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ECONOMIC FISH LANDED AT THE NUSANTARA FISHERY PORT (PPN) AWANG BAY

Ikan – Ikan Ekonomis Yang Didaratkan Di Pelabuhan Perikanan Nusantara (PPN) Teluk Awang

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ABSTRACT

Fishing ports are important nodes in the fisheries supply chain, where caught fish are landed and distributed. Teluk Awang Archipelago Fisheries Harbor (PPN) has the potential to become a center for fisheries-based economic growth and facilitate increased utilization of fisheries resources around the Teluk Awang area. The lack of information regarding economic fish species landed at the Teluk Awang Fishing Harbor has resulted in a lack of fisheries management efforts in the Teluk Awang area. This research aims to identify economic fish species landed in PPN Teluk Awang. Observations of fish samples were carried out at PPN Teluk Awang, Pujut District, Central Lombok Regency, in October 2022. The method used in conducting this research was survey and identification methods. Based on the research results, it was found that there were 41 economic fish species belonging to 20 families. The fish landed by fishermen can be grouped into large pelagic fish, small pelagic fish, coral fish and demersal fish. The most dominant fish species are found from the Scombridae (large pelagic) and Serranidae (demersal fish) families with the same number of species, namely 6 species.

Keywords: Awang Bay, Economical Fish, Nusantara Fisheries Port

ABSTRAK

Pelabuhan perikanan merupakan simpul penting dalam rantai pasokan perikanan, dimana ikan hasil tangkapan didaratkan dan didistribusikan. Pelabuhan Perikanan Nusantara (PPN) Teluk Awang berpotensi sebagai pusat pertumbuhan ekonomi berbasis usaha perikanan serta memfasilitasi peningkatan pemanfaatan sumberdaya perikanan di sekitar wilayah Teluk Awang. Minimnya informasi terkait spesies ikan ekonomis yang didaratkan di Pelabuhan Perikanan Teluk Awang menyebabkan kurangnya upaya pengelolaan perikanan di kawasan Teluk Awang. Penelitian ini bertujuan untuk mengidentifikasi spesies ikan-ikan ekonomis yang didaratkan di PPN Teluk Awang. Pengamatan sampel ikan dilakukan di PPN Teluk Awang, Kecamatan Pujut Kabupaten Lombok Tengah, pada bulan Oktober 2022. Metode yang

digunakan dalam melakukan penelitian ini yaitu dengan metode survei dan identifikasi. Berdasarkan hasil penelitian didapatkan 41 spesies ikan ekonomis yang tergolong ke dalam 20 famili. Ikan-ikan yang didaratkan oleh nelayan dapat dikelompokkan ke dalam ikan pelagis besar, pelagis kecil, ikan karang dan ikan demersal. Spesies ikan yang paling dominan ditemukan dari famili Scombridae (pelagis besar) dan Serranidae (ikan demersal) dengan jumlah spesies yang sama yaitu 6 spesies.

Kata Kunci: Ikan Ekonomis, Pelabuhan Perikanan Nusantara, Teluk Awang

INTRODUCTION

The waters in West Nusa Tenggara Province (NTB) are a very potential area for the development of the capture fisheries sector because these waters are a fish migration area. West Nusa Tenggara Province (NTB) has quite high coastal and marine resource potential. The area of its sea waters is around 29,159.04 km2, the length of the coast is around 2,333 km and the coral waters are around 3,601 km2 (Sari et al., 2020). The Teluk Awang Archipelago Fisheries Port (PPN) is located in Mertak Village, Central Lombok Regency, which has the potential to develop as a center for economic growth based on fisheries businesses. This is because of its good geographical location, which is protected from waves coming from the Indian Ocean. The existence of the Teluk Awang Fisheries Port is important in facilitating increased utilization of fishery resources around the Teluk Awang area. So, the surrounding community does not only depend on lobster fisheries. The SDI landed at Teluk Awang Fishing Port during 2018-2020 was 3,559,483 kg, still dominated by pelagic and demersal fish, such as Skipjack, Layang, Tongkol, Lemadan, Tuna, Baby Tuna, Marlin and other fish (Amir *et al.,* 2021).

