

# Modification of Pablo boats for longlining in Lakshadweep waters

## Authors

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## Introduction

The Union Territory of Lakshadweep consists of 36 small islands and islets lying scattered in the Arabian sea in around 200-400 km on South- West coast of India between 8° and 12° - 30' latitude (North) and 71° and 74° longitude (East). Of these, only 10 islands are inhabited and the rest are uninhabited. Lakshadweep sea is approximately 46% of total EEZ of west coast of India. The main fishery of the waters of the islands is based only on skipjack tuna and fishing is carried out only on a small scale. The mechanised fishing boats of Lakshadweep islands range from 7 to 10 m L<sub>OA</sub> and mostly these boats carry out pole and line fishing and mainly targeting skipjack tuna *Katsuwonus pelamis*. Other fishing methods include trolling, hand lining, shore seining, and gill netting. The Lakshadweep islands also have very good resources of other large pelagic fishes, especially yellowfin tuna, *Thunnus albacares*. The potential annual yield of tunas of Lakshadweep waters, is estimated to be about 50,000 tonnes and the average annual catch is about 10% of the harvestable potential.

## Focal Points at a Glance

Nature has endowed a predominant status in respect of tuna stocks in Lakshadweep area. In order to avail of the fishery, the fishers who are traditionally accustomed to fishing for tuna using handlines have now taken to longlining using Pablo boats and this work is now in a promotional mode. The authors have presented an excellent account of the development of longline fishing in Lakshadweep waters now in progress.



General deck layout of conventional Pablo boat



Modified Pablo boat



Modification works in progress



Installing insulated FRP fish hold in the boat



There is very good scope for diversifying the fishing methods, especially long lines, to exploit other large tunas, like yellowfin tuna, bill fishes, sharks etc. In this context, modifications were carried out on few Pablo boats at Agatti and Androth Islands of U.T. of Lakshadweep for carrying out pelagic longline fishing operations under the National Agricultural Innovative Project (NAIP), 'A Value Chain on Oceanic Tuna Fisheries in Lakshadweep Sea'

**Modifications of Pablo boats at Lakshadweep islands for long line fishing**

Pablo boats are operated for pole and line fishing by the fishermen of Lakshadweep mainly for catching skipjack tuna. The fish landed by pole and line fishing are mostly used for the preparation of Masmin, a traditional

smoke dried product of the island. For diversification of the fishing method, few Pablo boats of length ranging from 7 to 10 m L<sub>OA</sub> with engine power ranging from 16 to 24 hp were selected. A total of seven Pablo boats were modified at Lakshadweep islands, five boats from Agatti Island and two boats from Androth Island. Each Pablo boat was fitted with a stainless steel winch and guide pulley, two insulated Fibre Reinforced Plastic (FRP) boxes, one for storing the fish catch and other for storing the baits, and FRP bin for storing branchlines.

Details of the selected Pablo boats for the tuna Longline modification are given in Table. 1. The maximum capacity of the PUF insulated FRP box for fish catch is 0.6 m<sup>3</sup> and that of PUF insulated FRP box for baits is 0.3 m<sup>3</sup>. Both these boxes are firmly fixed on the boat. The manually operated winch

was fixed at the aft side of the boat. The drum of the winch has the capacity to hold 5,000 m long Polyamide monofilament mainline. Winch is made of stainless steel (grade IS 304). A handle was provided in the drum with bearings for smooth rotation during hauling operations. A control slit was made to pause the hauling whenever required during operation. The winch was fixed in the boat on strong wooden panel with nuts and bolts and could be easily dismantled and removed during the off season for the oiling, painting and maintenance.

**Modification of Pablo boats**

General deck layout before and after modification are given in Fig. 1 and Fig. 2.

**Stainless steel winch and guide pulley**

A stainless steel (grade IS 304) hand operated winch (1250 mm x 600 mm) is provided for hauling the line. The drum can store 5,000 m of 3.0 mm dia Polyamide monofilament (PA) twine (Fig. 3). A stainless steel (grade IS 304) guide pulley is provided in the forward port side of the boat for guiding the mainline towards the drum (Fig. 4).

