Diversifying risk exposure to reduce impacts of typhoons through squid pot fishing, Philippines

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Summary

Squid pot locally known as “bubo pangnokos” is an enticing device in the form of regular receptacle mainly to catch squid in coastal waters. The shape of the gear is semi-cylindrical and is generally made of polyethylene netting mounted on a bamboo frame. It is provided with a non-return valve, which allows easy entrance but difficult exit.

The device is baited with squid roe mounted on a young coconut leaves, place inside the pot. It is hung on a bamboo buoy and anchored on depths of 8 to 15 fathoms in such a way that it lies midway of the water depth.

Description

1. Implementation of the technology

Fishing ground: the ideal fishing ground is an area with dense concentration of sea grass / seaweeds beds and near coral reef at depths of 8 to 15 fathoms.

The presence of squid eggs in the area is the best practical indication that the area is suitable for the gear. Observation has shown that catch regardless of the month is greater during days just after the first quarter phase of the moon going to full moon.

1.1 Material requirements for the construction of three semi-cylindrical type of squid pots

- Polyethylene (PE) Net, green, 400/12 x7K, 100 MD: 3.7 m;
- Monofilaments nylon line # 30 lbs: 200 g;
- Common nails # 1” & 1.5”(assorted size): quarter kg;
- Whole length bamboo: 4 pcs 100/pc;
- Poly rope #14 (7 mm): 45 m;
- Poly rope #12 (6 mm): 32 m;
- Knife/NT Cutter: 1 unit;
- Knitting needle (6” long): 1 unit;
- Steel tape/meter stick: 1 unit; and
- Crosscut saw, bolo: 1 unit.

1.2 Construction method: the design of squid pot varies per locality but the emphasis of this method is on the construction of semi-cylindrical type of squid pot.

1.2.1 Step 1

Prepare and cut the following bamboo measurements to serve as frames (I unit)

- 8 pcs 46” long x 2” wide;
- 4 pcs 32” long x 2” wide;
- 4 pcs 34” long x 2” wide;
- 4 pcs 70” long x 1,5” wide; and
- 32 pcs 11” long x 0.5” wide.

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1.2.2 Step 2

Assemble the rectangular base by nailing and tying with mono-nylon line# 30.

1.2.3 Step 3

Assemble the body frame.

1.2.4 Step 4

Cut the P.E. netting 400/12 x 7K x 72 meshes (3.7 m long) x 26 meshes down for the main body covering and two pieces 18 meshes x 18 meshes as side cover. Then attach by lacing the main body covering starting from the edge of the mouth orentrance all around the pot using mono-nylon line #30. Cut the net covering theentrance part. Attach by lacing the side cover.

Figure 1. Hands-on squid pot construction

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1.3 Preparation for operation (pre-setting)

- Make an opening / slit on one side of the body, 7 meshes a few inches from the base for easier bailing of catch.
- Insert a young coconut fruit stalk through the slit and tie it vertically at the centre of the pot, then put squid egg. Then close the slit by lacing with mono-nylon line#30.
- Tie a 12 feet poly rope #12 to the pot to provide balance when hung.

1.4 Hauling operation

Hauling of squid pot should be done once a day by simply pulling the hanging line until the squid pot emerged and hauled on board with the aid of a hook attached to a bamboo pole or a hook tied with rope. The operation is done with the help of a diver. The catch is then bailed out. The squid pot should be thoroughly washed to remove debris before dropping it back.

1.5 Care and maintenance

Choosing the best materials and design of the gear is not enough to make it effective and efficient. Proper care and maintenance should also be undertaken to retain its efficiency and top prolong its life span. A common damage in squid pot is the fouling of frames and netting. Rotten frames should be replaced and torn nettings bemended immediately. Brushing with a broom daily prevents the attachment of barnacles to the units and maintains their efficiency since squid s love green colour.

2. Results and findings

Squid pot performance reported a harvest ranging from 2.5 kg to 45 kg per hauling that easily sells at PHP 150.00 per kg (in 2011). This encouraged some farmers to build another unit of squid pot to add to the one crafted with project. The performance however depends largely on the site where they are installed as well as the season of the year that influences water current patterns and wave action. It was observed that fish catch was greater during days after the first quarter phase before full moon.

Based on the farmer experiences seaweed farming and squid pot can be integrated into one complementing system such that seaweed cultivation lines can serve as squid habitat and therefore diversifying harvest and maximizing time, labour and expenses and increasing overall productivity. With squid pot and seaweed farms in the coastal waters, illegal and destructive fishing

methods are minimized for several reasons: the option can provide food and additional income opportunities with small start-up capital and farmers will surely protect and guard their farm (livelihood) from the harm of illegal fishing (i.e. use of cyanide directly affect seaweeds).

Figure 2. Diversifying risk exposure to reduce impacts of typhoons through squid pot fishing, Philippines

3. Further reading

- FAO. 2011. Implementation guidelines for DRR good practice options for fisheries and aquaculture-Technical paper prepared for project TCP/PHI/3203 (D)

4. Agro-ecological zones

- Tropics, warm