Fish landings at Teluk Awang Fishing Port since 2017-2019 have experienced a fairly high increase from a total of 552,218 - 1,985,123 tons. If the working days in 2019 are 360 days, then the average fish landings in Teluk Awang reached 164,911 tons/month or an increase of 262% when compared to 2017 - 2018 of 552,218 - 758,470 tons. Meanwhile, the frequency of fish landings from 2017 continued to increase until 2019. Fish landed at the Teluk Awang Fishing Port are used as raw materials for processing for consumption by the Teluk Awang community, and sent out of the region as raw materials for the fish processing industry (Marwan, 2021).

Fisheries are an important economic sector that provides animal protein through the utilization of fish, the most common natural resource in waters, as cold-blooded aquatic vertebrates that breathe with gills (Fitrah *et al.,* 2016; Rabuisa *et al.,* 2018). Marine fish as the organisms most consumed by humans, are very important in the world of fisheries (Ridho & Patriono, 2017). Maintaining the sustainability of fish is important, as an initial step, of course, identification activities are needed for these organisms. The number of fish species in Teluk Awang still has minimal information, while fishing activities are always carried out throughout the year. If the number of fish catches is not controlled, it will cause a decrease in the number of individuals or species of fish, so basic efforts are needed to monitor the number of fish species in the area (Ghazali *et al.,* 2020). Based on this, it is necessary to know the species of fish caught by fishermen landed at the Teluk Awang Nusantara Fisheries Port (PPN), Mertak Village, Pujut District, Central Lombok Regency. This study aims to identify the species of economic fish landed at the Teluk Awang Nusantara Fisheries Port (PPN).

RESEARCH METHODS

Time and Place

This research began in October 2022 at the Nusantara Fisheries Port (PPN) Teluk Awang, Mertak Village, Pujut District, Central Lombok Regency. Data collection of fish species caught by fishermen was carried out in the morning between 06.00 - 10.00 WITA when fishermen had just landed from fishing at sea.

Tools and Materials

This study uses several tools and materials, where the tools are stationery, cameras (cell phones), millimeter blocks, identification books of Market Fishes of Indonesia and Marine Fishes of Southeast Asia. While the materials used are fish caught by fishermen around Teluk Awang.

Research Procedures

The method used in conducting this research is a direct survey method with a purposive sampling technique of fish landed at PPN Teluk Awang (Samdani *et al.,* 2021). Each fish species was documented and further identified by referring to the books Market Fishes of Indonesia (White *et al.,* 2013) and Marine Fishes of Southeast Asia (Allen *et al.,* 1999). Each fish species was observed and its morphological characteristics were recorded.

Data Analysis

Data analysis in this study is descriptive qualitative to determine the species of economic fish landed at the Teluk Awang Archipelago Fisheries Port (Ariefandi & Isdianto, 2023). Data presentation is carried out with data presented in the form of a table containing the identification results including family, species name, local name and number of species.

