

Inventory of Traditional Fishing Gear in Floodplain at Pedamaran, Ogan Komering Ilir, South Sumatera

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Abstract. Capture fisheries in Ogan Komering Ilir Regency, especially in Pedamaran sub-district, are mostly sourced from the floodplain area. Therefore, fishermen use various types of fishing gear in their fishing activities. Information on various types of fishing gear used by fishermen in Pedamaran sub-district is still minimal. This research was conducted in May 2022. This research aimed to inventory of the types of fishing gear were operated by fishermen in floodplain, Pedamaran District. The method used in this research is a survey method and interviews with fishermen who land fish at the Land Fisheries Fish Auction Place, Pedamaran sub-district. Based on the results of the study, the fishing gear used by fishermen is divided into four groups, namely the pot trap group (sengirai, bubu, kemilar, pukat, roket), barrier trap (kilung, waring), gill net (net) and hook line (pancing, tajur).

1. Introduction

South Sumatra has an area of 2.5 million hectares of public waters and 43% is *Lebak Lebung*. The term *lebak lebung* is only known in South Sumatra to refer to waters that are inundated seasonally or floodplain [1]. Floodplain is one type of public waters that is inundated when river water overflows and has very important freshwater fishery resource potential [2]. OKI Regency has 19,000 km² with a stretch of swampy swamp reaching 146,279 hectares or around 58.96% of the area of Lebak in the province of South Sumatra. OKI Regency has 328 auction objects spread across 15 sub-districts [3].

Fishing activities in Pedamaran sub-district generally occur in the *Lebak Lebung* auction area. *Lebak lebung* auction means auctioning waters to individuals or community groups at a certain price and the winner has the right to manage and utilize the fish resources contained in lebak lebung within a predetermined time (1 year) [4]. The high cost of buying auction documents and the high cost of catching fish encourage fishermen to catch as many fish as possible with the aim of recovering the entire cost that fishermen spend on renting waters [5]. So that fishermen use various types of fishing gear to get fish.

The inland fisheries fish auction site, located in the Pedamaran sub-district, OKI district, is the third auction place in South Sumatra. Pedamaran sub-district was chosen as the location for the fish auction because Pedamaran sub-district is one of the largest river fish producers in OKI district [6]. Fish in the inland fisheries fish auction come from the catch of Lebak Lebung waters in Pedamaran sub-district. Information about the diversity of fishing gear in Pedamaran sub-district is still minimal. The purpose of this study was to determine the various types of fishing gear used by fishermen in Pedamaran District.

2. Methods






This research was conducted in May-June 2022. using survey and interview methods. The research location is a land fishery fish auction place, Pedamaran district, Ogan Komering Ilir district. Research data in the form of primary data, namely the type of fishing gear used by fishermen in the

waters of Lebak Lebung, Pedamaran sub-district, how to operate the equipment and the types of fish caught. The data obtained were analyzed using descriptive analysis.

3. Results and Discussion

Based on the results of interviews and surveys to fishermen who landed fish in TPI PD, data was obtained on several types of fishing gear used in the waters of Lebak Lebung, Pedamaran District, Muara Enim Regency. The types of fishing gear are as follows:

Table 1. Description of Traditional Fishing Gear were operated by fisherman in floodplain at Pedamaran

	Fishing Gear	Description
A.	Pot Trap	
1	Sengirai	Sengirai is a traditional fishing gear for people who live around the Lebak Lebung area. Has several variations in size 70 cm x 40 cm. The frame is made of wood in the form of a cube or block, the sides are meshed with 1-2 inch mesh. In the middle it is lined with a net so that incoming fish are trapped and on one side there is a hole with a size of half the length of the side. The method of operation of this tool is by immersing it in the water with a wooden support attached to the side of the clover. The mounted Sengirai are observed every 2 hours to see the catch.
		
2.	Bubu	Bubu is a traditional fishing gear made of bamboo strung together elongated. There are two types of traps, namely fish traps and eel traps. Bubu eel no only made of from webbing bamboo will but can made use rope which can wovnen community around call it with rope PT. The place of operation is also different where fish traps are operated in a swamp/swamp area which has a lot of puddles while the eel traps are operated in place Habibat eel that is in area mud.
		
3	kemilar	Kemilar is the same as Sengirai only the difference in the material used on tools where the shingle is made of a wooden frame and surrounded by rope mesh, while the whole shingle is made of wire woven and oval shaped.
		
4 .	Pukat	The trawl is rectangular in shape, shaped like a net, its length is much longer than its height, the upper net rope is equipped with a buoy, the bottom is equipped with a ballast. How to operate by installing transverse or in the direction of the current. With the buoyancy of the buoy and the weight of the ballast, the trawl will stretch out in the water. Fish that swim either in the direction of or against the current when they hit the trawl will get entangled or tangled.
		
