employment opportunities; (4) increasing the availability and consumption of animal protein sources; (5) optimizing the management of fish resources; (6) improve quality productivity, added value and competitiveness; (7) increase the availability of raw materials for the fish processing industry; (8) optimal utilization of fishery resources; (9) ensure the sustainability of fish resources, fish farming land, and spatial planning.

To achieve the goal of fisheries development, one of the most important things is the construction of fishery facilities and infrastructure. Especially for capture fisheries, the facilities and infrastructure that need to be noticed are "Fishing Ports", which support the increase in production. Given how important the construction of

fishing ports is, the Fisheries Law stated that the government is obliged to build them, and it has been realized in various places in Indonesia. Fishing Ports have a strategic role in developing fisheries and marine affairs as the centre of marine fisheries activities. The Fishing Port is not only a liaison between fishermen and users of catches, both direct and indirect users such as traders, processing factories, restaurants, and others but is also a place for the interaction of various interests of coastal communities located around the Fishing Port (Kusyanto *et al.*, 2006)

One of the fishing ports as a fish landing place in South Sulawesi Province is located in the Northern Bone Bay area. This port is often used as a place for loading and unloading fishery products are the Pontap Fish Landing Base in Palopo City. This is because the facilities provided at the PPI are more complete and better than at other PPI (Suardi, 2005). In addition, it is also due to the potential for marine fish resources in the Northern Bone Bay area, which is very abundant and dramatically supports the existence of fishing ports. Pontap Fish Landing Base or PPI is used to serve the landing and sale of fishermen's catches in the waters of northern Bone Bay, which covers the area of Palopo City and its surroundings (East Luwu Regency, North Luwu, and Luwu Regency). PPI Pontap was built several years ago, where the PPI facilities provided were adjusted to the conditions. Over time there has been a rapid development of the fisheries sector in the waters of Bone Bay which will affect the number of fish landed. The length of the pier, the size of the port pool, the depth of the in and out the channel, the location of the auction building, the requirement for ice, clean water, fuel, and other factors all have a significant impact on the weight and size of the ship's anchor. Based on this, it is deemed necessary to describe the conditions and analyze the level of utilization of the PontapPalopo City Fish Landing Base (PPI) facility.

## Data and Method

Field data collection was carried out for two months, from February to July 2022, at the Pontap Fish Landing Base (PPI) (Type D Port) Palopo City (Figure 1). The Pontap Fish Landing Base is located in the northern part of Bone Bay, South Sulawesi Province

## Data Collection Method

The data used in this study consists of direct observation data, including measurements of PPI facilities and

secondary data in the form of interviews with PPI managers and users and existing laws and regulations.

The level of utilization of primary, functional, and supporting facilities is determined by analyzing current utilization of facilities. The category of the utilization of fishing port facilities includes the utilization of low, medium, high, and very high facilities.

## Data Analysis

The utilization rate of each facility was analyzed descriptively using the formula (Merdekawati, 2019).

$$\text{Utilization Rate} = \frac{\text{Current needs}}{\text{Initial needs}} \times 100\%$$

The assessment of utilization level of facilities at PPI Pontap refers to Table 1.

## Results and Discussion

### General Condition of PPI PontapPalopo City

Pontap Fish Landing Base is located on Jl. A. M. Mappuji, Number 16, Ponjalae Village, East Wara District, Palopo City, South Sulawesi Province. PPI Pontap is included in the Bone Bay area with a geographical position of 2°59'18" South Latitude and 120°12'29" Eastern Star. The location of PPI Pontap can be seen in Figure 2 below.

Based on the field observations result, it can be said that the existing facilities at the Pontap City Fish Landing Base (PPI) are not fully equipped and require repairs in several facilities. The main facilities at PPI Pontap, including the dock, port pool, entry, and exit of the PPI need repairs, especially for the PPI pier and road, because there are several parts of the road with potholes can endanger road users. Supporting facilities at PPI Pontap include fishermen's meeting hall, prayer room, Toilet Wash (MCK), stand, and guard post. The condition of several supporting facilities such as fishermen's meeting halls and toilets needs to be improved. The results of interviews with the management of PPI Pontap, based on Law no. 23 of 2014 concerning Regional Government, that the handover of fishing ports transfer (P3D in the field of marine and fisheries) were carried out in 2018. As a result, the Regional Government's management of the Pontap PPI is still in transition to the Provincial Government at this time.