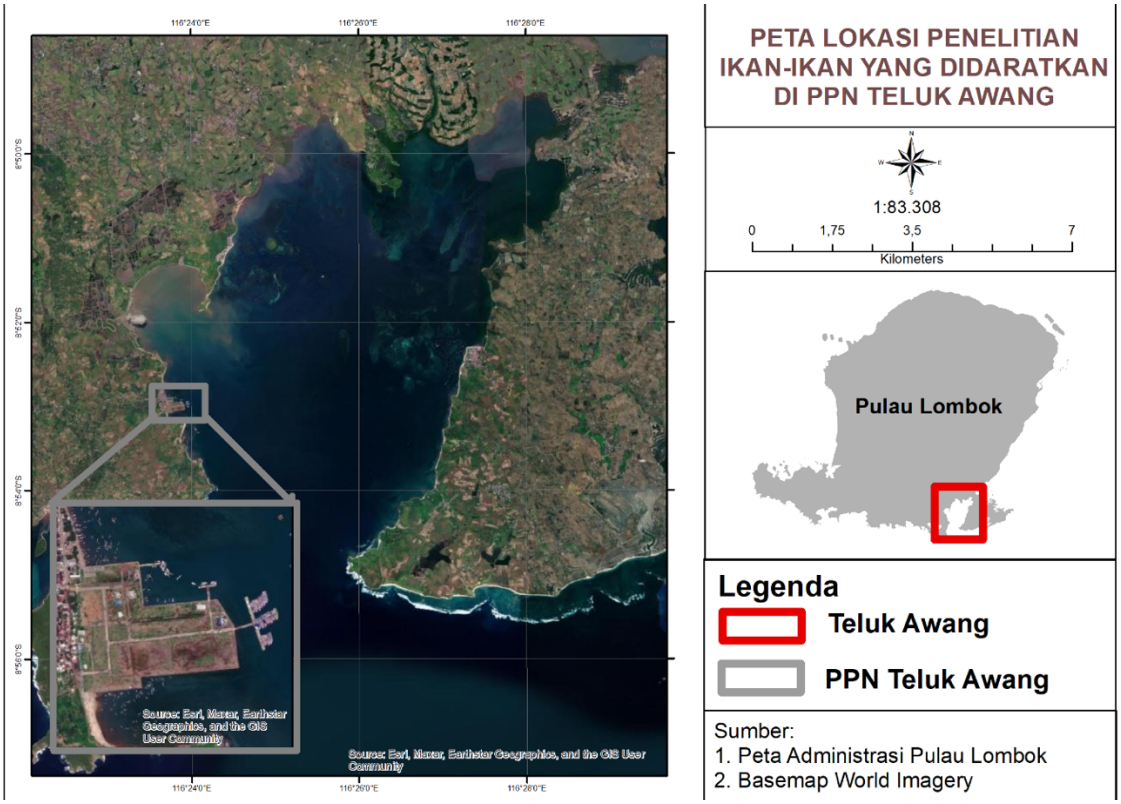


Figure 1. Research Map

RESULT

The results of the study showed that the catch of fishermen landed at the Nusantara Fisheries Port (PPN) Teluk Awang, Central Lombok Regency was divided into 20 families with a total of 41 species. The fish landed by fishermen can be grouped into large pelagic fish, small pelagic fish, reef fish, and demersal fish. According to the explanation from the staff of the Teluk Awang Fisheries Port Administration Office, it was stated that most of the fish species landed were not protected fish or their legality was not regulated by law so that they could be caught. In addition, it was also explained that the Office had given instructions to ship crews and fishermen who went to sea not to catch fish that were protected or regulated by law. The species of fish caught are presented in table form and can be seen in table 1.

Table 1. Species of Fish Caught by Fishermen Landed at the Nusantara Fisheries Port (PPN) Teluk Awang, Central Lombok Regency

No	Family	Species	Local Name
1	*Balistidae*	*Balistapus undulatus*	Pogot
		Balistoides viridescens	Pogot
		Sufflamen fraenatum	Pogot
2	*Belonidae*	*Tylosurus crocodilus*	Kacangan
3	*Carangidae*	*Carangoides hedlandensis*	Semar
		Caranx sexfasciatus	Selar
		Seriola rivoliana	Selar
		Ulua mentalis	Sulir
4	*Clupeidae*	*Dussumieria elopsoides*	Japuh Fish
		Herklotsichthys quadrimaculatus	Haring Fish
5	*Coryphaenidae*	*Coryphaena hippurus*	Lemadah, Lemadang
6	*Echeneidae*	*Remora sp.*	Sepatu Fish
7	*Engraulidae*	*Stolephorus indicus*	Teri
8	*Labridae*	*Cheilinus chlorourus*	Bayeman
		Choerodon zamboangae	Bayeman
		Halichoeres hartzfeldii	Pelo
9	*Latidae*	*Doederleinia berycoides*	Ambangan
10	*Lethrinidae*	*Gymnocranius microdon*	Tambak Pasir
		Lethrinus sp.	Lencam
		Lethrinus conchyliatus	Lencam
11	*Lobotidae*	*Lobotes surinamensis*	Kakap Bate
12	*Lutjanidae*	*Lutjanus gibbus*	Kakap
		Lutjanus kasmira	Kakap
13	*Mullidae*	*Parupeneus multifasciatus*	Ikan Jenggotan
14	*Nemipteridae*	*Scolopsis xenochroa*	Jangki
15	*Scaridae*	*Scarus ghobban*	Lembain
16	*Scombridae*	*Alepes vari*	Selar Papan
		Auxis rochei	Tongkol
		Euthynnus affinis	Tongkol
		Katsuwonus pelamis	Cakalang
		Thunnus albacares	Tuna Sirip Kuning

		Thunnus obesus	Tuna Mata Besar
17	*Serranidae*	*Anyperodon leucogrammicus*	Kerapu
		Cephalopholis argus	Kerapu
		Cephalopholis boenak	Kerapu
		Epinephelus maculatus	Kerapu tutul
		Epinephelus malabaricus	Kerapu
		Epinephelus ongus	Kerapu
18	*Siganidae*	*Siganus guttatus*	Baronang
19	*Sphyraenidae*	*Sphyraena jello*	Baracuda
20	*Xiphiidae*	*Xiphias gladius*	Ikan Pedang

