



Horizontal Pelagic Longlines

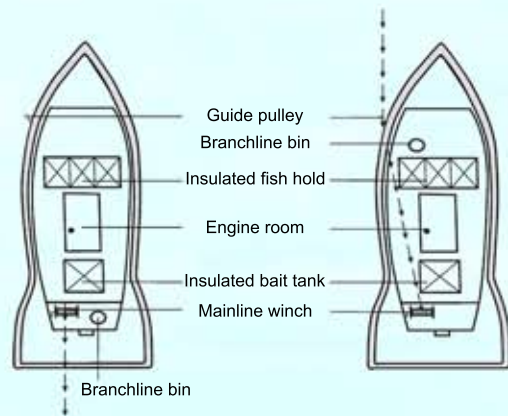


Fig. 3 Shooting

Fig. 4 Hauling

Table 1. Types of bait fish used for the tuna longline operations

Sl.No.	Local Name	Common Name	Scientific Name
1	Chala	Sardine	<i>Amblygaster sp.</i>
2	Bangada	Big eye Scad	<i>Caranx crumenophthalmus</i>
3	Ayala	Indian Mackerel	<i>Rastrelliger kanagurta</i>
4	Neichala	Indian oil Sardine	<i>Sardinella longiceps</i>
5	Oola	Dussumier's Half beak	<i>Hyporhamphus dussumieri</i>
6	Parava	Flying fish	<i>Exocoetus sp.</i>

Conclusion

Pelagic longlining is an eco-friendly fishing method. The success of this fishing mainly depends on the skill of the fishermen, use of suitable baits, appropriate hooks, depth of operation and temperature of water as tunas are usually associated with thermocline layer. The catch on board should be properly landed, bled and stored for getting premium price in the export market. The lines will have to be inspected periodically and maintained by replacing the broken/damaged snoods, hooks etc. Appropriate baits, shape and size of hooks and depth of operation of lines can reduce by-catch considerably



Prepared by:

Pravin. P.
 Baiju. M.V.
 Raghu Prakash
 Baiju. M.
 Paresh S. Khanolkar
 Aneesh Kumar. K.V.

For further information contact

The Director
 Central Institute of Fisheries Technology

CIFT Junction, Matsyapuri P.O.
 Willingdon island, Cochin- 682 029

Tel: 0484 - 2666845
 Telefax: 0091 - 484 - 2667212
 E-mail: cift@ciftmail.org
www.cift.res.in

NAIP Sub Project

“A Value Chain on Oceanic Tuna
 Fisheries in Lakshadweep Sea”

CENTRAL INSTITUTE OF FISHERIES TECHNOLOGY

CIFT Junction, Matsyapuri P.O.
 Willingdon Island, Cochin- 682 029

E-mail: cift@ciftmail.org
www.cift.res.in



Introduction

Longlining is a passive gear and can be operated as horizontal longlines (Fig.1) and vertical longlines. The latter method is used mainly near FADs. Introduction of 'Monolines' (Nylon monofilament) for branchlines and mainlines. Auto line system for shooting and hauling of longlines are recent introductions in India to improve the performance and efficiency of long lining.

The fishing method is specially suited to catch scattered, sparsely distributed fishes and is one of the most effective fishing method to harvest tunas. This method is eco-friendly, fuel efficient and size and species selective. The depth where the hooks are set in the water column is a crucial element, and can be regulated mainly by modifying the intervals of the mainline between floatlines and partially by adjusting the length of floatline and/or the speed of shooting, and to a lesser extent, by modifying the length of the branchlines.

The fishermen of Lakshadweep islands carry out pole and line fishing for harvesting tunas. It is an age old fishing method of catching skipjack tunas in Lakshadweep islands. Fishing is carried out from mechanised boats of size range of 7.6 m to 10.7 m length with engine of 10 to 40 hp. A bait tank of size 1.6 m x 0.8 m with water circulation facility is provided. Live baits with chumming are used to catch tunas using pole and line fishing.

Introduction of pelagic longline

The horizontal longline fishing method was introduced in Lakshadweep under the NAIP project titled "A Value Chain on Oceanic Tuna Fisheries in Lakshadweep Sea". Total of 7 Pablo boats, (5 boats from Agatti) and (2 boats from Andrott) were suitably modified for longline fishing operations. The tuna longline gear introduced at Lakshadweep islands consist of 3.0 mm diameter PA monofilament mainline, 1.8 mm diameter PA monofilament branchline, stainless steel swivel, plastic floats, stainless steel snap clip, stainless steel hook, luminous heart, aluminium sleeves, copper sleeves, snood wire and tuna hook. The length of the branchline varied between 15 m to 22.5 m.

