



## The New Marketing Strategies Of Thermocol Pongu Fishermen In Southern Kerala Fish Landing Centers

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### Abstract

This paper tries to collect the operational and comparative aspects of pongu fisheries. Thermocol fishing is considered as the zero costing environment-friendly fishing method. This fishing method creates a large number of direct and indirect employment opportunities, leading to alleviating the scarcity of a large number of fishing hamlets in coastal Kerala. This paper could lead to the marketing channel; price spread analysis and open up significant supply chain initiatives and innovation strategies of zero or near-zero budgeting.

**Keywords:** Thermocol pongu, Traditional fishing, Marine wealth, Zero cost, Price spread, Indebted

### Introduction

Kerala is the god's own country located on the southwest Malabar Coast of India near Tamilnadu. It can have 1.27 per cent of India's territory with a landmass of about 38863 sq. kilometres. Kerala shared its boundary with Tamilnadu in the south and eastern portions in connection with the Western Ghats region, Karnataka in the north and northeast portion, and the Arabian Sea in the west. Geographically the western ghat is considered the eastern boundary of the state. Kerala captured 10 per cent of India's total coastline of about 590 kilometres and a special Exclusive Economic Zone (EEZ) of 218536 km<sup>2</sup>. Kerala's total fish landing was 6.87 lakh tonnes in 2022; this shows an increase from the preceding year's landing of 5.55 lakh tonnes. The increasing nature of the fish landings shows that a large army of 11.114 lakh fish folk directly depends on the capture fisheries and indirectly on the allied sectors too; currently, there are 222 fishing villages along the state's marine belt. (Department of fisheries govt. of Kerala, CMFRI booklet no.31/2023, India waterportal.org.in)

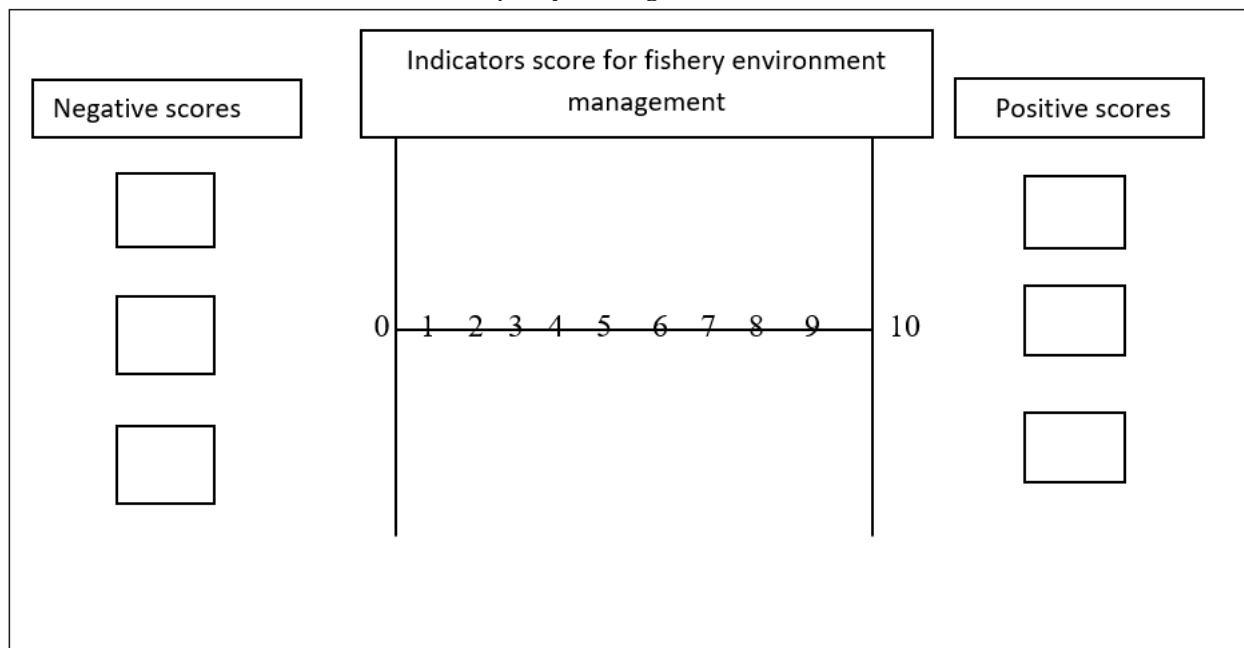
Thermocol pongu is an integral part of the fishery profile of Southern Kerala. Pongu fishermen played a vital role in the upliftment of the southern Kerala coastline. After the advent of modern fishing boats (outboard dingy boats), ordinary fishermen suffer much more. Most of them are mostly indebted to cooperative societies, Self Help Groups, Mathsyafed and private money lenders for their boats. Simple gearbox damage in these boats could cost a minimum of Rs.20000/-A large number of disused boats are the main scenery on the coastal shores of Southern Kerala. All of them are waiting for a loan waiver which brings immense relief, they will be grateful if any authority opens their eyes to their indebtedness. But the saga continues.