**Insulated FRP box for fish catch**

A Poly Urethane Foam (PUF) insulated Fibre Reinforced Plastic (FRP) box (1.6 m x 0.6 m x 0.9 m) was provided for storing the fish catch. It is placed in the forward portion of the

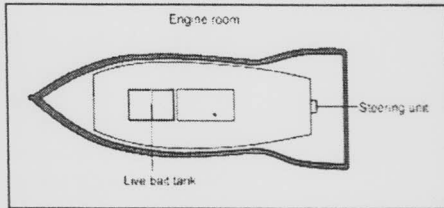


Fig. 1: General deck layout of Pablo boat at UT of Lakshadweep

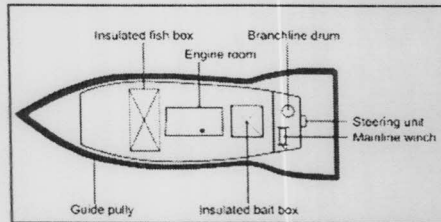


Fig. 2: General deck layout of modified Pablo boat

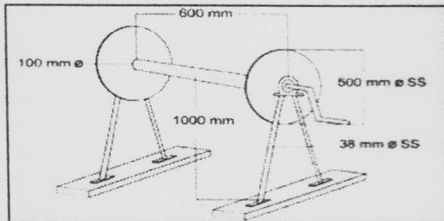


Fig. 3: Stainless steel winch

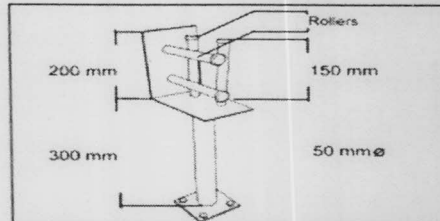


Fig. 4: Stainless steel guide pulley

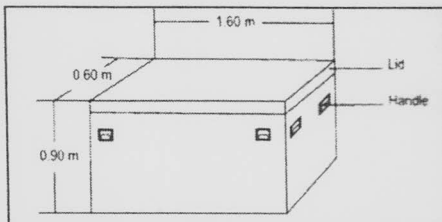


Fig. 5: PUF insulated FRP box for fish catch

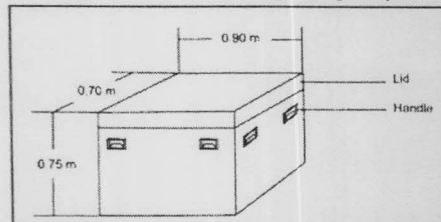


Fig. 6: PUF insulated FRP box for bait fish

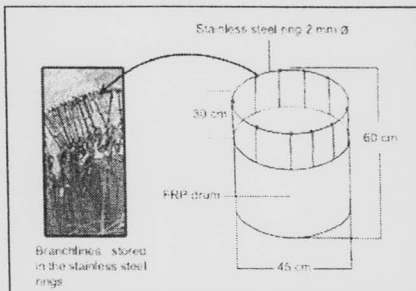


Fig. 7: FRP bin for storing branchlines

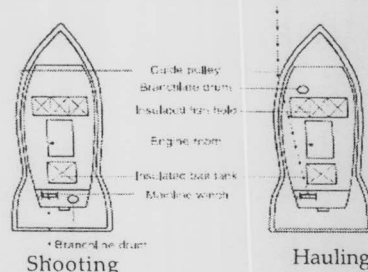


Fig. 9: Shooting and hauling of the longlines from the Pablo boat

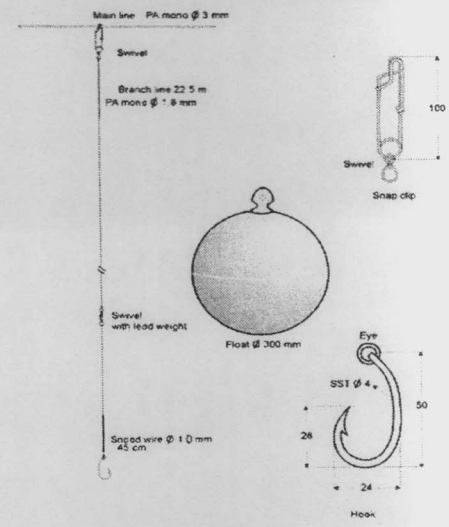


Fig. 8: Branch line of tuna longline

