 <p>www.thaavan.com thaavan2011@gmail.com</p>	CLEAR IJRMST	Print ISSN: 2249 3492, Online ISSN: 2249 3506
	CLEAR IJRMST	<p>International Journal of Research in Management, Sciences and Technology</p> <p>A Blind Peer Reviewed and Open Access Journal Publication as Per UGC Care of India and SCOPUS</p>
	Indexed and Impact Factor Journal	Vol-10, Issue-20 pp. 25-32, July-Dec- 2020

FISHERIES MARKETING SERVICES IN TAMIL NADU AND PUDUCHERRY – AN INSIGHT

Dr. D. Elumalai

Assistant Professor of Commerce, Hindustan College of Arts & Science, Chennai, Tamil Nadu,
India

ABSTRACT

India has immense water resource, both fresh and marine. It has a coastline of 8,118 Km., with Bay of Bengal on the eastern coast, Arabian Sea on the western coast and Indian Ocean towards the South. It has an 'Exclusive Economic Zone' of 2.02 million sq. Km, which is in accordance with the provisions of the Territorial Waters, Continental Shelf, Exclusive Economic Zone and other Maritime Zones Act of 1976, of which India is a signatory. Also, the country is endowed with about 1.4 million hectares of brackish water resource, which is available for aquaculture, and about 1.6 million hectares of freshwater lakes, ponds, and swamps, and nearly 64,000 Km., of rivers and streams, which form the total water resources of the country. The coastline extends to nine States and five Union Territories.¹² India is the second largest producer of fish in the world contributing to 5.68 per cent of global fish production in 2013-14. It is not only a source of livelihood for over 14.5 million people, but also needed for socio economic development of the country, which has contributed ₹. 30,213 Cr in 2013-14.³

Article History

Received 20th November, 2020, Received in revised form 28.11.2020

Accepted 20.12.2020, Published on 30th. December.2020

Keywords: Circuit training, interval training, university students, power, speed

Corresponding Author : Tesfay Asgedom Haddera

Email : asgedom.tesfay@gmail.com


Introduction

Fishery in India

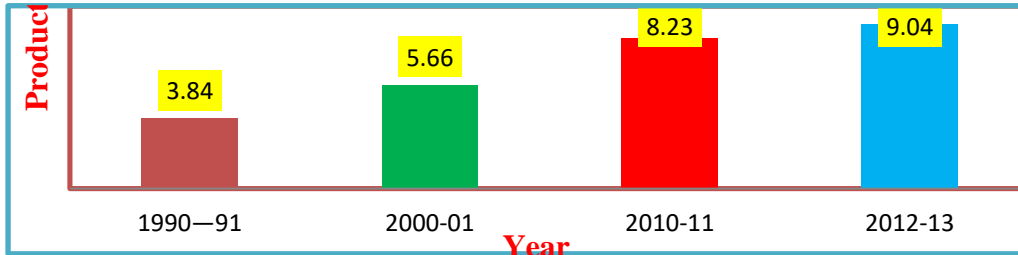
Approximately one per cent of the total population depends upon fishery sector in India as a primary source livelihood - direct employment to about 6 million fishers and to another six million people who are employed in fishery related activities since in 2005. The contribution of fisheries to Gross Domestic Product (GDP) at the current price level is 1.3 per cent.⁴ Nearly 70 per cent of the fish catch is marketed fresh. The fish drying and curing industry amounts to about 14 per cent of fish.

Frozen fish production accounts for 6.5 per cent, 8.4 per cent goes for reduction to fish meal, 0.8 per cent for offal reduction and 1.6 per cent for miscellaneous purposes. Only 0.3 per cent of the total catch is used for canning purposes. The per capita fish availability in India is 4.7 kg/ year.⁵ The major ports in India are Chennai (Madras), Cochin, Kandla, Kolkata (Calcutta), Mumbai (Bombay) and Vishakhapatnam. Apart from the main fishing harbors, twenty-three minor fishing harbors and ninety-five fish-landing centers are designated to provide landing and berthing facilities to fishing craft.

