

The Fishing Gears Traditional of Malik Village, South Bangka Regency

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Abstract—Malik village is not a coastal area so fisheries activities are conducted in public waters by using traditional fishing technology. Knowledge of technology catching fish in Malik village regarding traditional fishing gears should be documented to preserve the knowledge as a cultural heritage. Research was conducted from July to November 2015 in Malik village. Method used in this research was purposive sampling (determination of informants), interviews, observation, and literature study. Result showed that the Malik village has 14 types of traditional fishing gears for public waters, namely the banjur, bubu, injep, jaring, pancing, pengilar, rawai, serampang, serumbong, tanggok, teba', tekalak, tirok, and tugu. All fishing gears have their own construction and operating methods. Fishing techniques categorized as fishing by using traps, fishing by using a tool to hurt, and fishing by using a fishing rod. Tekalak is the only fishing gear that no longer used in Malik village. Difficulty of searching fishing area to operate tekalak might be the main reason for that. Based on its environmental friendliness, all traditional fishing gear in Malik village are classified as highly environmentally friendly fishing gears.

Keywords: *Fisheerie, Gears, Traditional, Malik*

I. INTRODUCTION

Traditional fishing gear is a device which could be defined as the fishing gear passed down from predecessors to present generation. These gears have their significance because they inherit the traditional knowledge of the community and the livelihood practices they play enhancing understanding in their cultural heritage. There are very few works done on traditional fishing gears in Bangka.

Bangka Belitung is the archipelago that has the potential in the capture fisheries sector. Capture fisheries are economic activities in the field of catching or collecting animals or aquatic plants that live freely in the sea or public waters [1]. Public waters fisheries are fishing activities carried out in fresh waters, such as lakes, reservoirs or rivers [2]. The fishing activity itself is very closely related to the use of types of fishing gears.

Malik Village is the villages which is administratively located in Payung District, South Bangka Regency. Based on a report from the Government of the Village of Malik in 2013, the land area of Malik Village was 59,563 km², all in the form of non-coastal areas, so that fishing activities were carried out in public waters, namely rivers and pit ex tin manning. Malik people still use fishing technology based on traditional fishing methods [3]. This is indicated by the existence of various types of traditional fishing gears that are used for generations, such as tirok, serampang, injep, pengilar, serumbong, and banjur. The aims to research is reveal the types of traditional fishing gears in the public waters of Malik Village, Payung District, South Bangka Regency.

II. METHODOLOGY

The methods adopted for writing this paper are that used in depth interview with purposive sampling, observation and literature study. Collection of materials, field survey, case study, interviews and questionnaires are some of the techniques involved in writing this paper. The research was conducted in Malik Village, Payung District, South Bangka Regency. Evaluation and analysis may also be implied as convenient tool of this study [4]. Schedules and questionnaires will be made to collect data from the informants. The information collected will be checked and cross checked from various sources. Methods adopted for investigation of the proposed study are: I. Interview method. II. Observation study method. The relevant data are collected from primary and secondary sources. The interview method is done on the following basis. The primary data are collected from the field survey. The secondary data are collected from books, journals, research papers, online sources, various census reports and government documents. [5]

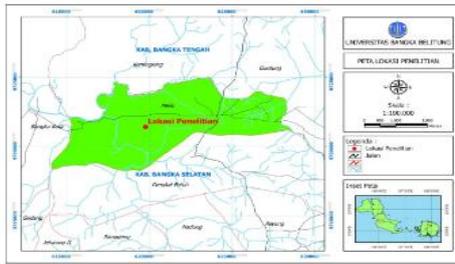


Fig 1. Location of Malik Village, Payung District, South Bangka Regency

III. RESULT AND DISCUSSION

Catching Techniques of Traditional Fishing gears in Malik Village. The many types of biota with all the traits that live in waters in different environments, lead to fishing methods including the use of different fishing gear. Malik Village has 14 types of traditional fishing gear that have been used for a long time in a number of ways. The fishing gear has different characteristics, both in terms of construction and method of operation [6].

