



Women Empowerment and Fisheries Sector in Kerala

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Central Marine Fisheries Research Institute
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FOREWORD

Fisheries sector provides an important source of food and nutritional security and livelihood for millions of people around the world. The complementarity and interdependence among the women and men is essential for the sustenance of the sector. In fishery sector women play significant role in maintaining household and community needs. Yet their roles remain largely unarticulated and unacknowledged. It is being recognized that fisheries as a sector will achieve full development if women involved in the sector have equal opportunities with men. The empowerment of women is very important for the socio-economic development of the fisherfolk. It is the need of the day to empower the women - socially, economically, politically, and legally in various facets of their life in order to sustain their livelihoods more effectively.

The research study on “Empowering women through fish processing and marketing in Kerala” analyses the diversified role of women in fisheries sector and their level of empowerment. The outcome of the research study would also serve as a useful handbook for research workers and policy makers in evolving specific goal oriented programs for the growth of the women in fisheries in particular and fisheries sector *per se*. The book titled “Women Empowerment and Fisheries Sector in Kerala” by Dr Shyam S.Salim, Ms. Bindu Antony, and Dr Geetha.R of Socio Economic Evaluation and Technology Transfer Division of Central Marine Fisheries Research Institute deals the subject in a coherent and systematic manner. The book documents the status of the women in fisheries sector and suggests the need for strengthening the means of empowerment for improved income generation and better standard of living. I compliment the authors for the successful and timely completion of the project.

13.11.2010
Kochi

R. Narayana Kumar
Head-in – Charge
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PREFACE

In the name of God the most benevolent and merciful

The principle of gender equality is enshrined in the Indian Constitution in its Preamble, Fundamental Rights, Fundamental Duties and Directive Principles. Gender disparity manifests itself in various forms. The underlying causes of gender inequality are related to social and economic structure, which is based on informal and formal norms, and practices. Most dimensions of social and economic life are characterized by pattern of inequalities between men and women.

In recognition of this, a growing number of developmental agencies are now adopting the 'gender and development' approach and there has been a marked shift in the approach to women's issues from 'welfare' to 'development' as women's issues have moved rapidly up the policy agenda. Empowerment of women has been recognized very well in this context.

Women play significant role in the fisheries sectors in terms of their involvement in fish related activities viz. fish vending; fish drying, value addition, fish packing, and marketing. Fisherwomen have multi-faceted tasks to perform not only in fisheries but in their families and communities, Yet their role is remain unrecognized. This situation has to change and women should be considered as equal partners and productive participants in fisheries activities that will improve their own and their family's nutritional and living standards. Though, the status of womenfolk in Kerala gone up considerably with the influence of education, the condition of fisherwomen remains unenviable. Little attention has been given to accord the role of women in fisheries as far as policy makers are concerned. The fact is that women have demonstrated their ability to work successfully at all levels of the sector, their roles were undermined. This particular research study is providing an opportunity to heighten the awareness on empowerment levels of fisher women being involved in fishery sector. The book on "Women Empowerment and Fisheries Sector in Kerala" " is an output of research conducted among 200 fisherwomen from various occupational groups in analyzing their level of income generation and empowerment status.

The authors wishes to thank Dr. G. Syda Rao, Director, CMFRI for providing all moral and support and guidance in conducting this study .The authors also wishes to place on record their gratitude to Director, NCAP and NAIP for providing an opportunity to initiate this work in Kerala. On a personal note the authors wish to place a record of gratitude to Dr Ganesh Kumar, Senior Scientist, NCAP, New Delhi.

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13.11.2010
Kochi

Shyam S.Salim
Bindu Antony
R. Geetha

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ADAK	Aquaculture Development Agency of Kerala
ADB	Asian Development Bank
AIDS	Acquired Immune Deficiency Syndrome
ANOVA	Analysis of Variance
BC	Backward Caste
CIDA	Canadian International Development Agency
CIFE	Central Institute of Fisheries Education
CMFRI	Central Marine Fisheries Research Institute
DFM	Dry Fish Maker
DIFD	Department for International Development
DoF	Department of Fisheries
DME	Development of Micro Enterprise
EEZ	Exclusive Economic Zone
EU	European Union
FAO	Food and Agriculture Organization
FFDA	Fish Farmers Development Agency
FIRMA	Fisheries Resources Management Agency
FIR	Fish Retailers
FIV	Fish Vendors
GDP	Gross Domestic Product
GoM	Gulf of Mannar
GPP	Grama Panchayath President
HRD	Human Resource Development
Hudco	Housing Development Corporation
ICT	Information and Communication Technologies
IFAD	International Fund for Agricultural Development
IMR	Infant Mortality Rate
INR	Indian Rupee
KSMTF	Kerala Swathanthra Matsyathozhilali Federation

KSFWFB	Kerala State Fishermen Welfare Fund Board
KVK	Krishi Vigyan Kendra
LIC	Life Insurance Corporation
LSG	Local Self Government
MBC	Most Backward Caste
MFRA	Marine Fisheries Regulation Act
MLA	Member of Legislative Assembly
MMR	Maternal Mortality Rate
MP	Member of Parliament
MPEDA	Marine Products Export Development Authority
MSC	Marine Stewardship Council
MSY	Maximum Sustainable Yield
NGO	Non Governmental Organization
NIFAM	National Institute of Fisheries Administration and Management
NCW	National Commission for Women
OC	Other Caste
OEC	Other Eligible Caste
PCR	Polymerized Chain Reaction
PLR	Prime Lending Rates
POR	Prevalence Odds Ratios
PRI	Panchayath Raj Institutions
RPE	Rating of Perceived Exertion
SAF	Society for Assistance to Fisherwomen
SC	Scheduled Caste
SHG	Self Help Groups
SPC	Secretariat of the Pacific Community
ST	Scheduled Tribe
SWOL	Strength Weakness Opportunities and Limitations
TEAP	Tsunami Emergency Assistance Project
TMV	Theeradesa Mahila Vedi
TRP	Tsunami Rehabilitation Project

UNDP	United Nations Development program
UNESCO	United Nations Education Science and Cultural Organization
UNESC	United Nations Economic and Social Council
USAID	United States Agency for International Development
VAP	Value Added Producers
VMS	Vertical Marketing System
WHO	World Health Organization
WTO	World Trade Organization



WOMEN IN FISHERIES : THE UNTOLD TRUTH

A. WOMEN IN FISHERIES – THE UNTOLD TRUTH

“Investing in women capabilities and empowering them to exercise their choice is not only valuable itself but also the surest way to contribute to the economic growth and development”. (UNDP-2008)

Global fisheries sector

Fish is the world's largest wild food harvest and provides a vital source of protein as well as cash income for many families in the developing world. Fisheries and aquaculture play, either directly or indirectly, an essential role in the livelihoods of millions of people around the world. In 2009, 43.5 million people were directly engaged- part time or full time, in primary production of fish, either by fishing or in aquaculture. More than 120 million people throughout the world are estimated to depend on fish for all or part of their incomes. In 2009-10 the global production from fishing and aquaculture combined reached approximately 145 million tonnes, of which 110 million were for human consumption. World exports of fish and fishery products reached US\$94.5 billion in 2009. In 2009, 194 countries reported exports of fish and fishery products.

Fisheries sector in India

The fisheries sector has a pride of place in the national economy of India. The socio-economic development of this vast population, therefore, presumes great importance in any developmental strategy. It is estimated that there are 5.4 million people fully engaged in fisheries activities. India is indeed endowed with vast and varied fishery resource and a steady growth has been observed in harnessing fisher resources in the recent years.

Fisheries contribute about 1.08 per cent of India's GDP, which forms about 4.3 per cent of the agricultural GDP (2008-09). The sector provides employment to about 14 million people in its primary, secondary and tertiary segments. The sector is also an important source of livelihood for women: it is estimated that in countries such as India, they represent on average half of the fisheries workforce (including post-harvesting activities).

Fisheries has a pivotal role to play in socio economic development of our country as it helps in increasing food supply, generate job opportunities, raising nutritional level, earning foreign exchange etc. The geographical base of Indian marine fisheries has 8219 km coastline, 2.02 million sq. km of Exclusive Economic Zone including 0.5 million sq. km of continental shelf and 3937 fishing villages. India's vast coastline provides food, stability, and income-producing opportunities for many of India's economically disadvantaged.

During 2008-09 total fish production of 7.6 million metric tonnes had nearly 55 per cent contribution from the inland sector and 65 per cent from the marine sector. According to the reports of the National Fisheries Development Board, Government of India, during 2008-09 India contributed about 4.4 per cent of the global fish production. In the post independent period India's marine fish production increased from 0.5 million tonnes in 1950 to three million tonnes annually. The per capita fish availability had been 9.0 kgs and annual export earnings were to the tune of 1.1 billion dollars during 2009-10 (INR).