FIGURE 1.01

 www.thaavan.com thaavan2011@gmail.com	CLEAR IJRMST	Print ISSN: 2249 3492, Online ISSN: 2249 3506 <hr/> International Journal of Research in Management, Sciences and Technology <hr/> A Blind Peer Reviewed and Open Access Journal Publication as Per UGC Care of India and SCOPUS Vol-10, Issue-20 pp. 25-32, July-Dec- 2020
	CLEAR IJRMST Indexed and Impact Factor Journal	

Fish Production (Million Tonnes)



Source: Ministry of Agriculture Government of India (2013 – 2014) p 57

The fish production has shown a consistent increase since 1990-91. From 3.84

million tonnes in 1990-91, the fish production has increased to 9.04 million tonnes in 2012-13. The growth of fish production, however, showed a cyclical pattern with an increasing long term trend. A constant growth has been observed in marine sector since 2008-09.⁶ The sector contributes about one per cent to the overall GDP and 4.6 per cent of the agriculture GDP. Fish products also form a significant commodity for overseas trade. During 2012-13, export aggregated to 9,28,215 tonnes in volume and valued at ₹.18,856.26 Cr recording a growth of 13.6 per cent over previous fiscal.⁷


Fishery in Tamil Nadu and Puducherry

Marine fishing in Tamil Nadu and Puducherry is an age old avocation and the fishermen venture all along the Indian coastline, even beyond the shelf into the deep sea.⁸ The basic details of fishery in Tamil Nadu and Puducherry are given in Table 1.01.

TABLE 1.01
Fishery in Tamil Nadu and Puducherry

Sl. No.	Particulars	Tamil Nadu	Puducherry
1.	Coastline	1076	45 km
2.	Coastal Districts	13	4
3.	Continental Shelf	44,412 km ²	900m ²
4.	Off Shore Area	2.2×10 ⁵ hectares	-
5.	Number of Fishing Villages	591(includes 10 estuarine fishing villages)	25
6.	Total Fisher Population	0.861 Million	36,905
7.	Active Fishers	0.26 Million	8,813
8.	Productions	5.34 lakh tonnes (2009)	30,502 tonnes
9.	Value of Exports	Rs 17,722 million(2008-09)	-
10.	Total Land Areas	1,30,058 sq.km	492 sq.km

Source: Marine Fish Production in Tamil Nadu and Pondicherry (2011).

 <p>www.thaavan.com thaavan2011@gmail.com</p>	CLEAR IJRMST	<p>Print ISSN: 2249 3492, Online ISSN: 2249 3506</p> <p>-----</p> <p>International Journal of Research in Management, Sciences and Technology</p> <p>-----</p> <p>A Blind Peer Reviewed and Open Access Journal Publication as Per UGC Care of India and SCOPUS</p> <p>Vol-10, Issue-20 pp. 25-32, July-Dec- 2020</p>
	<p>CLEAR IJRMST</p> <p>Indexed and Impact Factor Journal</p>	

Scope of the Study

The information stated above indicate the fact that there is a scope for growth and development of fishery sector both in Tamil Nadu and Puducherry. The fishery sector depends on both supply chain establishment and also that of the possible value addition before the commodities reach the ultimate consumer. So it is unavailable to learn about the present position of both supply chain conditions and value addition practices as well in both the states. They are explained as under. Players are the actors who take up various activities in the chain in lieu to certain returns accruing to them. The roles and responsibility of the players are defined and specific. The actors perform unique functions in the chain, which is exclusive in nature and hence categorizes the actors based on the activity undertaken/service provided by them.⁹ Irrespective of the chain based on the product or market segmentation, the actors present in the supply chain are as follows,

- i. Fishermen who do not have a boat,
- ii. Fishermen, boat and net owner,
- iii. Trawler owner,
- iv. Auction agents,
- v. Commission/Collection agents,
- vi. Transporters,
- vii. Ice Providers,

- viii. Godown owners,
- ix. Wholesalers,
- x. Exporters,
- xi. Head Loaders,
- xii. Cycle Vendors,
- xiii. Petty Sellers Trading Fish in Kind,
- xiv. People Working as Fish Packers at the Landing Centers and in Processing Units and
- xv. Ancillary Participants.¹⁰


Supply Chain in Fishery Sector

Fish passes through several intermediaries from landing centre or fish ponds to the consumer. The intermediaries are involved in providing services of headloading, processing, preservation, packing and transporting these activities result in cost-addition at every stages of marketing. The key intermediaries in fish marketing are: auctioneer, wholesaler, retailer and the vendor. Several other intermediaries like local fish collectors and fishermen cooperatives also exist in several markets. The biggest challenge in documenting intermediaries in the fish marketing is their multi-functional performances. There is no strict boundary between intermediaries and they perform several functions while marketing fish.¹¹

Sl. No.	Channel Numbers	Marketing Channels ¹²
1.	Channel I	Fishermen - Fish Collector/Local Dealers - Auctioneers Wholesalers - Retailers - Consumers.
2.	Channel II	Fishermen - Wholesalers - Retailers – Consumers
3.	Channel III	Fishermen - Auctioneers - Retailers - Consumers.