Construction and Operating Methods of Each Fishing Gear

1. Banjar

Construction; Banjar is a traditional fishing gear consisting of banjar rope and fishing line. Fishing rods are hooks made of metal or iron. Fishing rods that are commonly used are fishing hook number 12, while the length of the fishing line is generally 200 mm or adjusted according to desire. A distinctive feature of banjar is wood and a short string of string.

Operating Method; Banjar operation uses aids in the form of wood or bamboo by means of being tied with a rope, then plugged in to the edge of the river. Banjar uses bait in its operation, where the bait is attached to the fishing line. Banjar bait generally uses worms.

2. Bubu

Construction; Bubu is a traditional fishing tool in the form of elliptical traps like pipes. Generally a length of 1000 mm with a diameter of 200 mm. Bubu consists of bubu and bubu bodies. The basic ingredients for making bubu are mang bark, rarak root, remod bamboo, dikam lilit (*Dicranopteris linearis*), and rattan pledes as braids. The tool for manufacturing is enough to use taper iron such as screwdrivers and blade.

The bubu child is made from rarak root and the bamboo remod woven in such a way as to use a conical wrap to form like a cone. While the body of the bubu is made from rarak root and the bark of the mang bar which is formed rounded elongated, then woven using rattan pledes. The

child and the body of the bubu which have been braided, are then assembled and woven using rattan pledes. In this case, the child of Bubu was looped with a body of bubu that had been woven together. At the end of the open pit, the cover is made of remod bamboo braids and is soaked so that the fish cannot get out.

Operating Method; The operation of bubu uses bait and is carried out by placing the bubu into the bottom of the water, using rope aids. The rope is tied to one end of the bubu before being put in water. Furthermore, the rope is also tied to the nearest tree, where the size of the rope is adjusted to the needs

3. Injep

Construction; Injep is a type of traditional fishing gear in the form of elliptical traps such as jars, which consists of 2 parts, namely the injep small and the injep body. Generally a length of 1000 mm with a diameter of 200 mm. The basic ingredients for making injep are: inas bamboo (a type of small bamboo), rarak root, recam lilit (*Dicranopteris linearis*), remod bamboo (a type of small bamboo, but devoted to making injep small), and rattan pledes. The tools for making the injep simply use machetes and blades.

The injep consists of 2 parts, namely the injep small and the injep body. Small injep made from rarak root and bamboo remod which is woven in such a way to use a conical wrap to form like a cone. While the injep body is made of inas bamboo which is woven using a recessed coil. The child and the body of the injep that have been formed, are then assembled so that they become the injep that is shaped like a jar with an irregularly shaped end. The end part is then tied using rattan pledes. Cutting the ingredients of the injep is done using a machete or a knife.

Operating Method; The operation of the injep is carried out on the tributary using a tool called saber by placing it in the saber. The operation does not use bait, because the injep has already used a saber, so it only waits for the fish to pass. The principle of this tool is to cover the river channel. Saber is shaped like a mat and made of bamboo inas that is woven with a tight twist. The amount of inas bamboo is adjusted to the needs, following the width of the river channel that will be closed using a saber.

The middle part in the lower position of the saber is perforated about the size of the small injep opening as a place to enter the fish. Acting like a barrier wall, forcing fish to enter through injep small because there is no other way to pass.

Saber uses wood as a buffer tool that is plugged into it. The wood is plugged in the front and rear sides of the saber alternately, which aims to keep the saber firm and not easily collapsed by the river current. Generally, the saber is

closed using surrounding water plants as trap, so that the fish are not too visible to the injep.

4. Nets

Construction Nets, local name "Jaring" is a traditional fishing tool made of basic material called the net itself and equipped with wood and nylon straps. The size of the mesh is generally 2 inches (50 mm), while the size of the net is 2 x 1.5 meters. Making nets is done by inserting a nylon rope into the net, where the right and left sides of the net are also tied with wood.

Operating Method; The operation of the net is placed in narrow waters by plugging it into the bottom of the water in a wide open position like a badminton net.

5. Fishing Pole

Construction; Fishing rods are traditional fishing tools consisting of fishing hooks and ropes. The fishing line is a hook and is made of lead weight or sinker. The fishing line that is commonly used is the number 8 fishing line, while the length of the fishing line is adjusted according to desire.