Indian fisheries and aquaculture has proved to be an important sector not only for food production and providing nutritional security to the food basket but also for contributing to the agricultural exports. With diverse resources ranging from deep seas to lakes in the mountains and more than 10 per cent of the global biodiversity in terms of fish and shellfish species, the country has shown continuous and sustained increments in fish production since independence. India is the third largest producer of fish and second largest producer of inland fish in the world. It has been recognized as a powerful income and employment generator as it stimulates growth of a number of subsidiary industries and is a source of cheap and nutritious food besides being a foreign exchange earner. They are also the dominant source of inexpensive animal protein for India's enormous domestic market that totals over a billion people. Of the annual 2.2 mmt catch, 65 per cent is marketed as fresh fish for direct human consumption, and the demand is ever increasing along with India's population.

Fisheries potential of inland sector is estimated to be 4.5 million tonnes against the present production of 3.50 million tonnes. While marine resource of country having potential of 3.9 million tonnes we are able to explain only 2.94 clearly showing 0.96 million tonnes of marine fish production is still untapped.

Fisheries sector in Kerala.

Fisheries form one of the most important sectors of Kerala's economy. Kerala is a coastal state and is bordered on the West by the marine flora and fauna rich Arabian Sea. Kerala is situated in the South West corner of the Indian peninsula. The coastline of the state runs to a length of about 590 km. The territorial limits of the state is about 22 kms from the sea shore and the total area covered by the sea that falls within this territory comes up to around 13,000 square kilometers. This is the area in which the marine fishermen of the state are allowed to venture. The shallow seabed surrounding the state of Kerala comes to around 3919 square kilometers. This is the most fertile region of the Arabian Sea as far as fisheries are concerned. Not only do the fisheries contribute to about 3 per cent of the economy of Kerala they also earn the state a great deal of foreign exchange and goodwill.

Fisheries is a prime and growing sector of the Kerala economy which has been registering consistent growth of 5-6 per cent during the past three decades .The fisheries sector of Kerala is blessed with huge resources and caters to the export market of US, Europe and Asian destinations. During the year 2008-09 the fish production in

Kerala was 5.83 lakh tonnes which normally revolves around 6 lakh tonnes on a decennial average basis. The marine water resources of this small State are only about 1.5 lakh sq. km., out of which around 40,000 sq. km. is in the continental shelf region. The total potential marine fish stock of this State is estimated as 7.5 lakh tonnes, which is about 30 per cent of the country's potential. The total populace of fisherfolk residing in the state of Kerala is an estimated 10.85 lakhs, distributed across 222 fishing villages. Among these the number of fishermen who have taken up marine fishing as their occupation is believed to be about 2.2 lakhs. They and their families have taken up domicile in the coastal areas of the state and built up hamlets of hutments in these regions. In the state of Kerala about 1.65 million people are engaged in allied activities of the fishery sector. The workers of units involved in drying, preserving, packaging, transporting and exporting the fishes and seafood are included in this count. In the context of Kerala, the geographical condition of the state is favorable for reaping the rich marine wealth. Kerala occupies a prime position in fisheries and is first among the Indian states to introduce mechanization of boats through the Indo-Norwegian project in the sixties.

Fishing industry of Kerala which comprises of fish catching, processing and marketing provides employment to over 3.5 lakh person which constitutes nearly five per cent of the workforce in the state. The fishing industry is making valuable contribution to our exports and thus plays a vital role in preserving our foreign exchange reserves. Kerala has a very dominant position among the maritime states of the country in the export of marine products. As in the case of marine fish production, Kerala's contribution to the earnings from the export of marine products is tremendous. The number of active fishermen in the marine sector is 147875 and in the inland sector it is 42593.(Census-2005)

Though this coastal line is less than 10 per cent of the country's total coastal line, its water front contributes about 25 per cent of the country's fish catch. Economically, the fish caught by around two lakh active fishermen contribute to the tune of about 1.86 per cent of the State's net domestic product. Kerala holds the major share of exports in this sector from India.

Global fisheries sector *vis-a-vis* women

"In order to awaken the people it is the women who have to be awakened, once they are on move the household moves, village moves and the whole country moves" Indira Gandhi(1984)

Women play an important role in Fisheries Sector all over the world. In countries like South America, Srilanka, West Africa women equally contribute to that of menfolk. Women and men are engaged in complementary activities in fisheries. In most regions, the large boats used to fish offshore and deep-sea waters have male crews, while women manage smaller boats and canoes in coastal or inland waters – harvesting bivalves, molluscs and pearls, collecting seaweed and setting nets or traps. Mostly

women are not accepted on-board fishing vessels, but well recognized in areas such as financial management, processing, record keeping and trading. (FAO, 2004).

In many areas, women have also assumed a leading role in the rapid growth of aquaculture. They often perform most of the work of feeding and harvesting fish, as well as in processing the catch. In many countries, it is mostly women who are engaged in inland fishing. In Africa, they fish the rivers and ponds. In Asia, where fish is an integral part of the diet of many cultures, women are active in both artisanal and commercial fisheries. In parts of India, women net prawn from backwaters. In Laos, they fish in canals. In the Philippines, they fish from canoes in coastal lagoons. In artisanal fishing communities women are mainly responsible for performing the skilled and time-consuming jobs that take place on-shore, such as net making and mending, processing the catch and marketing it.

The most important role of fisherwomen in both artisanal and industrial fisheries is at the processing and marketing stages. In some countries, women have become important entrepreneurs in fish processing; In fact, most fish processing is performed by women, either in their own cottage-level industries or as wage labourers in the large-scale processing industry. Women are actively involved in the processing of fish catch - sun-drying, salting, smoking and preparing fish and fish-derived foods such as fish paste and cakes, either in cottage level industries, or as wage labourers in large scale processing industries. They are also normally the ones who subsequently sell the fish products. In some developing regions women have become important fish entrepreneurs by providing labour before, during and after the catch in both artisanal and commercial fisheries.

Women dominate the seafood processing sector the world over. The manual dexterity required in processing seafood which involves activities like sorting, grading, peeling, gutting, slicing etc., is the primary reason for this dominance. However, women have been confined to the lower rungs of the production process. Though skill is defined as the ability or talent to perform a task well or better than average, the work done by women technically comes under the 'unskilled' or 'semiskilled' category as their employment does not require a formal education or education only up to some basic level.

However women play an important role in fisheries all along the coastal areas and all the shore based activities are more or less women oriented. They do involve themselves in multifaceted activities often imperceptible to the world outside. As such, women earn, administer and control significant sums of money, financing a variety of fish-based enterprises and generating substantial returns for their household as well as the community.

Indian fisheries sector *vis-a-vis* women

The Father of “Green Revolution” in India Dr.M.S. Swaminathan state that some historians believe that it was women who first demonstrated crop plant farming. “While men went out for hunting in search of food women started gathering seed from flora on it started as cultivating practice for food, fodder and fiber”. This all indicate that since beginning women have played pioneer role in agricultural sciences.

Women, who constitute approximately half of India's population, play a vital role in the operation of the fisheries and their continuing growth as a component of the agriculture sector of the economy. It is estimated that there are 5.4 million people fully engaged in fisheries activities, of which, 3.8 million are fishermen and 1.6 million are fisherwomen. However, there is a sizeable difference in the income earned between males and females with the former being paid the higher benefits even in the lean season.

In India, about 25 per cent of women labour forces are involved in pre-harvest activities, 60 per cent in export marketing and 40 per cent in internal marketing. About 0.5 million women are employed in the pre and post harvest operations in marine fisheries sector out of a total of 1.6 million workforce. Opportunities for women in fisheries could be enlarged in the field of integrated aquaculture, fishery estates, marine products processing, manufacture and export, development, management of fishery infrastructure, marketing and export as well as in research and technology development.

The contributions of the fisherwomen penetrate every aspect of postharvest handling, preservation, processing, and marketing of seafood products, and provide an integral link between producers and consumers. In the fishing areas of the southern maritime states of Andhra Pradesh, Karnataka, Kerala, and Tamil Nadu, the most preferred activities of fisherwomen include fresh fish marketing and traditional fish processing for their livelihoods. Additionally fisherwomen involved in fishery related activities such as clam collection and processing; fish processing and aquaculture in Kerala, prawn seed collection; fish and shrimp farms and hatcheries, and salt loading in Andhra Pradesh; and working at landing centers, by-product units, and surimi plants in Karnataka. About 50-70 per cent of the fisherwomen and their families are dependent on fresh fish marketing and traditional fish processing for their livelihoods. Fisherwomen in Maharashtra coast are mostly engaged in fishing, serving as crew on the boats with men, as well as, in the post harvest activities. The activities like, sorting, washing and drying of fish needs to be improved to minimize the energy required by women in carrying out these activities

Over the years even though the marine landings depleted the share of the primary stakeholders in the consumer share hasn't decreased due to the sustained effort of the fisherwomen due to her participation in the forward integration in the marketing function as vendors/ retailers

A significant number of women involved either independently in processing fishmeal by sun-drying methods or work in by-product units. The seafood export sector, which utilizes 6 per cent of the marine catch, also employs large numbers of female workers to grade, pack, and freeze seafood products for export. The women in fishing communities play important role in the fisheries sectors in terms of their involvement in fish related activities viz. fish vending; fish drying, prawn peeling, sorting, grading, fish packing, and net making.