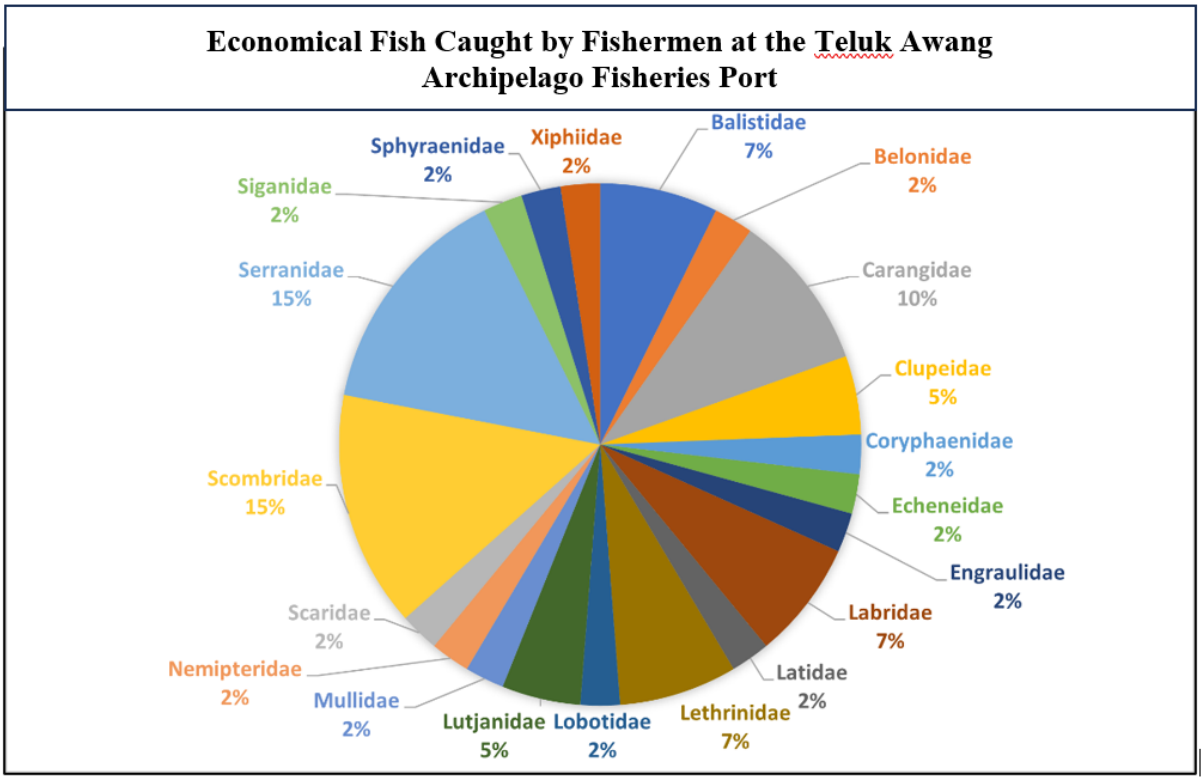
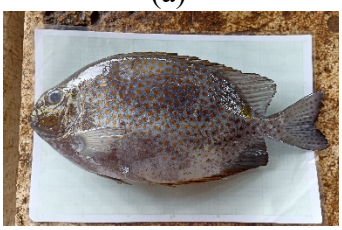


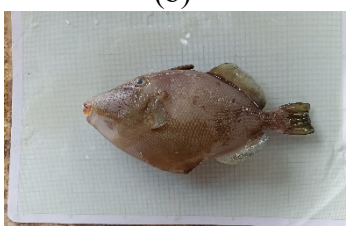
Figure 2. Number of Economic Fish Species in Teluk Awang PPN

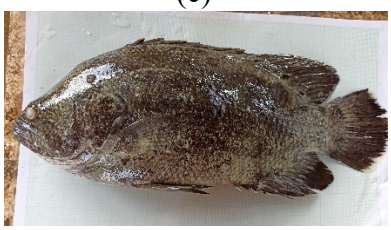

(a)


(b)


(c)







(d) (e) (f)