Most of the fishermen have in recent years been forced to abandon their motorized boats due to low yields. Mechanized boats are costly due to daily expenses like diesel, oil cost, crew Bata, severe maintenance costs etc. instead, many find sustenance by fishing solo in small makeshift boats made of Thermocol.

### Materials and Method

The pongu fishermen are selected at random for the purpose of evaluation and discussions. The total sample size was 120 fish folk representing 6 fishing villages in two coastal districts viz—Alappuzha and Kollam districts of Kerala. The pongu fishery is considered one of the sustainable livelihood methods in coastal Kerala, which is necessary for old and poor fishermen. The data were collected using, the Participatory Learning and Assessment (PLA) method. The PLA is a qualitative research method which particularly designed for monitoring, evaluation and review of programs. It was developed to assisting the local fishermen to monitor and evaluate the local environmental management. The PLA method can be used for displaying, assessing, smoothing or helping or recording and channelizing interviews with mass discussions.

The Participatory learning and assessment method



For the present study, a modified Participatory Learning and Assessment tool was used. Each of the variables should be assessed and evaluated in every path of the study. There should be several direct and indirect factors in the pongu fisheries sector. Which would be environment friendly and directly supported to the actual fishermen, old fishermen, and fishermen's family members. Thinking on the consumer side there arises a greater benefit! Fresh edible fish directly from the sea; without icing. Constructing the PLA diagram the indicators are categorized into positive and negative sides. On the right side, the indicators were given 10 representing most preferred and the score 0 least preferred was written. The fishermen are asked to discuss an opinion consensus score from 0-10. They were also asked to justify their scores by giving positive and negative reasons for their scores. Every point in this pongu fishing method is well structured, the socioeconomic variable factors were collected through the direct interview method using well-structured questionnaires. They were also asked to mention constraints in the operational aspects of crafts in the traditional landing centres and proposals to expand the performance of the fish folks.

### Result and discussion

The coastal villagers consider the Thermocol pongu to be the most modern form of the traditional catamaran. But the fish caught using a catamaran is risky; it can have a great skill to control its voyage in the sea. A catamaran is a graceful movable fishing craft in the right hand. The thermocol boats are slightly different from them. The thermocol pongu surely helps a number of fishermen from the coastal villages in Southern Kerala build small crafts to undertake fishing trips at a low cost near the shore. Easy to handle and construct, flexible, movable nature etc. can make the shift from the traditional catamaran to thermocol pongu. Fifteen to twenty years back, the skilled fishermen attached individual pieces of wood or bamboo sticks attached with nylon ropes. At present, the thermocol pongu replaced the traditional catamarans. Sitting ores in the thermocol pongu are constructed with locally available plastic cans and ropes, small indicators are attached to the mast and rock is used as an anchor.

At present, there is no need for making pongu from raw thermocol. There is finished thermocol pongu available from major industrial estates and thermocol exporting industries from all over India with a low constructional cost and fully finished manner with various price ranges. Except for these crafts, the fishermen are used angles, and various drift gillnets (measure ranges 36 to 42 mm) for fishing. Thermocol pongu is a basic craft; their operational area is generally 2 nautical miles away from the shore. Pongu is light and easy to maintain but fishing on pongu has its own risk. After the fishing voyage, the pongu can be taken easily to shore. They are not sea-pedestrian when the the fishing climate turns hostile but it helps and supports a number of fishermen in the coastal states of India especially in Southern Kerala. It can create a lot of direct employment opportunities to the actual fishermen without overuse of money and bad debts, help to improve the conditions of coastal jobless veterans to give up supportive jobs: such as the removal of the fish and prawns entangles in the net without damage, add a number of working days to allied workers like net repairers; mostly they are family labours, drivers of transportation vehicles for their direct selling.