Kerala fisheries sector *vis-a-vis* women

The fisherwomen in Kerala play important role in the fisheries sectors in terms of their involvement in fish related activities viz. fish vending; fish drying, prawn peeling, sorting, grading, fish packing, and net making. The average annual income of a fisherwoman in Kerala varied according to their occupations ₹ 8232 in sorting, ₹ 9720 in peeling, ₹ 18000 in value additions, ₹ 23328 in curing and ₹ 59760 in vending (CMFRI-2008). Mostly, they are involved in fish marketing followed by housekeeping, fish processing, etc. In the fish processing units women play an important role. The men in capture fisheries are engaged in going out in to sea. After men return from sea, the work is taken over by women. This will relive additional burden of men, who again, go out into the sea after gainfully engaging the women. Preprocessing and fresh fish marketing are the major roles performed by fisher women.

The activities and responsibilities of the women go far beyond providing household support or supplementing household income. Adjustment with fishermen, conscious savings and household contributions, permit women to meet daily household needs, to keep money for unexpected events or incidental expenses, and to accumulate capital at the same time.

Rural women in our country have always contributed substantially to productivity and rural economy. Yet their condition remains unenviable. Women in the traditional fisheries sector of Kerala comprising 49 per cent for the population (excluding children) are no exception to this. The paradoxical situation of the women viz., contributing to higher productivity but living in deplorable condition, is ripe for change. Matsyafed, as a Co-operative Federation has taken up the challenge of strengthening fisherwomen to take up the reins of their lives in their own hands and is now in the process of formulating and implementing projects aimed at the emancipation of women through co-operatisation.

Problem focus

Development of any nation, society, community, in any field depends primarily on the indispensability and complementarity between the men and women. But over years women have suffered utter neglect and deprivation. Realizing the truth “United nation declared ten year period ended in 1985 as “Decade of women” with a view to promote genuine equality to that of men. For third world countries like India where women constitute almost 50 per cent of population and their contribution in agriculture, fisheries, and forestry cannot be ignored. Although the status of women in the world has gone up considerably high after Second World War still it leaves much to be desired.

Persistent poverty and deteriorating economic conditions have forced many women from poor rural households to work outside their homes and ventured into varied economic activities while at the same time continuing to perform their traditional household duties. In India 1.6 million fisherwomen depend on fishery resources for food, work, income and identity especially, to nurture their children. Yet, they tend to have less control than men over these resources and the associated wealth.

Women play significant roles in all aspects of fisheries; both in the artisanal, small-scale sector and in the commercial sector, yet their roles remain unarticulated and unrecognized.

Mechanization has drastically limited the role of women and men in the fishing business. This has brought a lot of changes in the socio-economic conditions of fisherwomen adversely affecting their livelihood. The advent of motorization of country craft led to concentrated landing thus denying employment opportunity to small scale fish vendors. The modernization also resulted in replacement of indigenous handmade nets by machine made nets. No attention has been given to accord the role of women in fisheries as far as policy makers are concerned.

Mostly women in fisheries lack access to physical and capital resources, to decision-making and leadership positions, to training and formal education. Access to these critical resources and services would improve the efficiency, profitability and sustainability of their activities. Although large-scale fisheries development projects, mechanization, and improved technology may increase productive capacities in fisheries, they can also increase the post-harvest workload of women. This extra burden is often undertaken without a rise in pay or at the expense of other possible income-generating activities. If a fisheries activity is enlarged or mechanized, it often becomes the domain of men.

The major constraints faced by women in fisheries include limited access and control over resources like water, land, boat, crafts and gear, knowledge, training, finance, tools, technologies, information technologies, time, little or no influence on the decision-making process especially in the public sphere, lack of proper infrastructure and support facilities for marketing and processing etc. Fishing villages are deprived of

basic amenities such as better educational and health care facilities, transportation and communication facilities, water supply and electricity etc. Problems like anemia, malnutrition and vitamin deficiency is observed in fishing communities especially among fisherwomen and children. Furthermore poor awareness/knowledge in the areas of health, nutrition and child care heightened their problems.

Initiatives in fisheries management and fisheries conservation are rarely scrutinized for their potential impacts on women. Women participate in fisheries in different ways in different sector. Women should be equal partners and productive participants in fisheries activities that will improve their own and their families nutritional and living standards. They should be given the opportunity to acquire appropriate technologies that will enable them to contribute effectively to sustained fisheries development and growth. It is therefore essential to increase women's participation and decision-making in fisheries development efforts. The proper policy implication to accord the role of women in fisheries should be given emphasis.

Prospects

Development efforts have shown that sustained improvements in productivity and the sustainable use of fisheries and other natural resources can be achieved if women's crucial role is acknowledged. A striking example is the development and widespread adoption of the Chorkor oven, which has improved the working lives and incomes of women fisherfolk throughout Africa. Most recently, a tele food-funded project in Mauritania has provided 50 women in fishing cooperative with a new fish-drying plant, which will allow them to produce protein-rich food that can be transported safely across Mauritania's vast, arid hinterland.

Culture sector have vast field for women participation especially in small and backyard ponds. In Assam, Orissa and West Bengal these type of ponds are ideal site for women. They help in pond fertilization, feeding, weed control, manuring and harvesting. Their inputs result in minimizing the cost of production. In some states as Assam and Kerala, women are also engaged in seed collection from estuaries and backwater. Now sea weed production is rapidly emerging field for women which surely making good earning with employment to poor fisherwomen. Pearl culture is another field where immense of potential can be used. Feed preparation, net making practices are also common for fisherwomen now. But these practices are required to gain status of small scale industry so that women participation earning can be ensured to a certain level.

Post harvest activities start after harvesting of fish to till it reaches to consumer. It includes icing, boxing, drying, gutting, smoking, canning and marketing offering vast opportunities for women. Icing gutting, feeling drying, packing in most of the processing plants is done by women. Marketing activity makes women to earn profit depending upon kind of species they handle, their investment capacity and the marketing assessment. Remoteness of fisherfolk villages from urban areas, and lack of proper transport facility create problem in supply of fish value added product like fish pickle, Massimo dried fish can increase the earning of fisherwomen. Providing standard

drying racks, smoking kilns and fish transport containers is also important from standard of product and their health point of view.

It should also be noticed that per capita land availability is decreasing rapidly it was 0.48 hectare in 1950 which has decreased to 0.20 hectare in 1981 and likely to decrease to 0.14 hectare in 2000 A.D. So water resource should be explored in way so that they can meet the demands of increasing population. The number of fish consumer is also increasing rapidly it at present it is 56 percent in India, by 2030 it is expected to become 70 percent which makes it becomes necessary to increase the women role in fisheries field. The best way to improve status of fisherwomen in India is comprehensive human resource development programme for fisherwomen. It should be mixture of literacy, co-operative, education, family management and transfer of technology so that can contribute more effectively to fisheries sector.

Scope of the study

The study will provide a framework for drawing suitable programmes and viable business opportunities for the upliftment of traditional fisherfolk with particular focus on fisherwomen. In short, the study will be highly useful to researchers, planners and policy makers in overcoming the problems of fisherwomen and in formulating strategies for the socio-economic development and empowerment of fisherwomen.

In India, the developmental plan for marine fisheries lays emphasis on improving the lot of marginal fishermen. A concerted effort to coordinate the fishing would improve the subsidiary activities of fishermen household, by tapping the potential of the fisherwomen.

Fish landed would definitely go a long way in improving the socio-economic condition of this sector. The post-harvest technology for handling fish can be easily transferred to these beneficiaries. Giving due consideration to the factors, like, relatively low level of formal education of the beneficiaries and the need to design a cost-conscious configuration of processing equipment, Integrated Fisheries Project has developed and popularized low cost technologies that could be adopted by the coastal fisherwomen for self-employment

Objectives

The overall objectives of the study is to document the empowerment status of women in fisheries across the different occupation in which they are involved
However the specific objectives are

- To analyse the role of fisherwomen in processing and marketing of fish and fishery products as a source of income generation and livelihood option in Kerala

- To compare the levels of employment and income between fisherwomen involved in low value fish processing vis-à-vis value added fishery products and between fisherwomen as retailers and vendors
- To estimate the social, political and economic empowerment of fisherwomen involved in processing and marketing of fish and fishery products in Kerala
- To suggest policy options for empowerment of fisherwomen through fisheries oriented activities in Kerala

Hypothesis:

There exists no significant difference in the empowerment levels of fisherwomen across the different occupations

Duration of the Study

The study was conducted during the period from July 2010 to January 2011.

Methodology

The study was based on the data collected from primary and secondary sources. The primary data was collected from selected respondents using comprehensive and pre-tested questionnaires. The primary data provided concise, clear, complete, and unbiased information about the respondent. The important variables considered for the study were gender, age, religion, caste, family structure, education level, occupation, income level, assets, expenditure level, frequency of fish consumption along with total and average monthly quantity of fish and fish substitutes purchased, problems in fish consumption, awareness about the value added fish products, and problems in consumption of value added products.

The secondary data was obtained from the existing electronic and literary sources, such as MPEDA, various journals, periodicals, magazines, reports of the different State, National and International fisheries departments and organizations. This secondary data was very important in supplementing the primary data.