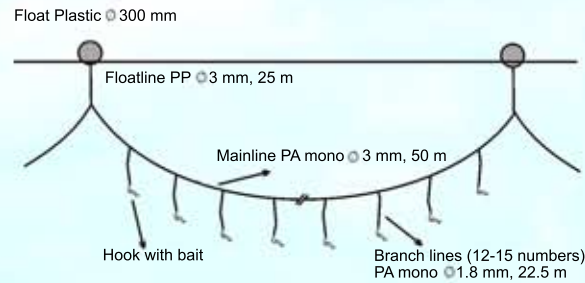


Fig. 1 Horizontal longline

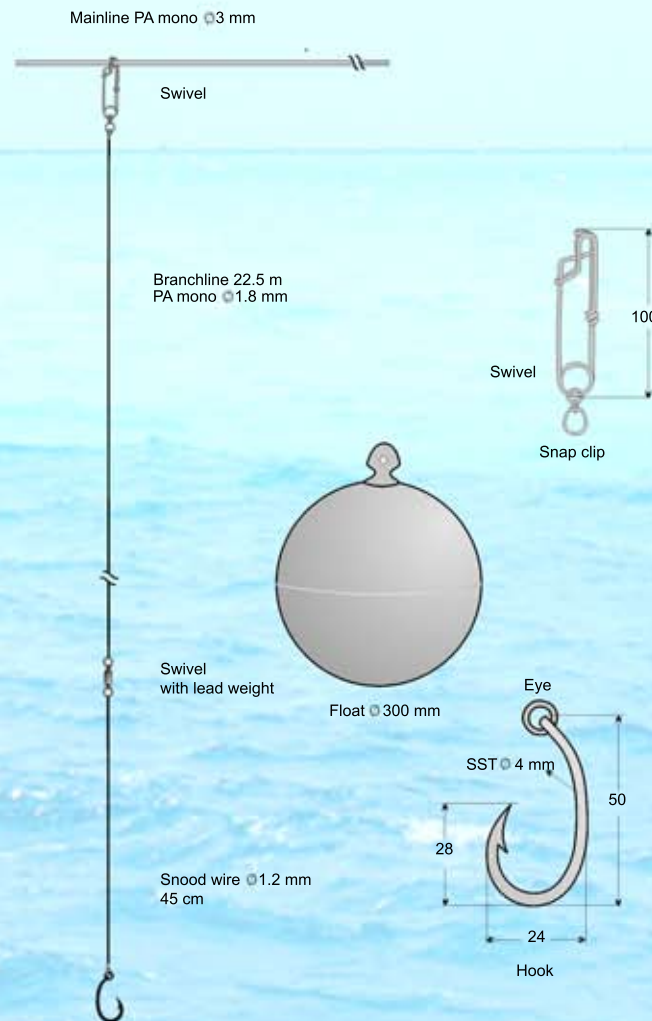


Fig. 2 Branch line of tuna longline

The snood wire is provided just before the hook so as to prevent sharks from cutting off the monofilament branchline. Design details of brachline is show in Fig. 2.

Shooting of longlines

Shooting of the lines is carried out just before dusk or dawn with four crew members. The flag with pole is released first. The hooks are baited either by using flying fish, sardines, half beaks and mackerel. Fishermen use Global Positioning System (GPS) to record the area/positions (Latitude and Longitude) of the fishing grounds. After shooting the lines, it is allowed to soak for 3 to 4 hr (Fishing or soaking time) and then hauled (Fig.3).

Hauling of longlines

Hauling is carried out by locating the floatline (with flag). During hauling, the mainlines are taken back into the drum manually through a guide pulley after removing the branchlines. The branchlines are stored in a branchline bin by clipping it on to the rods in the branchline bin along with the hooks so that it does not get entangled and is ready for the next shooting. The depth of operation of the mainline can be varied by changing the distance between the buoys, and also by changing the speed of the vessel while shooting. Light buoys are used for locating the lines during night. The last buoy set is usually the first to be hauled onboard and detached from the mainline. When a fish is caught on a line, the vessel slows down and the fish is brought alongside the vessel and a gaff hook is used to take the fish onboard the vessel (Fig. 4).



Training on rigging of tuna longlines at Agatti