Operating Method; Fishing rods use wood or bamboo aids by means of being tied with fishing lines. Fishing rods use bait in operation, where the bait is attached to the fishing line. Fishing lures generally use earthworms. Its use is by holding a wood or bamboo whose upper part has been tied to a fishing line, where the fishing line and hook are inserted or thrown into the water.

6. Pengilar

Construction; Pengilar is the traditional fishing device in the form of a trap shaped like a cylinder consisting of 2 parts, namely the small pengilar and pengilar body. There are 2 types of pillars, namely resam pengilar (1100 mm high with 400 mm diameter) and wire pengilar (900 mm high with 400 mm diameter). The basic ingredients for making resam pengilar are pakis (fern) root, rarak root, ketakung (*Nepenthes* sp.) root, bamboo remod, elephant resam (*Dicranopteris curranii*), vein, and nylon rope. While the basic material for making wire pengilar is a special wire pengilar. Tool for making pengilar is enough to use a blade and wire cutting tools.

These two pengilar consist of 2 parts, namely the small pengilar and pengilar body. The recessed pillar boy is oval-shaped. Small pengilar are made from rarak root and remod bamboo which are woven using root of ketakung and fern root. While the body of the resilient pengilar is made from rarak root and resam bulin which is woven using fern roots. The small and the resilient pengilar body that has been braided, are then assembled and braided using fern roots to form a cylindrical shape. As for the wire pillar, the constituent material is only a special wire for the pillar

which is cut and shaped in such a way as to form like a cylinder with a trapezoid shaped puppets. Cutting of the pengilar constituent materials is done using a blade and wire cutting tools.

Operating Method; The resampengilar is operated on large rivers without the help of bait and uses saber in operation. On the contrary, the operation of wire winding is by using bait and without using saber. Sabers for recessed pengilar are made of wood. Wood for saber making can use any wood, as long as it is strong. While for saber weaving, the root of ketakung (*Nepenthes*) is used.

7. Rawai (Long line)

Construction; Rawai is a traditional fishing tool consisting of rope, banjur and small wood. The making is tied in sequence, starting from a rope with a length of 200 mm, small wood with a length of 200 mm and a diameter of 10-20 mm, then flooding with a length of 300 mm. The wood that is used can use any wood, for example wood, samek wood, and so on.

There are 2 types of rawai, namely basic longline and water level longline. On the surface length, the position of the rope until the wood is above the surface of the water and flooded in the water. While on the basic longline, all longline components are at the bottom of the waters.

Operating Method; The characteristics of longline are always operated in large quantities. Longline operation using aids in the form of long ropes and wood as a support. The length of the rope varies depending on needs. Generally the length of the rope is around 30-50 meters (30,000-50,000 mm).

Some longlines that have been prepared, are tied to ropes along 30-50 meters. The distance between longlines is 3 meters (3000 mm). When finished, at the end of the rope is tied to the wood that has been prepared, where the length of the wood must pass through the surface of the water.

8. Serampang

Construction Serampang is a traditional fishing tool such as a spear with 3 pointed iron tips or commonly called a spear-edged 3. It consists of 2 basic ingredients, namely iron and wood. The making is done by forging the three iron until it is tapered, then it is compressed to form like a fork. Furthermore, the finished iron was said to be combined with wood using iron glue.

Operating Method; The simple operation is done by simply walking in the water while sticking randomly or by throwing it from the boat or river bank to the intended target.

9. Serumbong

Construction; Serumbong is a traditional elliptical fishing gear made of bamboo. Generally made of large bamboo measuring 1 meter long (1000 mm). The center of the bamboo is perforated using taper or iron. The wood that is used must be strong, for example wood against. While the part of one end of the bamboo is left closed and the other end is left open as a way to enter the fish.

Operating Method; The operation of the porch does not use tools and is operated by placing it on the bottom of the water. Serumbong does not use bait, but aquatic animals like fish use it to take shelter.

10. Tanggok

Construction; Tanggok is a traditional fishing gear shaped like a rectangular bowl with a convex bottom with a length and width of 600 mm and 400 mm, respectively. The basic ingredients for making Tanggok are rattan and, rattan sap, (*Calamus manau*) manau stems, rattan pledes and veins. Rattan and used for mortar bodies, rattan sap as reinforcing bones, rattan pledes as braids, manau trunks as frames, and veins as reinforcement. The tool used is a straight knife and sharp iron like a screwdriver as a hole maker in the frame.