Limitation of the study

The present study relied on primary data collected through the questionnaire survey methodology. The inherent faults and limitations in the primary data collection like respondents' recall bias –due to the absence of proper records on their income, expenditure, profit etc with the respondent fisherwomen are to be recognized. The information was collected from the respondents based on their memory and experience and the bias cannot be eliminated fully. But in the context of the study, care was taken to avoid personal bias while giving information. Apparent limitations like getting only seasonal information; having data that is for a specified period of time, depending on data that is word of mouth (with its inherent contradictions) as primary data should be considered. The income and expenditure pattern and empowerment levels of the

respondents are subject to change in the short run as well as long run, also need to be considered. This study was confined to the coastal districts of Kerala state. Here time constraints permitted the selection of respondents by random sampling of only representative areas of the whole coastal districts of Kerala for the micro level study.

ORGANIZATION OF THE BOOK:

- A. **WOMEN IN FISHERIES – THE UNTOLD TRUTH** : discusses on the Global fisheries sector, Fisheries sector in India, Fisheries sector in Kerala, Global fisheries in India – *vis- a- vis* women, Indian fisheries sector *vis- a- vis* women, Kerala fisheries sector *vis- a- vis* women, Problem focus, Prospects, Scope of Study, Objectives, Hypothesis, Duration of study ,Methodology and Limitations of Study
- B. **PARADIGMS AND PERSPECTIVES** : deals on the major concepts and review of the past studies done related to women empowerment in fisheries
- C. **WOMEN EMPOWERMENT IN FISHERIES: AN APPROACH**: explains on the objectives , locale of the study, period of study, data collection and methodology and tools of analysis
- D. **KERALA FISHERIES- AN OUTLOOK** : describes SWOL analysis, Present Status, Strengths, Weaknesses, opportunities an Limitations, Strategies and Policies and The Fisheries Policy
- E. **REFLECTION AND UPSHOT**: deals with the results and discussion based on the sample survey undertaken among the four occupational groups of fisherwomen
- F. **SUMMING UP**: highlights the conclusion and meaningful inferences drawn based on the results of the study
- G. **THE WAY FORWARD**: provides the policy implications of the study and approaches



PARADIGMS AND PERSPECTIVES

B. PARADIGMS AND PERSPECTIVES

The Section on Paradigms and Perspectives is a condensed version of an exhaustive literature survey and is an important aspect of any scientific endeavor as it helps the researcher to develop good understanding of the present study and to formulate appropriate research methodology. It also helps to focus the research to identify the problems and relate the empirical findings of those of other done in past.

It is imperative in any study, that for the twin purposes of clarity and comprehension, it is necessary to review the various concepts, research methodologies and analytical tools used by researchers in earlier studies. This effort would help the researcher to have a more precise understanding of the intricacies involved in the research problem and would also facilitate the researcher to modify and improve the research problem. This would also help in developing a framework in the right direction to suit the problem situation. The findings of earlier studies would guide the researcher in formulating the hypotheses and objectives and enable him to evaluate the validity of his own findings.

This Section briefly reviews the concepts and findings of the past studies, which are relevant for the present study. This particular section discusses on the changing role of women in fisheries over the years and the transformation of fisherwomen. The Section put forth the different concepts related to the empowerment of the women. The Section also reviews the progress of the women related works and the status of women in fisheries.

The section is discussed under the following head

- A. Concepts
- B. Review on the past studies done

A. Concepts

- 2.1.1 Market
- 2.1.2 Marketing
- 2.1.3 Marketing channels
 - 2.1.3.1 Marketing channel functions and flows
 - 2.1.3.2 Marketing channel levels
 - 2.1.3.3 Marketing channel dynamics
- 2.1.4 Market functionaries
 - 2.1.4.1 Wholesaling

- 2.1.4.2 Retailing
- 2.1.5 Fish Market
- 2.1.6 Fish Vendor
- 2.1.7 Fish Retailer
- 2.1.8 Fish Processors
 - 2.1.8.1 Dry Fish making
 - 2.1.8.2 Value added fish products
- 2.1.9 Gender
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 - 2.1.11 Gender Mainstreaming
 - 2.1.12 Empowerment
 - 2.1.13 Women Empowerment
 - 2.1.14 Economic Empowerment
 - 2.1.14.1 Fisherwomen *vis a vis* economic empowerment
 - 2.1.15 Social Empowerment
 - 2.1.16 Political empowerment
 - 2.1.17 Legal Empowerment
 - 2.1.18 Problems
 - 2.1.19 Prospects

2.1.1. Market

Market is a social arrangement that allows buyers and sellers to discover information and carry out a voluntary exchange of goods or services. It is one of the two key institutions that organize trade, along with the right to own property. In everyday usage, the word "market" may refer to the location where goods are traded, sometimes known as a marketplace, or to a street market. A marketer can readily satisfy everyone in a market. Therefore marketer starts with market segmentation and it can be identified by examining demographic, psychographic and behavioral difference among buyers. For each chosen target the firm develops a marketing offering that is positioned in the mind of target buyers as delivering some central benefit.

The function of a market requires, at a minimum, that both parties expect to become better off as a result of the transaction. Markets generally rely on price adjustments to provide information to parties engaging in a transaction, so that each may accurately gauge the subsequent change of their welfare. In less sophisticated markets, such as

those involving barter, individual buyers and sellers must engage in a more lengthy process of haggling in order to gain the same information. Markets are efficient when the price of a good or service attracts exactly as much demand as the market can currently supply. The chief function of a market, then, is to adjust prices to accommodate fluctuations in supply and demand in order to achieve allocative efficiency.

Markets of varying types can spontaneously arise whenever a party has interest in a good or service that some other party can provide. Hence there can be a market for cigarettes in correctional facilities, another for chewing gum in a playground, and yet another for contracts for the future delivery of a commodity. There can be black markets, where a good is exchanged illegally and virtual markets, such as “eBay” in which buyers and sellers do not physically interact. There can also be markets for goods under a command economy despite pressure to repress them.

Thomas and Maurice (2005), stated that a market is any arrangement through which buyers and sellers exchange final goods or services, resources used for production, or, in general, anything of value. The arrangement may be a location and time, such as a commercial bank from 9 A.M. until 6 P.M. on weekdays only, an agricultural produce market every first Tuesday of the month, a trading “pit” at a commodity exchange during trading hours, or even the parking lot of a stadium an hour before game time when ticket scalpers sometimes show up to sell tickets to sporting events. An arrangement may also be something other than a physical location and time, such as a classified ad in a newspaper or a website on the Internet. You should view the concept of a market quite broadly, particularly since advances in technology create new ways of bringing buyers and sellers together.

Markets are arrangements that reduce the cost of making transactions. Buyers wishing to purchase something must spend valuable time and other resources finding sellers, gathering information about prices and qualities, and ultimately making the purchase itself. Sellers wishing to sell something must spend valuable resources locating buyers (or pay a fee to sales agents to do so), gathering information about potential buyers (*e.g.*, verifying creditworthiness of legal entitlement to buy), and finally closing the deal. These costs of making a transaction happen, which are additional costs of doing business over and above the price paid, are known as transaction costs. Buyers and sellers use markets to facilitate exchange because markets lower the transaction costs for both parties.

Kotler (2003), described that “market” is a physical place where buyers and sellers gathered to buy and sell goods. Economists now describe a market as a collection of buyers and sellers gathered to buy and sell goods who transact over a particular product or product class (the housing market or grain market); but marketers view the sellers as constituting the industry and the buyers as constituting the market. Sellers and buyers are connected by four flows. The sellers send goods and services and communications (ads, direct mail) to the market; in return they receive money and

information (attitude, sales data). The inner loop shows an exchange of money for goods and services; the outer loop shows an exchange of information.

Modern economies abound in markets. Manufacturers go to resource markets (raw material markets, labor markets, money markets), buy resources and turn them into goods and services, and then sell finished products to intermediaries, who sell them to consumers. Consumers sell their labor and receive money with which they pay for goods and services. The government collects tax revenues to buy goods from resource, manufacturer, and intermediary markets and uses these goods and services to provide public services. Each nation's economy and the global economy consist of complex interacting sets of markets linked through exchange processes.

Today we can distinguish between a marketplace and marketspace. The marketplace is physical, as when one goes shopping in a store; marketspace is digital, as when one goes shopping on the Internet. Many observers believe that an increased amount of purchasing will shift into marketspace (Rayport and Sviokla, 1994 & 1995).

Shyam *et al* (2005), stated that the word market comes from Latin word 'marcates' which means 'trade' or 'a place' where business is conducted. The word 'market' has been widely and variedly used to mean: a place or building, where commodities are bought and sold (*e.g.*, super market); potential buyers and sellers of product (*e.g.*, wheat or cotton market); potential buyers and sellers of a country or region (*e.g.*, Indian or Asian market); an organization, which provide facilities for exchange of commodities (*e.g.*, Mumbai Stock exchange); and a phase of commercial activity (*e.g.*, dull or bright market). Other terms used for describing markets in India are Haats, Painths and Bazaars.

2.1.2. Marketing

Marketing is said to be the business function that identifies customer needs, determines which target markets the organization can serve best, and design appropriate products, services and programmes to serve these markets. Some researchers have reported that marketing is more than an isolated business function. In fact, Kotler and Armstrong, (1999) have stated that it is a philosophy that guides the entire organization. Creating customer value and satisfaction is included in the modern marketing thinking and practice.