First, the marketing chain from producers to consumers passed through a number of intermediaries: producers or suppliers, wholesalers and retailers. The price was increased nearly double from producer to consumer. During peak season price was lower than that of lean season. The marketing system was operated through a set of intermediaries performing useful commercial functions in a

chain formation from producers to the final consumers.¹³ Secondly, all marine fish produced are not consumed fresh and also not sold in the local market. This movement depends on the local specific demand patterns pertaining to different marine species, either in the form of fresh, processed, dried or value added products. Hence, the ordinary marine fish channel is very complex.¹⁴ Thirdly, marketing is

 <p>www.thaavan.com thaavan2011@gmail.com</p>	CLEAR IJRMST	<p>Print ISSN: 2249 3492, Online ISSN: 2249 3506</p> <p>-----</p> <p>International Journal of Research in Management, Sciences and Technology</p> <p>-----</p> <p>A Blind Peer Reviewed and Open Access Journal Publication as Per UGC Care of India and SCOPUS</p> <p>Vol-10, Issue-20 pp. 25-32, July-Dec- 2020</p>
	<p>CLEAR IJRMST</p> <p>Indexed and Impact Factor Journal</p>	

the connecting link between the producers and consumers. Through marketing system of fish, being a perishable commodity, it reaches the consumer in acceptable conditions. The marketing system operates through a set of intermediaries performing useful commercial functions in a chain all the way from the producers to the final consumers. The commercial units comprising the fish marketing system can be grouped into three categories – fish auctioneers, fish wholesaler, fish retailers. The auctioneers obtained their supplies of fish directly from the fishermen as they come ashore with their catch. The wholesalers who operate in small numbers in the district markets and large numbers in big city and usually obtained their supplies from suppliers.¹⁵ Fish retailers in turn obtained their supplies either from the auctioneers or wholesalers or when convenient directly from the producers at the landing point. The entire marketing function of the fish industry was found to be conducted through these categories of middlemen.¹⁶

Value Addition in Fishery Sector

The primary market which the production level where is catching value addition rarely take place. Small-scale fishers use ordinary boats and canoes that do not have fish preservation facilities such as cooling systems this means that there isn't even quality assurance at this level. Once the fish caught, it is taken straight to the beach for selling without any value addition. The situation therefore impact on the wholesaler as he/she is always in a panic to find ways to preventing the fish from going bad. At this level it's either the fisher or the wholesaler who takes the burden of value addition through smoking of the fish.¹⁷


This is the market where the wholesalers are involved in transacting the business with fish retailers. The wholesalers once he buy fresh fish from the fisher, they decide whether to sell the fish while smoked or fresh. In case they want to sell fresh fish then they are required to have ice to prevent fish quality deterioration. The wholesalers also meet the costs for transporting the fish to potential markets.

The benefits of such value addition are listed below. Firstly, the price during harvesting

season came down to the minimum and started rising up to the maximum in the off season. The variation of prices might be varied due to seasonal variation and availability of fishes. The Fish marketing, the nature and types of cost at different stages in the marketing process not identical due to the dissimilarities of marketing function at various stages.¹⁸ Secondly, the marine fisheries generate good employment and income for a large section of backward and economically weaker section of the coastal community. Thirdly, value chain analysis is one of the managerial strategies that can reduce various costs associated with processing and can improve the quality and productivity/processing of the product, also reduces distribution cost. Fourthly, value chain model to processing of marine fisheries and thereby suggesting cost effective value chain from fishermen to consumer. Value chain management in fisheries will help the fishermen in offering great value with minimum cost.¹⁹ Fifthly, value addition increases the economic value of the products and does not necessarily increase the nutritional value. It is aimed at the high-income groups rather than at the nutrition deficient weaker sections of the society. Value addition of fishes will also help in improving the utility for direct human consumption, which otherwise may become animal feed. Value addition will contribute towards a more sustainable use of scarce fisheries resources, and will consequently result in higher income benefits for fishermen.²⁰ So there is a strong is a need for a separate study on the cost effective supply chain and value addition of fishery sector on the basis of the review of literature stated below.

