

Fishing craft

Appropriate technology power

Intermediate technology has helped the South Indian Federation of Fishermen Societies build new types of craft for artisanal fishermen

If you were to visit the beaches along the southern districts of Quilon, Trivandrum or Kanyakumari in south India, you are almost certain to see fishermen on plywood boats landing their catches. More likely than not, you would have seen a 'stitch-and-glue' plywood boat built by one of the boatyards under the network of the South Indian Federation of Fishermen Societies (SIFFS).

SIFFS has four boat building centres at Muttom, Anjengo, Quilon and Veil. Together they account for over half of the plywood crafts ever built in this region. SIFFS with considerable assistance from the Intermediate Technology Development Group, UK has been involved with boat building for the last ten years. In fact, the first craft built by the Muttom yard in 1982 is still in operation.

Most of the fishermen who today use plywood boats were using the dugout or plank built canoes or the traditional 4-log *kattumarams*. (A *kattumaram* or catamaran is made up of logs of lightweight wood lashed together with rope. The most commonly used species of timber in south India is *Albizia falcataria*).

Plywood boats in this region are mainly of two types the decked boats and the canoes or open *vallams*. The decked boats are unsinkable crafts. They are generally preferred by the erstwhile *kattumaram* fishermen for their hook-and-line operations. The open *vallams*, on the other hand, are used by the fishermen who earlier used the dugouts or the plank-built canoes to fish with gill nets or drift nets.

In the 1980s, motorisation and an increasing difficulty in obtaining logs of the right size and quality to manufacture

new dugouts forced the fishermen to look for alternatives. They then took to plywood crafts in a big way. The fishermen found that these were safer, faster, sturdier, easier to beach, had a greater carrying capacity and were more suitable for fishing in deeper waters than their traditional crafts.

The needs of the fishermen have been constantly changing. SIFFS has consequently been modifying the plywood boats or making new models depending on the demands from the fishermen. Not all modifications or new models have been successful.

Some of the fishermen in the backwaters of Quilon wanted a substitute for their traditional plank-built crafts. For them SIFFS built the *thoni*.

The barrier of cost

While fishermen in general agreed that the *thoni* was a good craft, no one actually placed an order for the craft. This was because the *thoni* is a more expensive craft than the one they are currently using.

The increased investment in a *thoni* would not translate itself into increased returns because they would still be working in the same fishery.

When the fishermen of Pozhiyoor wanted a bigger craft that would enable them to carry large quantities of drift nets comfortably, SIFFS responded with the 28-foot long Pozhiyoor model. This has been a big success with the fishermen of this area and since now gets a large number of orders for this model.

Concerned with the increasing signs of overfishing in the inshore waters, SIFFS attempted to promote fishing in deeper waters by building 'offshore crafts' and

the 'PV series' of *ply-vallams*. These have not yet become popular with fishermen.

SIFFS is now promoting the use of ice boxes and awnings these can double as sails and a few fishermen are currently using them for motor sailing and indigenously built diesel engines. These, SIFFS hopes, will eventually lead the fishermen to 'stay fishing', where they fish for a longer duration and do not return the same day.

Changes in design have also been made depending on the availability of suitable raw materials for boat building. The plywood boats themselves were a response to the shortage of large logs of timber for building dugouts.

Today, good quality marine plywood has become scarce in India and is increasingly difficult to procure. A large quantity of marine-grade plywood is manufactured in India using timber imported from Africa and Southeast Asia.

The result is that the prices of plywood have increased by about 20 per cent in the last one year alone.

Last year, the Muttom boatyard (the largest under the SIFFS network) had to close down production of plywood boats for about three months, due to non-availability of marine-grade plywood.

SIFFS is currently experimenting with a different technique of boat building called 'strip plank construction'. This uses cheap, locally available timber which is cut into thin strips of 40mm x 10mm and tooled so that they have a concave and a convex surface along either edge.

These strips will then easily fit into one another and can be glued and nailed together. Strips of smaller width of, say, 20 mm, can be used while building around curves.

A sheathing of fibre glass is then given to the craft to protect the timber from marine borers and deterioration from prolonged direct contact with sea water. This is especially necessary when the crafts are not beached daily but are left anchored in harbours until the next trip.

Strip plank construction results in crafts that are quite strong. Moreover, the building method is itself easy to learn. ■

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