Kotler (2003), stated the distinguishing features between a social and a managerial definition, of marketing. A social definition shows the role marketing plays in society. One marketer said that marketing's role is to "deliver a higher standard of living." Here is a social definition that serves our purpose: Marketing is a societal process by which individuals and groups obtain what they need and want through creating, offering, and freely exchanging products and services of value with others. For a managerial definition, marketing has often been described as "the art of selling products," but people are surprised when they hear that the most important part of marketing is not selling! Selling is only the tip of the marketing iceberg.

Drucker (1973), a leading management theorist, puts it this way: There will always, one can assume, be need for some selling. But the aim of marketing is to make selling superfluous. The aim of marketing is to know and understand the customer so well that the product or service fits him and sells itself. Ideally, marketing should result in a customer who is ready to buy. All that should be needed then is to make the product or service available.

The American Marketing Association, (1995) offers the following definition: Marketing is the process of planning and executing the conception, pricing, promotion, and distribution of ideas, goods and services to create exchanges that satisfy individual and organizational goals." Coping with exchange processes calls for a considerable amount of work and skill. Marketing management takes place when at least one party to a potential exchange thinks about the means of achieving desired responses from other parties. We see marketing management as the art and science of choosing target markets and getting, keeping, and growing customers through creating, delivering, and communicating superior customer value.

2.1.3. Marketing Channels

Marketing channels are sets of interdependent organizational paths involved in the process of making a product or service available for use or consumption. Marketing channel decisions are among the most critical decision facing management. The channel chosen decisions initially affect all the other marketing decisions.

A marketing channel performs the works of moving goods from producer to consumer. It overcomes the time, place and possession gaps that separate goods and services from those who need or want them. Members of marketing channel performs a number of key functions like

- They gather information about potential and current customers, competitors and other actors and forces in the marketing environment.
- They develop and disseminate persuasive communication to stimulate purchasing.
- They reach agreement on price and other terms so that transfer of ownership or possession can be affected.
- They place order with manufacturers.
- They acquire the funds to finance inventories at different levels in the marketing channel.
- They assume risks connected with carrying out channel work.
- They provide for the successive storage and movement of physical products.
- They provide for buyers' payment of their bills through banks as other financial institutions.
- They oversee actual transfer of ownership from one organization or person to another.

There are various marketing flows in the marketing channel namely physical flow, title flow, payment flow, information flow and promotion flow. Marketing channel levels are based on the numbers of intermediaries between the producer and final consumer of the product. The various marketing channel levels are as follows:

- Zero level channels (also called direct marketing): it consists of manufacturer selling directly to final consumer.
- One level channel: it contains one selling intermediaries such as retailer.
- Two level channel: it contain two intermediaries, in consumer market these are typically whole seller and a retailer.
- Three level channels: it contains three intermediaries like in meat packaging industry wholesaler, jobbers, and retailers.

Marketing functionalities includes the intermediary like wholesaler and retailer in the marketing of a product. Wholesaling includes all the activities involved in selling goods or services to those who buy for resale or business use. Wholesaling excludes manufacturers and farmers because they are engaged primarily in production and it excludes retailer. Wholesaler are used when they are more efficient in performing one or more of the functions like selling and promoting, buying and assortment building, warehousing, transportation, financing, risk bearing, market information, management service and counseling. Retailing includes all the activities involved in selling goods or services directly to final consumers for personal non-business use. A retailer or retail store is any business enterprise whose sales volume comes primarily from retailing. Retailers offer one of the four levels of service like self-service, self-selection, limited service and full service. Major retailer types are specialty store, departmental store, supermarket, convenience store, discount store and off price retailers.

Kotler (2003), explained that to reach a target market, the marketer uses three kinds of marketing channels. Communication channels deliver and receive messages from target buyers, and include newspapers, magazines, radio, television, mail, telephone, billboards, posters, fliers, CDs, audiotapes, and the Internet. Beyond these, communications are conveyed by facial expressions and clothing, the look of retail stores, and many other media. Marketers are increasingly adding dialogue channels (e-mail and toll-free numbers) to counterbalance the more normal monologue channels (such as ads).

The marketer uses distribution channels to display, sell, or deliver the physical product or service(s) to the buyer or user. They include distributors, wholesalers, retailers, and agents.

The marketer also uses service channels to carry out transactions with potential buyers. Service channels include warehouses, transportation companies, banks, and insurance companies that facilitate transactions. Marketers clearly face a design problem in choosing the best mix of communications, distribution, and service channels for their offerings.

Stern and El-Ansary (1996), stated that marketing channels are sets of interdependent organizations involved in the process of making a product or service available for use or consumption. Marketing channel decisions are among the most critical decisions facing management. The channels chosen intimately affect all the other marketing decisions.

Marketing channels may be further be defined in different ways. According to Moore *et al*, (1976), the chain of intermediaries from whom the various food grains pass from producers to consumers constitutes their marketing channel.

Kohls and Uhl (1990), have defined marketing channel as alternative routes of product flows from producer to consumers.

2.1.3.1. Marketing channel functions and flows

Kotler (2003), expressed that a marketing channel performs the work of moving goods from producers to consumers. It overcomes the time, place and possession gaps that separate goods and services from those who need or want them. Members of marketing channel perform a number of key functions like gathering information about potential and current customers, competitors and other actors and forces in the marketing environment; developing and disseminating persuasive communication to stimulate purchasing; reaching agreements on price and other terms so that transfer of ownership or possession can be affected; placing orders with manufacturers; acquiring the funds to finance inventories at different levels in the marketing channel; assuming risks connected with carrying out channel work; providing for the successive storage and movement of physical products; providing for buyers' payment of their bills through banks and other financial institutions; overseeing actual transfer of ownership from one organization or person to another.

Some functions (physical, title, promotion) constitute a forward flow of activity from the company to the customer; other functions (ordering and payment) constitute a backward flow from customers to the company. Still others (information, negotiation, finance, and risk taking) occur in both directions. To take an example, five flows namely, physical flow, title flow, payment flow, information flow, promotion flow take place for the marketing of forklift trucks. If these flows were superimposed in one diagram, the tremendous complexity of even simple marketing channels would be apparent. A manufacturer selling a physical product and services might require three channels: A sales channel, a delivery channel, and a service channel.

All channel functions have three things in common: They use up scarce resources; they can often be performed better through specialization; and they can be shifted among channel members. When the manufacturer shifts some functions to intermediaries, the producer's costs and prices are lower, but the intermediary must add a charge to cover its work. If the intermediaries are more efficient than the manufacturer, prices to consumers should be lower. If consumers perform some functions themselves, they should enjoy even lower prices.

2.1.3.2. Marketing channel levels

Kotler (2003), stated that the producer and the final customer are part of every channel. We will use the number of intermediary levels to designate the length of a channel. Several consumer–goods marketing channels of different lengths are present: Zero level channels (also called direct-marketing channel) consists of a manufacturer selling directly to the final consumer. The major examples are door-to-door sales, home parties, mail order, telemarketing, TV selling, Internet selling, and manufacturer-owned stores.

- A one-level channel contains one selling intermediary, such as a retailer.
- A two-level channel contains two intermediaries. In consumer markets, these are typically a wholesaler and a retailer.
- A three-level channel contains three intermediaries. In the meat packing industry, wholesalers sell to jobbers, who sell to small retailers.
- Longer marketing channels can be found. In Japan, food distribution may involve as many as six levels.

Other than consumer–goods marketing channels of different lengths, industrial marketing channels and reverse-flow channels are also present in the distribution of physical goods. The concept of marketing channels is not limited to the distribution of physical goods. Producers of services and ideas also face the problem of making their output available and accessible to target populations. Schools develop “educational-dissemination systems” and hospitals develop “health-delivery systems.” These institutions must figure out agencies and locations for reaching a population spread out over an area.

2.1.3.3. Marketing channel dynamics

Shyam *et al* (2005), stated that marketing channels are routes through which fisheries commodities move from producers to consumers. The length of the marketing channel varies from commodity to commodity depending upon the quantity to be moved, the form of consumer demand and degree of regional specialization in production.

Kotler (2003), stated that distribution channels do not stand still. New wholesaling and retailing institutions emerge, and new channel systems evolve. We will look at the recent growth of vertical, horizontal, and multi-channel marketing systems and see how these systems cooperate, conflict, and compete.

2.1.4. Marketing functionaries

Shyam *et al*, (2005), stated that marketing agencies carry out marketing functions or offer marketing services. There are two main routes through which fish commodities reach the consumers. *Viz.*, the direct and indirect route

In the direct route the fish commodities generally move from producers to consumers. There is a complete absence of middlemen or intermediaries. In the indirect route the fish commodities generally move from producers to consumers through middlemen or intermediaries. The number of intermediaries may vary from one to many.

Marketing agencies may be individuals acting independently, partnerships, large firms or branches thereof co-operatives or governmental corporations. Any of these various types of economic unit may also act in several capacities at the same time.

Country buyers - Country buyers undertake the initial work of assembling produce from farms or local country markets. They may be farmers who collect the produce of other farmers, agents of processing plants, co-operative organizations and government procurement agencies. He may act either on commission or purchase on his own account.