Research Gap

It is clear from the above that various literature reviewed indicated that there was no specific study done on the lines required for the assessment of cost effective supply chain and value addition in the fishery sector of Tamil Nadu and Puducherry put together as a whole. The research gap found out was the absence of a clear approach to study the cost of supply chain and cost of value addition in an effective way in the field of fishery in the states under study. So the researcher chose this study for a complete

 <p>www.thaavan.com thaavan2011@gmail.com</p>	CLEAR IJRMST	<p>Print ISSN: 2249 3492, Online ISSN: 2249 3506</p> <p>-----</p> <p>International Journal of Research in Management, Sciences and Technology</p> <p>-----</p> <p>A Blind Peer Reviewed and Open Access Journal Publication as Per UGC Care of India and SCOPUS</p> <p>Vol-10, Issue-20 pp. 25-32, July-Dec- 2020</p>
	<p>CLEAR IJRMST</p> <p><i>Indexed and Impact Factor Journal</i></p>	

and purposeful analysis, so as to create a new knowledge in the existing field.


Statement of the Problem

Marketing chain from producers to consumers is generally passing through a number of intermediaries' viz., producer fishermen, wholesalers and retailers/vendors. The price also is increasing nearly double from producer level to consumer besides violent and frequent fluctuations. As different from marketing of agricultural products, fish marketing is confronted with certain peculiar problems; greater uncertainty in fish production, highly perishable nature of fish, assembling of fish from numerous landing centers, too many species and as many demand pattern difficulties in adjusting supply to variations in demand and need for specialized transportation of fish.²¹ However, the researcher found it important to address the following ones as they are prominent at field level in Tamil Nadu and Puducherry now.

First, the producer fishermen level problems are to be brought to light. The major challenges at producers fishermen level of the supply chain in marine fisheries sector could be infrastructural inadequacies which include lack of timely adequate inputs, high cost of labour and raw materials, lack of clean water, lack of indigenous equipment, inadequate extension personnel and training facilities, non-availability of cheap electricity and lack of inadequate infrastructural facilities.²² In addition the absence of quality control at primary production centers (landing centers) often resulting in poor quality of the products due to lack of facilities for onboard storage, freezing and processing, non availability of quality ice and packaging materials, risks due to environmental variations and climatic changes and huge investment cost.²³ Hygiene and food safety at the docks are also inadequate. So the producers or suppliers have to incur additional costs on their maintenance of supply chain and value addition. The role of fishery cooperatives is also not satisfactory. Secondly, there are certain problems at the level of wholesalers in the supply chain leading to high cost of the fishes ready for supply because wholesalers buy fishes in bulk from producers/auctioneers and sell

them to retailers or other traders with some improvement in terms of cleaning, sorting, grading, icing and packing of the fish before sale. Exact information on the marketing cost of wholesalers is not available, but it has been found that cost structure of wholesalers in India is on the higher side due to value addition also, besides supply chains costs. They usually know the demand for species outside markets and are aware of average trend of daily fish catches at the landing centers. The wholesalers assume the risk of selling the fish and therefore keep a higher margin as compared to producers/auctioneers.²⁴ The wholesalers also have to meet the cost of transporting the fish to the markets. So the wholesalers have to face the problem of higher cost of supply chain due to quality maintenance and value addition practices.

Thirdly, the retailers are directly purchasing fish from the commission agents and wholesalers who took part in the auctioning at the landing centers.²⁵ The fish retailers engage in their trade in various ways, they procure their fish directly from landing centres, where they participate in daily auctions of the catch, they buy from traders and merchants, or they buy from the wholesale markets for resale at retail/local markets. Retailers/Vendors also carry out value addition by cleaning, sorting, grading,²⁶ and icing of the fish. Fish may be sold as either (a) fresh fish that is stored in ice and sold in local or distant markets or door-to-door by vendors, (b) salted, dried or smoked fish, which is sold in local markets or to merchants who take it to other markets once it is processed. Such processing is usually done by women using traditional methods.²⁷ The women vendors occupy a significant role in the marine fish marketing in the states.²⁸ They are directly participating in the auctioning and purchasing fish from the agents and wholesalers in the markets. The women vendors using ice, ice cost and transport cost of the retail/vendor markets. So there is a strong case for higher cost of supply chain and value addition at the retailer/vendor level before the stocks reach ultimate consumers. In the light of the above problems the researcher framed the following objectives.