Some of the facilities have been handed over to the Provincial Government. However, they have not been managed by the Provincial Government because it wants all facilities to be handed over to the Provincial Government. However, the Regional Government has not yet delegated this authority. Based on this, until now, the PPI PontapPalopo City is still managed by the Palopo City Government.

The Pontap Fish Landing Base has an area of 3 hectares equipped with basic facilities, functional facilities, and supporting facilities that follow the Regulation of the Minister of Maritime Affairs and Fisheries of the Republic of Indonesia Number PER.08/MEN/2012 concerning Fisheries Ports.

### Utilization Level of PPI Pontap Facilities

#### Port

The port facility at PPI Pontap has a length of 140 m (Figure 3). The width of the outboard motor boat is 1 m on average, the width of the motor boat < 5 GT is 1.5 m on average, the width of the 5 - 10 GT motor boat is 2 m on average, and the width of the 10 - 30 motor boat is 3 m on average. The number of ships using the dock per day is an average of 45, and the time the ship docks at the dock are 2 hours. It has been calculated using the formula that the current pier length requirement is 380.08 m. Based on this, it can be seen that the current utilization rate of the PPI Pontap pier is very high.

#### Harbor Pool

The area of the fish landing base port pond when it was built was 3,791 m<sup>2</sup> (Figure 4). The area for turning ships is 1256 m<sup>2</sup>, while the maximum number of ships docked is 50 units with an average length of 20 m. The utilization rate of the PPI Pontap port pool (Yahya *et al.*, 2013) has been included in the very high category

#### Depth of Water

Ships carrying out loading and unloading at the Pontap Fish Landing Base pier have a draft of 1 m, the height of the ship's swing is about 0.5 m, the maximum wave height in the harbour pool is 0.7 m, and the safe distance from the keel of the ship to the bottom of the waters is 0.8 m. The water depth at low tide is 0.50 m.

The calculation results (Nurdiyana, 2013) found that the required water depth according to current conditions is 2.67 m. The utilization rate of water depth is 88.33% or is included in the very high water depth utilization rate category.

#### Mainland Harbor

The Pontap Fish Landing Base has a land area of 30,000 m<sup>2</sup> (Figure 5). According to current conditions, the calculation results using the formula (Ardandi, 2013) found that the required port land is 5.4 m<sup>2</sup>. The land utilization rate of the Pontap Fish Landing Base port is 18.15%. In other words, based on this, it can be stated that the utilization rate of the port land is low.