Wholesale distributor - They may be defined as market intermediaries who sell to retailers and other merchants but not in significant amounts to ultimate consumers unless the latter are industrial users. They undertake the transport, storage and preparation for consumption of commodities. They handle and play one of the major parts in marketing. Some wholesalers are criticized as "speculators" who hamper the flow of goods through the market; a speculative buyer is one who is willing to accept greater risks than any others. By when and where demand is slack and attempting to resell when and where demand is relatively high, he is stabilizing the market moving through time and space to the advantage of society and preventing the price level from fluctuating between still wider extremes.

Packers and processors - Packers and processors change the form of the products they handle to one more convenient for marketing and more acceptable to the consumer. They provide the plant and equipment, the technical knowledge, experience and capital necessary to carry out the transformation of the product.

Processors generally derive their income from the difference between their buying and selling prices on outright purchases, plus the proceeds from the sale of by-products. They may pack or process for farmers, wholesalers or large retailers in return for a fee at a fixed rate on the volume handled.

Commission agents - Producers and wholesalers frequently wish to display their produce in markets, which they cannot conveniently attend to personally. Commission agents specialize in buying and selling for absent principals and take charge of goods on their behalf. Generally they have considerable discretion in the making of decisions and are encouraged to do well for their client by remuneration in the form of percentage of the price obtained. The commission agent runs no risk, but he must do at least as well for his client as others would if he is to maintain a steady flow of business.

Brokers - Brokers bring potential buyers and sellers together. Theirs is an extremely specialized job, involving an ultimate knowledge of supplies, requirements and prices in

various markets. The term broker is best restricted to agents who do not own or handle goods. The actual transaction takes place between the original buyer and seller with the broker as counselor or intermediary in return for a fee. Brokers widen the market beyond that otherwise accessible to a less specialized buyer and seller, because they are in touch with more dealers of the appropriate type and can keep themselves better supplied with up-to-date information.

Auctioneers - An auctioneer also offers a special service in the negotiation of purchase and sales. He concentrates buyers and sellers together at a particular time and place, negotiates sales quickly, yet in such a way that all present are informed of the bids and disposes of all the produce offered. He may furnish a place for public display and sale and usually ensures prompt payment for all purchases.

Retailers - The function of retailers is to set up establishments, procure supplies, and display them in forms and at times convenient for consumer customers. Usually the retailer buys from a few wholesale distributors or processors in relatively large lots and breaks the goods down to small lots suitable for purchase by numerous small buyers on a day-to-day basis.

Middlemen - Middlemen are those individual or business concerns, which specialize in performing the various marketing functions and rendering such services as are involved in the marketing of goods. They do this at different stages in the marketing process:

1. Merchant middlemen: Merchant middlemen are those individuals who take title to the goods they handle. They buy and sell on their own, and gain or lose depending on difference in the sale and purchase prices. Merchant middlemen are of two types namely, wholesalers and retailers.
2. Agent middlemen: They act as a representative of their clients. They do not take title to the produce and therefore do not own it. They merely negotiate the purchase and/or sale. They include commission agents and brokers.
3. Speculative middlemen: Those middlemen who take title to the product with a view to making a profit on it are called speculative middlemen. They are not regular buyers and sellers. They specialize in risk taking. They buy at lower prices and sell in the off-season when prices are high. They make a profit from short run as well as long run price fluctuations.
4. Facilitative middlemen: Some middlemen do not buy and sell directly but assist in the marketing process.

Marketing can take place even if they are not active but the efficiency of the system increases when they engage in business. The middlemen receive their income in the form of fees from those who use their services. The important facilitative middlemen include *hamals* or labourers, weigh-men, graders, transport agencies and communication agencies.

Marketing institutions - Marketing institutions are big business organizations, which have come up to operate the marketing machinery. In addition to individuals; corporate, cooperative and government institutions are operating in the field of fish marketing. They perform one or more marketing functions. They assure the role of one or more marketing agencies described earlier. Some important institutions in fisheries sector are MPEDA and fisheries cooperative societies.

2.1.4.1. Wholesaling

Kotler, (2003), stated that wholesaling includes all the activities involved in selling goods or services to those who buy for resale or business use. Wholesaling excludes manufacturers and farmers because they are engaged primarily in production, and it excludes retailers. Wholesalers (also called distributors) differ from retailers in a number of ways. First, wholesalers pay less attention to promotion, atmosphere, and location because they are dealing with business customers rather than final consumers. Second, wholesale transactions are usually larger than retail transactions, and wholesalers usually cover a larger trade area than retailers. Third, the government deals with wholesalers and retailers differently in terms of legal regulations and taxes.

In general, wholesalers are used when they are more efficient in performing one or more of the following functions:

1. Selling and promoting: Wholesalers' sales forces help manufacturers reach many small business customers at a relatively low cost. Wholesalers have more contacts, and often buyers trust wholesalers more than they trust a distant manufacturer.
2. Buying and assortment building: Wholesalers are able to select items and build the assortments their customers need, saving the customers considerable work.
3. Bulk breaking: Wholesalers achieve savings for their customers through buying in large carload lots and breaking the bulk into smaller units.
4. Warehousing: Wholesalers hold inventories, thereby reducing inventory costs and risks to suppliers and customers.
5. Transportation: Wholesalers can often provide quicker delivery to buyers because they are closer to buyers.
6. Financing: Wholesalers finance customers by granting credit, and finance suppliers by ordering early and paying bills on time.
7. Risk bearing: Wholesalers absorb some risk by taking title and bearing the cost of theft, damage, spoilage, and obsolescence.
8. Market information: Wholesalers supply information to suppliers and customers regarding competitors' activities, new products, price developments, and so on.
9. Management services and counseling: Wholesalers often help retailers improve their operations by training sales clerks, helping with store layouts and displays, and setting up accounting and inventory-control systems. They may help industrial customers by offering training and technical services.

2.1.4.2. Retailing

Kotler, (2003), stated that retailing includes all the activities involved in selling goods or services directly to final consumers for personal, non-business use. A retailer or retail store is any business enterprise whose sales volume comes primarily from retailing. Any organization selling to final consumers – where it is manufacturer, wholesaler, or retailer – is doing retailing. It does not matter how the goods or services are sold (by person, email, telephone, vending machine, or Internet) or where they are sold (in a store, on the street, or in the consumer's home).

Kotler, (2003), stated that consumers today can shop for goods and services in a wide variety of retail organizations. There are store retailers, non-store retailers, and retail organizations. Perhaps the best-known type of retailer is the department store.

Retail-store types pass through stages of growth and decline that can be described as the retail life cycle. A type emerges, enjoys a period of accelerated growth, reaches maturity, and then declines. Older retail forms took many years to reach maturity; newer retail forms reach maturity much more quickly. Department stores took 80 years to reach maturity, whereas warehouse retail outlets reached maturity in 10 years.

Major retailer types - The major retailer types are:

- Specialty store: Narrow product line with a deep assortment. A clothing store would be a single-line store; a men's clothing store would be a limited-line store; and a men's custom-shirt store would be a super-specialty store. Examples: Athlete's Foot, Tall Men, The Limited, The Body Shop.
- Department store: Several product lines – typically clothing, home furnishings, and household goods – with each line operated as a separate department managed by specialist buyers or merchandisers. Examples: Sears, J C Penney, Nordstrom, Bloomingdale's
- Supermarket: Relatively large, low-cost, low-margin, high-volume, self-service operation designed to serve total needs for food, laundry, and household products. Examples: Kroger, Food Emporium, Jewel.
- Convenience store: Relatively small store located near residential area, open long hours, seven days a week, and carrying a limited line of high-turnover convenience products at slightly higher prices, plus takeout sandwiches, coffee, soft drinks. Examples: 7-Eleven, Circle K.
- Discount store: Standard merchandise sold at lower prices with lower margins and higher volumes. Discount retailing has moved into specialty merchandise stores, such as discount sporting-goods stores, electronics stores, and bookstores. Examples: Wal-Mart, Kmart, Circuit City, Crown Bookstores.

- Off-price retailer: Merchandise bought at less than regular wholesale prices and sold at less than retail: often leftover goods, overruns, and irregulars.
- Factory outlets are owned and operated by manufacturers and normally carry the manufacturer's surplus, discontinued, or irregular goods. Examples: Mikasa (dinnerware), Dexter (shoes), Ralph Lauren (upscale apparel).
- Independent off-price retailers are owned and run by entrepreneurs or by divisions of larger retail corporations. Examples: Filene's Basement, T. J. Maxx.
- Warehouse clubs (or wholesale clubs) sell a limited selection of brand-name grocery items, appliances, clothing, and a hodgepodge of other goods at deep discounts to members who pay annual membership fees. Wholesale clubs operate in huge, low-overhead, warehouse like facilities and offer rock-bottom prices – typically 20 to 40 percent below supermarket and discount store prices. Examples: Sam's Clubs, Max Clubs, Price-Costco, BJ's Wholesale Club.
- Superstore: About 35,000 square feet of selling space traditionally aimed at meeting consumer's total needs for routinely purchased food and non-food items, plus services such as laundry, dry cleaning, shoe repair, check cashing, and bill paying. New groups called category killers carry a deep assortment in a particular category and a knowledgeable staff. Examples: Borders Books and Music, PetSmart, Staples, Home Depot, IKEA.
- Combination stores are combination food and drug stores that average 55,000 square feet of selling space. Examples: Jewel and Osco stores.
- Hypermarkets range between 80,000 and 220,000 square feet and combine supermarket, discount, and warehouse retailing. Product assortment includes furniture, large and small appliances, clothing, and many other items. They feature bulk display and minimum handling by store personnel, with discounts for customers who are willing to carry heavy appliances and furniture out of the store. Hypermarkets originated in France. Examples: Carrefour and Casino (France), Pysca, Continente, and Alcampo (Spain); Meijer's (Netherlands).
- Catalog showroom: Broad selection of high-markup, fast-moving, brand-name goods at discount prices. Customers order goods from a catalog, and then pick these goods up at a merchandise pickup area in the store. Example: Service Merchandise.

