Boat building at Malpe in Udupi District of Karnataka - an alternate livelihood option

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Fishing is one of the major sources of income for coastal dwellers. People of the coastal region depend on a wide spectrum of fishery related activities for alternate sources of livelihood. Boat-building is one such avocation, which can be traced back to very ancient times.

An attempt was made to survey the boat builders of Malpe Fisheries Harbour and to analyse how boat building forms an alternate source of income generation and livelihood. There are two boat building yards at Malpe, one near Malpe Fisheries Harbour and another at Angarkatte, 5 km from Malpe. The boat-building yard at Malpe is 35 years old and the technology of boat building is a traditional profession and is the monopoly of the Aachari community. The entire boat building activity is in the hands of the “Head Maestri” who has a supervisor and a group of labourers (up to 35 numbers) working under him. The different types of boats built here are, the single-day trawler (40-42 feet overall-length, OAL) of 63 HP, the multi-day trawler (52-60 feet OAL of 122 HP) and purse seiner (50-55 feet OAL of 122 HP). Once the Head Maestri receives the orders for a particular type of boat, he makes the sketch of the boat and necessary instructions are given to the supervisors and group of labourers. The peak period of boat building is from August to May, when they are employed for 30 days in a month and the lean period of work is during June - July. During the lean period, they are engaged in other income generating activities such as painting and carpentry work in households.

Annual earnings of a Maestri from boat building = ₹ 300 x 30days x10 months = ₹ 90,000/-
Annual earnings of a supervisor from boat building = ₹ 250 x 30 days x 10 months = ₹ 75,000/-

Annual earnings of a labourer from boat building = ₹ 250 x 30 days x 10 months = ₹ 75,000/-

The boat builders (maestri, supervisors and labourers) avail medical insurance facilities since they encounter causalities of falling from heights in the yard, injuries caused by handling heavy logs, sawing machines etc. The ground space for the boat-building yard at Malpe has been leased out by the harbour authorities to the maestris @ ₹ 2,500/year. The architects of these boats, deserve a special place in the socio-economic arena of the coastal society in particular and the community in general.

Innovations in the trawl fisheries of Karnataka and its possible impact on fisheries sector

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Mechanisation of fishing operation in Karnataka was initiated with the introduction of 30 to 43 feet trawlers in 1957 for exploiting inshore demersal resources including shrimps. Introduction of purse seiners in the 1970s extended the area of fishing operation and enhanced pelagic fish landings significantly. Motorisation of traditional crafts like gillnetters and longliners and encouragement of offshore fishing beyond 50 m depth using bigger vessels for duration of 12-15 days have effectively increased the range and effort of fishing operations. Further, financial institutions have extended loan facilities for acquiring fishing boats which helped to enhance the fleet strength.

Presently, out of 10,892 mechanised crafts in the state of Karnataka, there are 4,482 trawlers alone. The rest is constituted by purse seiners, gillnetters and longliners. The steel trawlers, an innovation introduced in the marine fisheries of Karnataka 14 years back, has brought about a visible and phenomenal increase in the capture fisheries sector by virtue of its bigger size, larger fish holding capacity, longer fishing duration and durability to endure rough weather at sea.

Single-day trawlers are operated using Ruston engine of 35-75 HP. The crew consists of 4-5 men. The species caught by such fleet include prawns, lobsters, crabs, anchovies, silver bellies, scombroids, pomfrets and ribbonfishes. The boats operate mainly shrimp nets with cod end mesh size of 10-12 mm. These units leave the shore during early morning and return the same day afternoon after fishing for 5-6 h. Multi-day trawlers are now mostly steel trawlers with a length of 55 feet and operate using Ashok Leyland engine of 130 HP. They operate at a depth of 500 m and each trip lasts for a period of 10 days. The diesel consumption of these units is 5000 l and the fish holding capacity is 20 t.

According to the catch and effort data analysis of CMFRI (2002-2008), the present multi-day trawler effort in Karnataka is 33% more than the required effort to exploit the resources of the coast. The calculation is based on the engine capacity of the fleets pertaining to the period. Steel trawlers are increasingly becoming preferable over wooden trawlers because of the advantages like bigger fish holding capacity, less maintenance/repair cost, better capacity to withstand rough weather conditions etc. The steel trawlers can venture into longer distances at sea and at deeper fishing grounds when compared to wooden trawlers. Yet another modification noticed in the case of steel trawlers is the advent of Chinese engine operated steel trawlers. Introduction of Chinese engine for trawling appears to make disparity in the income generated by the trawlers operated with traditional engines. Chinese engines with nearly double the capacity (240 HP) are virtually utilising almost double the fishing effort when compared to traditional engines. This increased use of engine power/unit is equivalent to increasing the