During the entire survey, period observed the disuse and costly nature of the mechanized craft, which leads to more debts; they have not been able to pay their dues. They transformed into sustainable fishing, Thermocol Pongu

The over use of Kerosene in the outboard engine causes the unburned fuel to be reddened out into the sea. These will severe increase the water pollution and leads to the destruction of the marine fish varieties and corals too. The regular use of outboard craft leads to a lack of adverse catches due to the depletion of marine resources. A 10 HP outboard engine normally requires 8 to 10 litres of kerosene per operational hour. Wastage of fuel like kerosene is also high as

around 20 per cent of it flows out into the sea. Conversion of these kinds of crafts to thermocol craft will reduce the pollution level and marine fish species protection. But the present day a part of pongu uses 4 HP to 8 HP outboard engines.

The followings are the construction cost of the outboard engine boat(fibre boat) and thermocole pongu in Kerala cost.

<b>Cost of construction</b>		
<b>Particulars</b>	<b>Out board engine fiber boat</b>	<b>Thermocole pongu</b>
Craft	180000	12000
Fishing gear (large mesh drift gillnet)	20000	8000
Engine installation		-----
Sail rig		
Total expenditure	200000	20000
No. of persons /voyage	15-20	1-2
<b>Total expenditure/trip</b>	<b>3500</b>	<b>-----</b>

Source: Field survey

The use of outboard engine-fitted traditional craft will decline due to the high level of operational cost hierarchy. The low catches obtained with large mesh driftnets during the fishing haul show that this craft is not economically viable in coastal Kerala. Considering their day-to-day expenses on each trip shows they regularly go through debt. The average cost of a fibre boat per trip is 3500/Rs. But shifting it to thermocol pongu leads to a zero costing method.

**AVERAGE DAILY CATCH OF PONGU WITH MAJOR SPECIES COMPOSITION**

Thermocol pong is considered an economically viable mechanism to uplift the coastal people. It generates no cost and creates only income. A fibre boat fisherman starts his job in the early morning near to midnight, but the pongu fishermen work as he likes. An average pongu fisherman earns around 6000 rs. per day with the daily routine of his two three trips. From this income, he supports his family's labour too.

<b>Species</b>	<b>Percentage to total</b>
Sardinella Longiceps(Oil sardine)	40
R.Kanagurtha	28
Anchovys	14
Thryssa	12
P.Indicus	2.5
M.Dobsoni	2.0
E.thoracata(white sardine)	1.5
<b>Total</b>	<b>100</b>

Source: Field survey

From the Southern Kerala coast most of the fishermen catch the bulk of oil sardine due to the availability of shall, the average annual catch of this is 40%, After that R. Kanagurtha (Mackerels)28%, Anchovies (14%), Thryssa(12%), P.indicus(prawns) (2.5%,m.dobsoni(prawn)2% and white sardines 1.5%.sometimes the catch came in the forms of mixture fishes(combination of crabs, anchovies, oil sardines, mackerels etc.)

**Prevalent Fish Selling Network of Pongu**

The fish selling or distributing network starts with the fishermen from landing centre or harbor and finish with the final buyer or purchaser. There arise numerous middlemen between the actual producer and the end consumer. “The involvement of these marketing intermediaries provides services of head loading, processing, preservation, packaging and transporting of fishes and these activities result in cost addition at every stage of marketing, (Bishnoi, 2005). The major intermediaries involved in pongu fisheries are illustrated in the table.

<b>Channel no.</b>	<b>Fish Marketing Channel</b>
Channel I	Fishermen→Consumer
Channel II	Fishermen→Retailer→Consumer
Channel III	Fishermen→Wholesaler→Retailer→Consumer
Channel IV	Fishermen→Fish collector→ Auctioneer→Wholesaler→Retailer→Consumer

Source: Field survey

During the entire study, period observed there are four marketing channels for the pongu fishery. Channel first introduces the direct marketing of fishermen to the consumer. This creates 100 per cent marketing efficiency. In this method mainly the local consumers are purchased fresh fish for their consumption purpose. Channel II has less marketing efficiency than Channel I. Adding an additional person to this marketing network creates a decline in the marketing efficiency of the fishermen. The III and fourth channels show the declining networking efficiency of the marketing. The expansion of the marketing chain indicates the level of employment opportunities directly depending on the fisheries sector. This will illustrate in the above table.