2.1.5 Fish Market

A fish market is a marketplace used for marketing fish products. It can be dedicated to wholesale trade between fishermen and fish merchants, or to the sale of seafood to individual consumers, or to both. Retail fish markets, a type of wet market, often sell street food as well.

A fish market can be defined as:

- an area within which the forces of demand and supply converge to establish a single price.
- as not a particular market place in which things are brought and sold but the whole of any region in which buyers and sellers are in such a free interaction with one another that the prices of the some goods tend to equality. can be defined by a location (New York fish market), a product (shrimp market), a time (September-October catfish market), and a level (Retail market).

The components of a market include conditions that need to be satisfied for a market to exist. These components require the existence of good or commodities for transactions (physical existence is however, not necessary); the existence of buyers and sellers, the business relationship or interaction between buyers and sellers; and the demarcation of area such as place, region, country or the whole world. The existence of perfect competition or a uniform price is not necessary.

The dimensions of a market include location, area or coverage, time span, volume of transactions, nature of transactions, number of commodities, degree of commodities, nature of commodities, stage of marketing, and extent of public intervention.

2.1.6. Fish Vendor

Fish vending is a traditional occupation that has been a means of livelihood for thousands of fisherfolk in India, especially for women. Sharma, 2010 explained various types of fish vendors in which they procure their fish directly from landing centers, by daily auctions of the catch; or buy from traders and merchants; or they buy from the wholesale markets for resale at retail/local markets. Vendors used to carry out sorting, grading, cleaning and icing the fish before selling their products. They market their products –fresh fish stored in ice-in local and distant markets on a door to door basis.

Sharma, (2010) classified fish vendors in to following categories:

1) Peripatetic vendors who walk from place to place to sell their fish: These are usually women fish vendors who purchase fish directly at auctions that take place at the village/wholesale markets/landing centers, and sell fish door-to-door, travelling on foot, and carrying their fish in bamboo baskets or aluminum vessels.

2) Mobile vendors who move around on bicycles or motorized vehicles: This type of fish vending, which is very common in States such as Orissa, primarily involves men.

3) These vendors arrive at the landing centres from different villages and purchase fish at auctions at the village/wholesale markets/landing centres, for sale back in their own villages on door-to-door basis.

Sharma, (2010) highlighted major problems faced by women fish vendors in her information booklet on fish vendors such as 1) Distances and lack of basic facilities at harbours and landing centers 2) Poor access to credit, exorbitant interest rates 3)

Technology-induced changes 4) Lack of public transport to markets 5) Lack of ice and proper storage facilities: Fish is a highly perishable commodity, 6) Problems at marketplaces like poor infrastructure including basic facilities for storing and selling their products etc.

Theeradesa Mahila Vedi, the women’s wing of Kerala Swathanthra Matsyathozhilali Federation (KSMTF) also highlighted the problems faced by fisherwomen in association with fish marketing and vending which includes 1) Harassment from male fish vendors, contractors and tax collectors 2) Selling fish in very unhygienic places 3) Lack of basic infrastructures like sheds and other facilities like table, chairs, toilets, and room to change dress, iceboxes and drinking water 4) Brutal exploitation by middlemen, moneylenders etc.4) Physical attacks by *goondas* of the market contractor 5) Rape and other forms of sexual violence etc. Kerala Swathanthra Matsyathozhilali Federation (KSMFT) added that in addition to their domestic chores, fisherwomen perform the difficult function of selling a highly perishable commodity like fish in most of the coastal villages where chilling and freezing facilities are least available. Their business is a story of fluctuating fortunes.

2.1.7 Fish Retailer

Sharma (2010) named fish retailers as stationary vendors in her information booklet on fish vendors. They market their fish on a regular basis at specific locations: Many stationary vendors/retailers trade their products in selected wholesale or retail markets. They used to transport their fish from the landing centre to these markets in rickshaws or mini-vans, which they lease. Some buy from wholesale markets and trade at retail markets, while some others are wholesale suppliers themselves.

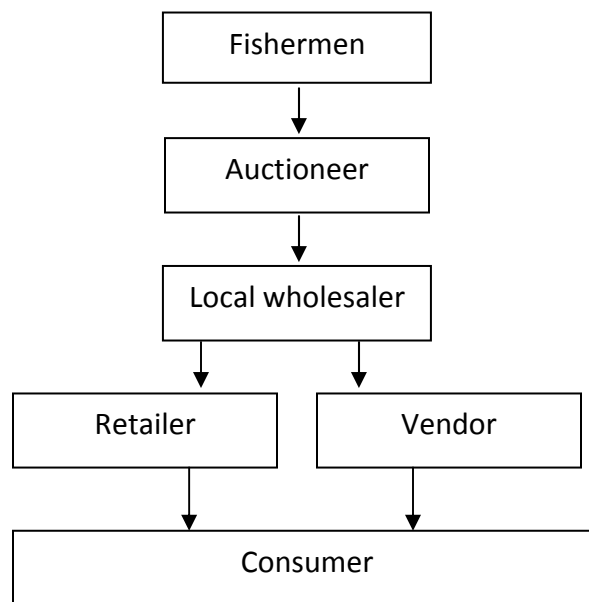


Figure 1 Marketing channel of fish vendors and fish retailers

A particular group of stationary vendors/retailers procure fish from the landing sites for sale at roadside markets, where they have been traditionally marketing their fish for years. Many stationary fish vendors/retailers trade fish at the landing sites themselves at harbours and beaches. There is thus considerable variation in the scale of operations of fish retailers ranging from small scale traders to those who are large wholesalers. The marketing channel of fish vendors and retailers is given in Figure 1 above

2.1.8 Fish Processors

Fish processing is the processing of fish and other seafoods delivered by fisheries, which are the supplier of the fish products industry. Although the term refers specifically to fish, in practice it is extended to cover all aquatic organisms harvested for commercial purposes, whether harvested from cultured or wild stocks.

Processing of fish involves primarily the application of preservation techniques in order to retain quality and increase shelf life. It may also mean adding value to produce a wide variety of products. A number of methods are used to preserve fish. There are various techniques based on temperature control, using ice, refrigeration or freezing; others on the control of water activity that includes drying, salting, smoking and freeze-drying.

Techniques may rely on the physical control of microbial fish loads, such as through microwave heating or ionizing irradiation or on chemical control of microbial activity and loads by adding acids. Techniques are also used that are based on oxydo- reduction, such as vacuum packaging. Most often a combination of different techniques is used to preserve fish.

Fish processing may be subdivided into two major categories: fish handling (which is initial processing of raw fish) and fish products manufacturing. Another natural subdivision is into primary processing involved in the filleting and freezing of fresh fish for onward distribution to fresh fish retail and catering outlets, and the secondary processing that produces chilled, frozen and canned products for the retail and catering trades. The major two categories of fish processors found among Kerala fisherwomen are dry fish makers and value added fish producers.

2.1.8.1. Dry Fish making

The drying of food especially fish is the world's oldest known preservation method, and dried fish has a storage life of several years. The method was cheap, the work could be done by the fisherman or his family, and the resulting product was easily transported to market.

The fish is prepared immediately after capture. After gutting the fish, it is either dried whole, or split along the spine leaving the tail connected. The fish is hung on the flakes during summer. The fish flakes are subjected to vacuum packaging or by controlling or modifying the atmosphere around the fish. After three months of hanging on the flakes,

the fish is then matured for another two to three months indoors in a dry and airy environment. During the drying, about 80% of the water in the fish disappears.

Salting and drying is an ancient procedure for preserving fish. Dry salting is a simple process whereby whole fish are eviscerated, cleaned, washed and packed with a layer of salt to draw out the juices which then produces brine. The salt acts as a short term preservative in slowing down the proliferation and production of bacteria which causes spoilage and decay. Dry salting is most suitable in home cooking using small pieces of fish which can absorb salt quickly such as fish roe, small fish especially anchovies and herrings. Larger pieces of fish can take longer to cure, usually as long as a week but the slowness of the process can be advantageous due to the quality of flavors produced.