5.	Roket	Rocket is one of the fishing gear used by fishermen to catch fish in the region waters horseradish. Rocket have a bamboo and given the comfort of a bar that is placed on a bamboo stick. This operate by spreading the existing bamboo bar and then leaving it for a while a number of hours ago then just taken back .
		

B. Barrier Trap

6. Kilung



Kilung is a fishing gear that is installed in the waters of Lebak. Kilung is made of waring that has been shaped and sewn in such a way, the pole uses bamboo which is plugged into the water. The method of catching is similar to that of a pond fishing gear, namely by blocking the fish in the middle.

7. Waring



Waring is a fishing gear used during the harvest season fish exactly at the time dry season. Waring is usually used for catching in area bubbles small until river. Operation this fishing gear need some people because the size of the tool is quite large and heavy. As for the fish that usually caught, namely all types of fish in the waters ranging from small to the largest size, this is because this tool has a large gap very small

C. Gill Net

8. Net



The nets are made of nylon thread or multi-filament yarn with a size between 2-3 cm with the number of meshes getting lower and more, and when developed it forms a large cone whose side length can reach 4-5 meters. At the end of the cone of the net, a rope that is 4-5 meters long is tied, while at the circumference of the lower leg it is equipped with a weight in the form of a chain made of iron or tin. Its operation is by throwing it into the water which is thought to be a gathering place for the fish and by using certain techniques, the net can be opened wide so that the fish are trapped in the fishing gear.

D. Hook and Line

9. Pancing



Fishing rods are fishing tools that are commonly used by people in Indonesia. fishing rod there is three part main, that is stick fishing rod, thread/ strings fishing rod and eye hook. Method usage hook which has connected with stick fishing rods are given bait in the form of worms, crickets, small fish, shrimp or a mixture. Hook have various size, most small size on number 20 and biggest number 1. The use of the hook depends on the target fish which are desired. For medium-sized fish like fish wader, smell, lais, statue and caper could use size eye hook numbers 6-12. Larger fish can use size numbers 1-5 while small fish can use size number 12-20.

10. Tajur



Tajur is tool kind of fishing rod difference only located on method operation tool where Public around call it tajur because on the operation of the crown is not like a fishing rod where the operation of this crown is left silent for a few hours or it could be just a few hours just taken again. Target of tajur this is usually snakehead fish, Putak and Betok

Table 1 shows that the traditional fishing gear were operated by fisherman in floodplain at Pedamaran divided into four groups, they are pot trap (sengirai, bubu, kemilar, pukat, roket), barrier trap (kilung, waring), gill net (net) and hook line (pancing, tajur). Generally, fishing gear used in flooded swamp public waters is passive or permanent fishing gear [7]. Passive fishing gear is widely used in the Lebak Lebung area because of its relatively narrow area, easy manufacture, construction and installation, shallow waters and fish do not move too far [8]. Sengirai, bubu, kemilar and pukat are a group of pot traps. Bubu includes passive fishing gear and is classified as trap fishing gear [9]. Bubu fishing gear is also used by fishermen in various regions in Indonesia, such as eel fishermen in the Cikaso River and in the Cibuni River Estuary [9; 10], fishermen in swamp, Banjar Regency [11], fishermen in Bintan Regency [12], fishermen in Batang River, Jambi Province [13], fishermen in Alai River, Jambi Province [14] fishermen in Rawa Pening [15].

Bubu is widely used by fishermen because it is included in the category of very environmentally friendly, safe for fishermen, does not damage the habitat around the catch, is profitable and does not conflict with existing regulations [9]. In addition, catches using traps are generally still alive so that their freshness is guaranteed [14] and has advantages in managing fishery resources such as catches that can be released if the size is not suitable for catching [16].

The use of fishing gear in public waters varies, this is influenced by hydrological and seasonal factors [17]. For example, waring is used during the harvest season, while sengirai, kemilar, rocket and kilung can be used throughout the year. Fishing rods and fishing rods can also be used throughout the year because they are not affected by the season. The use of fishing rods has advantages, [18] explaining that fishing rods as fishing gear are very safe for the habitat and do not endanger the protected fish because they have good selectivity.

Barrier group traps obtain the most diverse catches, due to their nature which prevents fish migration from land covered by water when the flood subsides and returns to the main river [19]. However, traps are not selective for certain species and will only be friendly if they have a large enough mesh size.

The net is an active fishing tool used by fishermen. The nets are only used when conditions in floodplain high tides due to high rainfall. According to [20] the success of the operation of the net depends on the size of the mesh that serves as a catchment for fish.

4. Conclusions

Based on the research results, fishermen in Pedamaran sub-district use fishing gear based on time and there are fishing gear made specifically to catch certain fish and to catch all types of fish. The fishing gear used by fishermen in Pedamaran is grouped into four groups, namely pot traps (sengirai, bubu, kemilar, pukat, roket), barrier traps (kilung, waring), gill net (jala) and hook line (pancing, tajur).

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