 <p>www.thaavan.com thaavan2011@gmail.com</p>	CLEAR IJRMST	<p>Print ISSN: 2249 3492, Online ISSN: 2249 3506</p> <p>-----</p> <p>International Journal of Research in Management, Sciences and Technology</p> <p>-----</p> <p>A Blind Peer Reviewed and Open Access Journal Publication as Per UGC Care of India and SCOPUS</p> <p>Vol-10, Issue-20 pp. 25-32, July-Dec- 2020</p>
	<p>CLEAR IJRMST</p> <p><i>Indexed and Impact Factor Journal</i></p>	

Objectives of the Study

The specific objective of the study are as follows.

1. To analyse the factors leading to high cost of supply chain and value addition in marine fishery at the producers or suppliers level in the states of Tamil Nadu and Puducherry.
2. To study the wholesaler practices in marine fishery in the study area with a focus on cost intensive supply chain and value addition functions, inclusive of the role of fishery cooperatives.
3. To assess the ever increasing cost of supply chain and value addition at retail level in marine fishery in the study area.
4. To offer a model for cost control and effective supply of fishery products in the study area without compromising necessary value addition.

Methodology Adopted

The present study is based on both primary and secondary data. The primary data have been collected from producer fishermen, wholesalers, fishery cooperatives, retailers/vendors in the State of Tamil Nadu and Puducherry through a Schedule prepared separately. The secondary data were collected from relevant Web enabled sources, Journals, Magazines, Newspapers, Ministry of

Agriculture, Government of India and CMFRI Annual Reports. The period of study is ten years from 2005-2015, with reference to the analysis of secondary data. The period of collection of primary data is 2016-17, so as to give a complete picture of the chosen field. The style of thesis writing is based on the lines of Jonathan Anderson, *et al.* while the list of reference materials used for thesis writing is appended in the Bibliography, the schedules used for primary data collection are given in Appendices. The information so collected was analysed scientifically to arrive at useful findings and results for a comprehensive policy oriented suggestions.


Sampling Frame and Size

Judgement sampling method is chosen for fixing proper sampling frame of the study. As already stated the marine fishery sector in India consists of the Producers Fishermen, Wholesalers, Fishery Cooperatives, Retailers or Vendors. There are 13 and 4 marine fishery districts in Tamil Nadu and Puducherry respectively that form the universe of the study. However the researcher later limited the study to three top* marine fishery districts in Tamil Nadu (1.Kanyakumari 2.Nagapattinam 3.Ramanathpuram) and two top marine fishery districts in Puducherry (4.Karaikal 5. Puducherry). The sample size chosen is given below.

Sampling Frame

Sl. No	Sampling Districts	Selected Producer Fishermen	Selected wholesalers	Selected Fishery Cooperatives	Selected Retailers or Vendors			Total Sample Size
					Male	Female	Total	
1.	Kanyakumari	30	30	10	20	20	40	110
2.	Nagapattinam	30	30	10	20	20	40	110
3.	Ramanathpuram	30	30	10	20	20	40	110
4.	Karaikal	30	30	10	20	20	40	110
5.	Puducherry	30	30	10	20	20	40	110
Total		150	150	50	(100)	(100)	200	550

*

 <p>www.thaavan.com thaavan2011@gmail.com</p>	CLEAR IJRMST	<p>Print ISSN: 2249 3492, Online ISSN: 2249 3506</p> <p>-----</p> <p>International Journal of Research in Management, Sciences and Technology</p> <p>-----</p> <p>A Blind Peer Reviewed and Open Access Journal Publication as Per UGC Care of India and SCOPUS</p> <p>Vol-10, Issue-20 pp. 25-32, July-Dec- 2020</p>
	<p>CLEAR IJRMST</p> <p>Indexed and Impact Factor Journal</p>	

Top refers to districts having more number of fish landing centres as compared to other coastal districts – Please see Appendix V.

Pretest and Pilot Study

A pretest of the schedule was conducted during the pilot survey not only to modify the schedule in accordance to the current trends in the marine fishery sector but also to understand the pulse of the respondents. Ten per cent in each category of the chosen sample population have been contacted for the pretest and pilot survey in their respective places especially, the Producers fishermen, Wholesalers, fishery cooperatives, Retailers/Vendors in Tamil Nadu and Puducherry states.

Operational Definitions

The research study undertaken includes various concepts used mainly for theory setting and for all dimensions of analysis made. Such concepts are defined below from the view point of the author.