Figure 3. (a) Sulir (*Ulua mentalis*) (b) Yellowfin Tuna (*Thunnus albacaresi*) (c) Lemadang (*Coryphaena hippurus*) (d) Baronang (*Siganus guttatus*) (e) Pogot (*Sufflamen fraenatum*) (f) Sea Bass (*Lobotes surinamensis*)

DISCUSSION

Another dominant species is the tuna (*Euthynnus affinis*) which is included in the pelagic fish group. This species belongs to the Scombridae family which is widely produced in Indonesian waters. Tuna has a protein nutritional content of 24.7% with more red meat than other Scombridae fish species. The characteristics of tuna are a medium-sized body, a torpedo-like body shape, and a narrow gap separating the two dorsal fins. In addition, tuna live in groups, are meat eaters, and are fast swimming fish (Isti'anah & Maulana, 2020). Tuna has a terminal mouth shape and a forked tail shape, the upper head to the beginning of the base of the dorsal fin is slightly convex (Lubis *et al.,* 2021). The Scombridae family includes large pelagic fish such as tuna, skipjack, and tuna.

Based on the existing diagram, it can be seen that in addition to being dominated by the Scromridae family of the tuna species, Teluk Awang is also dominated by reef fish in the Serranidae family of the grouper species. This is because grouper is included in the fish that are cultivated in Teluk Awang, and the potential of its sea waters is suitable for grouper commodities (Merpaung *et al.,* 2018). Grouper fish like calm waters and are free from storms which are in accordance with the characteristics of the waters in Teluk Awang (Yulianto *et al.,* 2015). Grouper fish is one of the fish commodities that has important economic value for marine cultivation in the Indonesian region because it has a large market in the Southeast Asian region (Mulyani *et al.,* 2021).

The morphology of grouper fish in general is easily recognizable, namely having a flat body shape, with upper and lower jaws equipped with sharp and strong teeth, and having a wide and upward slanting mouth. The lower lip protrudes slightly beyond the upper lip, a single and elongated dorsal fin where the part with hard rays is more or less the same as the part with soft rays. The position of the pelvic fins is below the pectoral fins and the body is covered with small fins with stenoid sides (Tadjuddah, 2021). Physical appearance such as shape, pattern, and color are key in identifying the morphology of grouper fish. However, even so, distinguishing between grouper species based on morphological characteristics alone is very difficult. Some people even use the same name for two or three different grouper species. Grouper fish is one of the most sought-after fishery commodity species, with high demand in the market (Kusuma *et al.,* 2021).

Some of the fishing gear used by fishermen in PPN Teluk Awang are thread nets, string nets, circle nets, gill nets, longlines, traps, fishing rods (bottom and surface), handlines, and trolling rods. Then for the dominant ship species used are katinting boats and outboard motor boats, where the average size of the ship is still below 5 GT (Gross Tonnage). Katinting boats are traditional boats that are still widely found in coastal areas, where the engine used to drive these boats is a katinting engine. Katinting boats are used as transportation when fishing because the ability of this boat is considered capable of reaching the fishing area targeted by fishermen (Wolok *et al.,* 2016; Harianto *et al.,* 2022)

Economical fish caught by fishermen in PPN Teluk Awang are dominated by fish species from the Scombridae family (15%) (Figure 2). This is because the majority of fishing gear used by fishermen in PPN Teluk Awang is trolling fishing gear. The trolling fishing gear is a fishing gear that is very suitable for the behavior of large pelagic fish, especially tuna, skipjack, and skipjack, so it is effective for catching these fish species (Rahmat, 2015). In its operation, this tool is supported by a motorboat equipped with a pair of wooden or bamboo

poles (outriggers/booms) attached to both sides of the ship's hull. Then on the outriggers, and the back or stern of the ship, several trolling fishing rods are tied which are then pulled behind the ship. At the end of the branch rope tie on each main rope, a surfboard is equipped to keep the fishing rod floating (not floating) in the waters (Baskoro & Yusfiandayani, 2017).

CONCLUSION

Based on the results of research conducted at the Teluk Awang Archipelago Fisheries Port (PPN) located in Mertak Village, Central Lombok Regency, 41 species of economic fish were obtained which were classified into 20 families. The fish landed by fishermen can be grouped into large pelagic fish, small pelagic fish, reef fish and demersal fish. The most dominant fish species found were from the *Scombridae* family (large pelagic) and *Serranidae* (demersal fish) with the same number of species, namely 6 species.

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