Making a mortar is done by interweaving the parts of rattan and, rattan sap, and manau stems in such a way using rattan pledes and reinforced with a vein until it is shaped like a rectangular bowl with a convex base. Stems manau functions as a frame of mortar which is then perforated so that the rattan can be woven with manau stems. Rattan cutting is done using a blade, while for hole punching the frame uses taper iron.

Operating Method; Operation of the tanggok is carried out by walking in the water while inserting the tanggok, then lifting it back in a short time so that the animal is trapped into it. Appointment must be done quickly so that animals can no longer escape

11. Teba '

Construction Teba 'is a traditional fishing gear made of tin stone, nets, buoys and nylon rope. It can be said, that teba 'is a large net, but uses a buoy at the top, and a tin stone at the bottom. The left and right sides of the section use wood as a support in the waters.

Operating Method

Free operation is the same as the operation of the net, namely by sticking the wood into the bottom of the water as a support cane so that it is in a standing position. It's just that, at the end, the buoy is added so that it can be seen on the surface. The buoy also functions so that the top cane is not drowned because of its heavy weight and large size.

12. Tekalak

Construction; Tekalak is a traditional cone-shaped fishing gear that acts as a trap. The basic ingredients for making tekalak are rattan and, kiring root as a fabricator, and thorn manau (*Calamus manau*). The tools used are machetes and blade. Tekalak generally has a height of about 700 mm with a diameter of the Tekalak mouth is 300 mm.

The making of tekalak is done by forming the parts of the rattan and in such a way using the kiring root to form like a cone. Furthermore, the inner part of tekalak is tied to the thorns of manau using kiring root. The cutting of the constituent materials is done with machetes and blades.

Operating Method; The operation of tekalak is carried out on swamps or small river grooves by using wooden aids. Tekalak is positioned to lie down like a funnel, then on both sides of the left side it is plugged in one log each. The installation of tekalak is a position that must follow the flow (from upstream to downstream), because it is intended for all types of fish that are carried by the current. The installation must be on a swift river channel and on the side is inserted with surrounding aquatic plants so that the fish do not have other roads to pass unless they have to pass through tekalak.

13. Tirok

Construction; Tirok is a traditional fishing tool like a spear with a pointed iron tip. Consists of 2 basic ingredients, namely iron and wood. Iron for the manufacture of tirok has a length of about 200 mm. In its manufacture, iron was forged until it narrowed to taper. But on the one end of the tip a little left for the neck tirok as a link between wood and iron. On the iron neck, it is thinly forged, then rolled and attached to wood using iron glue.

Operating Method; The operation of tirok is done by walking in the water while repeatedly plugging the water into the bottom of the water. If you feel that a fish is pierced or stuck, the tirok is immediately lifted and the fish is moved to the container that has been provided by removing it from the iron.

14. Tugu

Construction; Tugu is a traditional fishing gear made of large aren cloth and is divided into 2 parts, namely the body tugu and the small tugu. The material for making the tugu is aren cloth and nylon rope, while the tools used are scissors and special needles from iron to sew aren cloth.

The body of the tugu was originally rectangular, while the small tugu was a triangular shaped tugu. Both are then sewn with nylon straps using a special needle from iron. Furthermore, the tip of the body of the tugu is tied using a rope to produce a cone shape.

Operating Method; The operation of the tugu uses a wooden support device on the right and left sides and iron hooks are rounded on all sides of the mouth opening of tugu which is the entrance of the animal. Installation of the upper tugu must be right on the surface of the water, so the wood for the buffer must be higher than the opening of the tugu. Tugu is installed following the current from upstream to downstream.

IV. CONCLUSION

Malik village, payung subdistrict, south bangka regency, has 14 types of traditional fishing equipment, namely bubu, injep, jaring (net), pengilar, serumbong, tanggok, teba ', tekalak, tugu, serampang, tirok, banjur, fishing pole, and longline. All traditional fishing tools in malik village are very environmentally friendly fishing gear, in which all fishing gear has been patterned in such a way as to capture without damaging the environment.

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