**The price spread of pongu fishes**

The price spread is considered one of the important indexes of marketing ability. This study reports the price spread between fish landing centres, fish collection agents, auctioneers, wholesalers, retailers and the end consumer for major pongu varieties. The price spread is measured as the difference between the actual price paid by the end consumer and the price received by the actual fishermen. The thermocol pongu fishery channel, the first channel is more marketing efficient than any other channel. Wayside net entangled fish sale is the example of the channel first. Most of the local people prefer these non-iced fish varieties.

**Price Spread of Various fishes of Thermocol Pongu**

Particulars	Channel I				Channel II				Channel III				Channel IV			
	F1	F2	F3	F4	F1	F2	F3	F4	F1	F2	F3	F4	F1	F2	F3	F4
Price received-by fishermen	60	100	150	70	50	80	130	50	40	75	120	40	50	75	135	50
Fish collection-agent	-----				60	87	145	60	45	80	125	48	60	80	145	55
Auctioneer	-----				65	90	150	65	55	85	135	60	65	90	155	65
Wholesaler	-----				75	95	165	70	65	95	145	65	75	95	160	75
Retailer	-----				85	100	170	75	70	100	155	70	80	100	175	80
Consumer	60	100	150	70	95	110	185	90	85	115	160	75	85	105	185	90
Fishermen's-share(%)	100	100	100	100	explanation in paragraph											

Note: F1-Oil sardine, F2-Mackerals, F3-Prawns, F4-Thrysa, White sardine, Anchovy's

Net price received by the fishermen\*100

$$\text{Fishermen share in Rs/- (\%)} = \frac{\text{Net price received by the fishermen*100}}{\text{Amount paid by the end consumers}}$$

The retail price shows a wider fluctuation from the I channel to the IV channel. Fishermen's share is 100 per cent in the first channel. But from channel second to channel fourth there should be a declining trend in the actual fishermen's share, increasing the consumer's retail price and vice versa. Pongu fisheries give raise a better marketing efficiency than any other fishing methods. "An efficient marketing system is capable of moving from the ultimate producer to consumers at the lowest cost consistent with the provision of services that consumers demand. Marine fish marketing in India is characterized by uncertainties in supply, assembling of fish from too many landing centres, different types of varieties and demand patterns, a large number of marketing channels and intermediaries and price fluctuations. Unlike other agricultural commodities, where the demand decides the price, marine fisheries supply plays a major role in price" (Sathiyadas, 1997)

**Conclusion**

A wide variety of fish species with a rich marine wealth and highly skilled marine population of fish folk has made the gods own country Kerala become a leading producer and purchaser of fish. A very high level of rainfall and a large number of rivers, backwaters, canals and waymouths make the Kerala coast fertile for fish. The very important speciality of Kerala coast is the formation of mud banks in the middle or end of the monsoon season. It is considered as the after-effect of flowing the clay and organic matter edible for fish species on the near shore with the roaring sea remaining calm, thus resulting in a good harvest of fish. In this period pongu fishermen earn a huge amount in comparison with their sufficient daily routine.

The mission plan for the efficient and effective pongu fisheries is the fish resource conservation and management, increasing livelihood opportunities, social security and welfare measures for fisher folk, ensuring inclusive development for the jobless senior citizens, facilitating improved market linkages, controlling marine water pollution etc. But at present, some negative impacts arise due to craft modernization. Some of the pongu fishermen use 1HP to 2HP motors in pongu including the centrally sponsored scheme on the motorization of fishing crafts. The fishing operational area has increased; a larger quantity of juvenile catching, increasing the level of trash fish and coming up of underwater mud

particles etc. are the after-effects of the adoption of motors in pongu. This scheme gave a subsidy scheme for a number of fishing crafts. The motorizations of pongu adversely affect the later mission of fish folk. In the coming years, the fishermen and the researchers in this field gave potential to these kinds of craft this directly helps the coming fish folk and reduce the poverty.

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