- Cost Effectiveness

 1. Supply Chain Partners/Supply Chain
 2. Value Addition
 3. Marine Fishery
 4. Producer fishermen
 5. Wholesalers
 6. Retailers/Vendors
 7. Landing Centers

¹ Nimble Systems Private Limited (2005), “Value Chain Analysis of Fishery in Puri and Ganjam Districts of Orissa,” Draft Report on Fishery Supply Chain, Oxfam (India) Trust, p 14.

² Chandasudha Goswami, Zade.V.S (2015), “Statistical Analysis in Fish Production in India,” International Journal of Innovative Research in Science, Engineering and Technology Volume and paper no 4, 2 p 294.

³ Chandasudha Goswami, Zade.V.S (2015), “Statistical Analysis in Fish Production in India,” International Journal of Innovative Research in Science, Engineering and Technology Volume and paper no 4, 2 p 294.

⁴ Ministry of Agriculture, Government of India, Annual Report (2013-14), “Department of Animal Husbandry, Dairying & Fisheries,” New Delhi p. 57.

⁵ H. Mohamed Kasim, V. Vivekanandan (2011), “Marine Fish Production in Tamil Nadu & Puducherry,” Central Marine Fishery Research Institute, Kerala. p 1.

⁶ B. Ganesh Kumar, K.K. Datta, P.K. Joshi, P.K. Katiha, R.Suresh, T. Ravisankar, K. Ravindranath and Muktha Menon (2008), “Domestic Fish Marketing in India – Changing Structure, Conduct, Performance and Policies,” Agricultural Economics Research Review, Volume no 22 pp 346-347.

⁷ Amin M.A, Islam.M.R, Belal Hassain. M (2012), “Marketing Channel of Dried Fish in the Southeastern Coastal Belt of Bangladesh,” Middle-East Journal of Scientific, Volume and paper no12, 3. pp 301-302.

⁸ D. Rajasenan, Rajeev.B. (2012), “Fishery Commodity Chain Trap vis-à-vis Global Quantity Standards: An Analysis of the Kerala Marine Fishery,” Developing Country Studies, Volume and paper no.2, 5. p 79.


⁹ M. Serajul Islam, Md. Akteruzzanan, Nasar Ahmed, “Study on Marketing and Value Chain of Some Commercially Important Coastal and Marine Aquatic Products of Bangladesh,” bfrf, org/aquatic-product-overview.pdf,(visited on 7-9-2015) p 7.

¹⁰ Letson Yoyala Phiri, Joseph Dzanja, Tasokwa Kakota, Mafanizo Hara (2013), “Value Chain Analysis of Lake Malawi Fish: A Case Study of Oreochromis SPP (Chambo),” International Journal of Business and Social Science, Volume and paper no 4, 2. p176.

¹¹ V.V. Devi Prasad Kotni, “A Study on Value Chain Management Practices of Fresh Fish: An Empirical Study of Coastal Andhra Pradesh Marine Fisheries,” IOSR Journal of Business and Management, p 80.

¹² Http://Www. Marketing of the Fish. Pdf. (visited on 8.11.2015) p177.

¹³ Shiferaw Mitiku Tebeka, Emmanuel Zivengem, Ushadevi K.N, K.Jesy Thomes (2013), “Value Addition in Fishery Marketing, Gains and Losses Along the Supply Chain in India,” International Journal of Research in Commerce, Economics and Management, Volume and paper no3.12. p15.

 <p>www.thaavan.com thaavan2011@gmail.com</p>	CLEAR IJRMST	<p>Print ISSN: 2249 3492, Online ISSN: 2249 3506</p> <p>-----</p> <p><i>International Journal of Research in Management, Sciences and Technology</i></p> <p>-----</p> <p><i>A Blind Peer Reviewed and Open Access Journal Publication as Per UGC Care of India and SCOPUS</i></p> <p>Vol-10, Issue-20 pp. 25-32, July-Dec- 2020</p>
	<p>CLEAR IJRMST</p> <p><i>Indexed and Impact Factor Journal</i></p>	

¹⁴ N. Aswathy, R. Narayanakumar and N. Harshan (2014), "Marketing Costs, Margins and Efficiency of Domestic Marine Fish Marketing in Kerala, Indian Journal of Fish, Volume and paper no 61, 2 p 99.

¹⁵ KG. Kumar (2010), "Women Fish Vendors in India: As Information Booklet," International Collective in Support of Fish Workers, p 8.