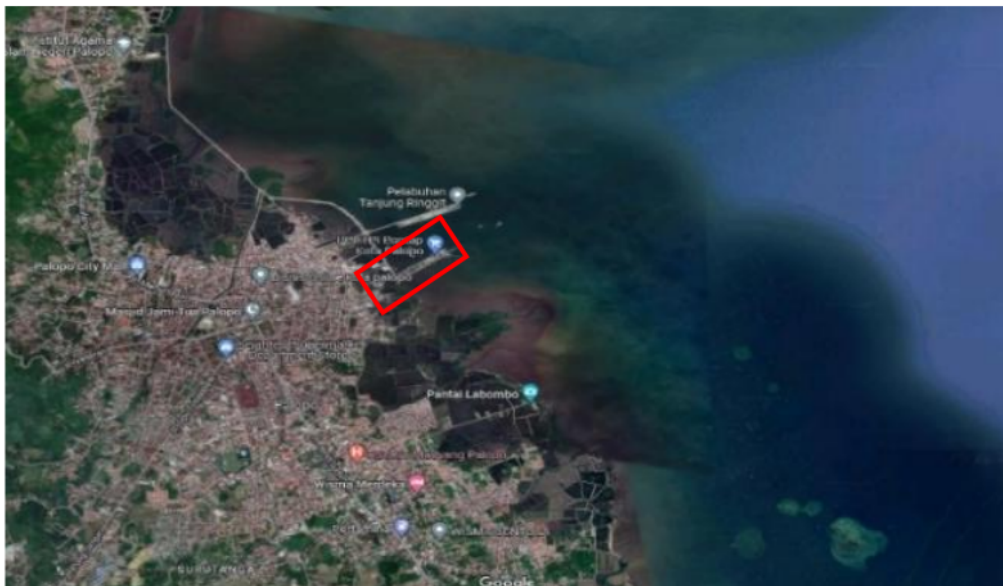
#### SPDN

Fishermen's Solar Packed Dealer (SPDN) at the Pontap Fish Landing Base has a capacity of 5,000 L. The standard diesel requirement is 0.22L/PK/Hour. Based on the analysis, the engine power at PPI Pontap was divided into 3, namely 20 ships using 190 PK engines, 15 ships using 120 PK engines, and 8 engines using 100 PKs.

The calculation results of the current Pontap Fish Landing Base (PPI) fuel tank found that the fuel demand, according to current conditions, is 200,640 L. The fuel utilization rate of the Pontap PPI has exceeded 100%. Based on this, it can be said that the fuel utilization rate of PPI Pontap is very high

**Table.1** Assessment of Fishery Port Utilization Level

Utilization Rate Percentage	Description
≥ 85% - 100%	Utilization of fishing port facilities is <b>very high</b> category
≥ 75 - 85 %	Utilization of fishing port facilities is <b>high</b> category
≥50 - < 75%	Utilization of fishing port facilities is <b>moderate</b> category
< 50%	Utilization of fishing port facilities is <b>low</b> category

**Fig.1** The Pontap Fish Landing Base, Palopo City**Fig.2** The location of PPI Pontap and its surroundings in Palopo City (Googlemaps, 2022).

**Fig.3** Port Facilities of PPI Pontap.



**Fig.4** PPI Pontap Port Pool



**Fig.5** The land of PPI Pontap port



**Fig.6** PPI Pontap Fish Collection Place.



### Water Storage

The clean water reservoir at the Pontap Fish Landing Base has a capacity of 2500 L. The need for clean water for fishing is 3,120L/day, the need for clean water for washing fish is 20,000L/day, the need for clean water for housing is 560L/day, and the need for clean water for offices is as much as 50L/Day.

The current water demand calculation has been carried out using the formula (Pane, 2005). The current need for

clean water is 23,730/day. The utilization rate of clean water facilities at PPI Pontap has passed 100% or is classified as very high.

### Fish Landing Place

The area of the fish landing site (TPI) of PPI Pontap is 476 m<sup>2</sup> (Figure 6), while the current needed is 369 m<sup>2</sup>, assuming that the ships arrive simultaneously and the caught fish are immediately transferred to the TPI. Based

on calculations (Murdianto, 2003), the utilization rate of the PPI Pontap auction building is 79% or quite high.

### Ice Factory

The existing ice factory at the Pontap Fish Landing Base has a capacity of 10 tons, while the average daily use of ice is 10 tons per day.

It has been calculated (Cristanti, 2005) that the level of utilization of the ice factory in PPI Pontap is 99.98%. Based on this calculation, the utilization rate of PPI Pontap's ice factory is still relatively low.

Based on the results obtained, the evaluation of facilities at PPI Pontap found that the physical condition of the existing facilities was still good and still suitable for use, both primary and functional facilities. The utilization rate of PPI Pontap facilities for dock facilities, port pools, SPDN, and water reservoirs has exceeded 100. In contrast, the water depth is 88.33%, the mainland port is 18.15%, and ice factory facilities have reached 99.98%.

### Suggestion

Based on this, the level of utilization of existing facilities at PPI Pontap is very high so it is necessary to develop facilities to increase the class of fishing port from PPI (Class D) to Coastal Fishery Port (Class C).

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