Salting is one way to store fish until you are ready to smoke or pickle them. Traditionally the fish was sun-dried on rocks or wooden frames, but today it is mainly dried indoors by electrical heating. It is sold whole or in portions, with or without bones. (Vaish and Pioush, 2010) The salting period depends on several factors. These include the desired ripened characteristics in fish, the fish species, the amount of salt used, and the storage temperature. A moderate cure is best so that fish displays its characteristics, slightly resinous without being palatably dry. Signs of poor salting includes salt crystals on the food, discoloration and soft or dry, stringy textures.

2.1.8.2. Value added fish products

In general value addition means “any additional activity that in one way or the other change the nature of a product thus adding to its value at the time of sale.” Value addition is an expanding sector in the food processing industry, especially in export markets. Value is added to fish and fishery products depending on the requirement of different markets. Globally a transition period is taking place where cooked products are replacing traditional raw products in consumer preference. For example, there is a demand in urban centres for “ready to eat” and “ready to cook” convenience products in a frozen condition. There is also a need to divert low value fish to human consumption which can be facilitated by diversifying fishery products to value added products, such as minced meat from low priced fishes.

Value added fish producers play important roles in absorbing products from fish producers, producing high value products, and drive export development. The operation and existence of fish processors was seen as the output market of fish producers. In most of the regions where fish processors/value added fish producers are located, aquaculture and fish capture was promoted. There was a correlation between fish processors and fish producers in the development process. All kinds of value-added and other high value products are produced by the fish processors, mostly for export.

The major processing operations includes sorting, dressing, cutting, eviscerating, skinning, pre-cooking, breading, spicing ,blanching, filleting, salting, packing etc. On

arrival of fish, grading and sorting (including debridement) is done initially to segregate them into different categories. Afterwards skinning, (peeling) eviscerating, is done where necessary. Some fishes are chopped into rings (ring cutting) followed by cooking, breadng, spicing, preparing, salting etc. Finally packing is done. Some are send for packing after cutting in to pieces. Peeling is done mostly manually (needed in case of small shrimps only) and ring cutting is a mechanized process in most of the units. Small hand tools like knife, needle are used in grading and packing. The whole activity is done at a low room temperature and hardly any personal protective equipment being used the hands of workers come in frequent contact with ice and ice cold water. The major fish products made by value added fish producers include fresh fish, canned fish, frozen fish, cured fish, salted fish, smoked fish, dried fish, fish fillets, fish roe, pre cooked fish, fish oil and fish meal etc.

Marketing channel of dry fish makers and value added fish producers found in Kerala is as follows

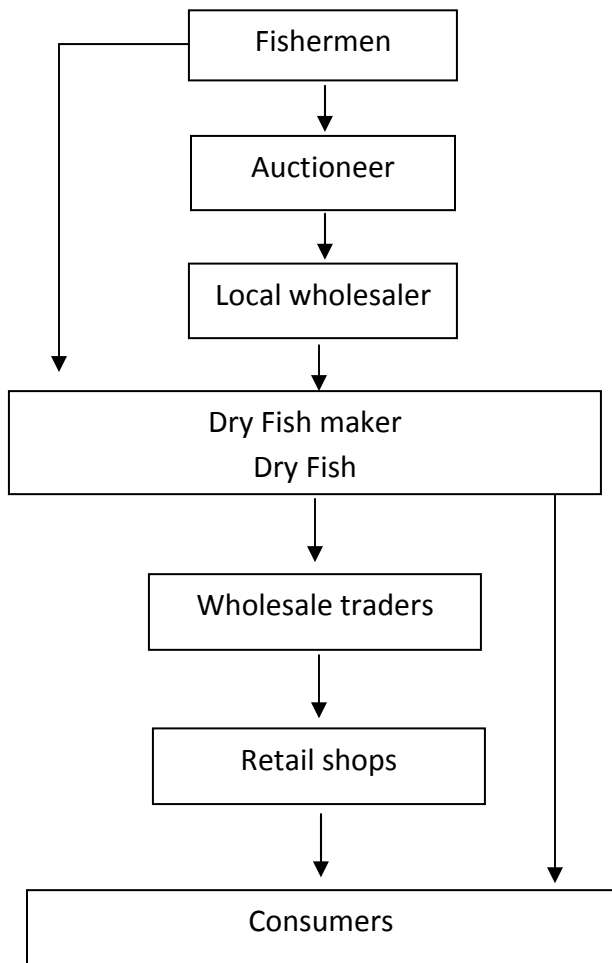


Fig 2 Marketing channel Dry fish maker added

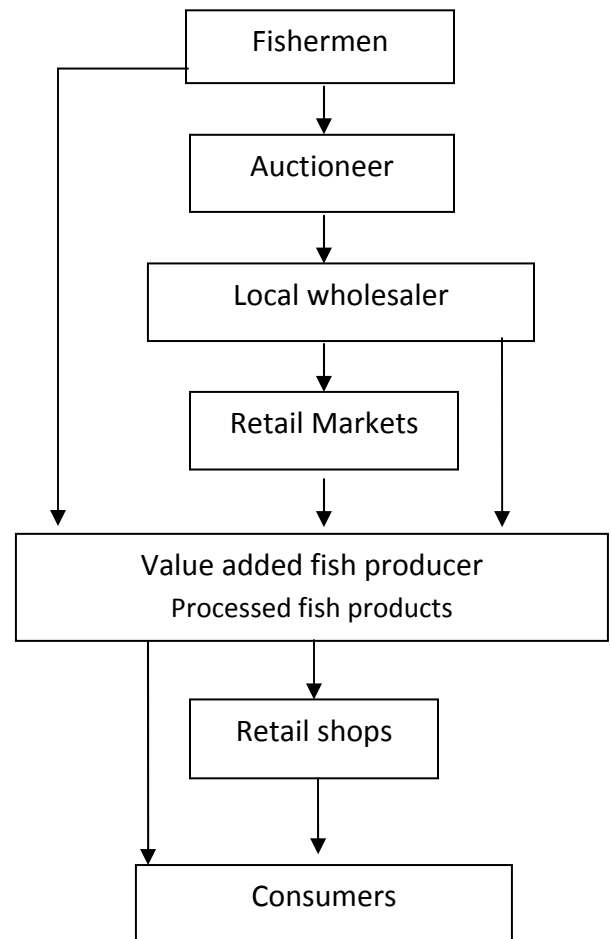


Fig 3 Marketing channel of Value fish producer

2.1.9 Gender

“No nation, no society, no community can hold its head high and claim to be part of the civilized world if it condones the practice of discriminating against one half of humanity represented by women.” – Prime Minister Dr. Manmohan Singh(2009)

Gender refers to socially constructed roles and responsibilities of women and men. It refers to the socially constructed roles, behaviors, activities, and attributes that a given society considers appropriate for men and women (WHO).

The difference in roles and responsibilities among women and men stems from our families, societies and culture. The concept of gender includes our expectations about the characteristics, attitudes and behaviors of women and men, and is vital in facilitating gender analysis. The different roles, rights and resources that both the genders have in society are important determinants of the nature and scope of their inequality and poverty. Inequality in access to resources between women and men is most common in poor and developing countries. Gender inequality refers to inequality in conditions among women and men .

According to UNESCO’s gender mainstreaming implementation framework, (2003) Gender refers to the roles and responsibilities of men and women that are created in our families, our societies and our cultures. The concept of gender also includes the expectations held about the characteristics, aptitudes and likely behaviors of both women and men (femininity and masculinity). Gender roles and expectations are learned. They can change over time and they vary within and between cultures. Systems of social differentiation such as political status, class, ethnicity, physical and mental disability, age and more, modify gender roles. The concept of gender is vital because, applied to social analysis; it reveals how women’s subordination (or men’s domination) is socially constructed. As such, the subordination can be changed or ended. It is not biologically predetermined nor is it fixed forever.

Barbados (2008), discussed gender as a concept that refers to socially learned differences between males and females, and it explains differences in the social, economic and political relations between women and men. According to him the concept of gender is very important since it helps to understand how the males and females are influenced by differences such as age, class, religion, culture, location etc. Moreover the concept highlights hierarchical roles and relations between and among males and females, unequal value given to women’s work and women’s unequal access to power and decision-making, resources etc.

2.1.10 Gender Discrimination

Gender discrimination is unfair or unequal treatment aimed at a person because of his or her sex or gender. Historically, societies across the globe have accredited social significance to gender and assigned different roles to women and men. The Gender wise

differences become unfair discrimination when women are identified continuously as subordinate and weaker. Even though the gender distinction has used to allocate burdens and rewards to women and men differentially, in practice societies have considered gender inequalities part of a natural or divine order and justified discrimination by referring to religion and biology

DIFD (2000), defined gender discrimination as the systematic, unfavorable treatment of individuals on the basis of their gender, which denies them rights, opportunities or resources. Women's differential access to power and control of resources is central to this discrimination in all institutional spheres, i.e. the household, community, market, and state (Reeves and Baden, 2000).

Sivakumar (2008), defined gender discrimination as denial of equality, rights and opportunity and supplement in any form on the basis of gender. Gender discrimination is not biologically determined but it is determined by socially and the discrimination can be changed by the proper and perpetuate. India is a male dominant society and gender discrimination is customised habitually.

From web to death females are facing lots of discrimination against them. Major areas of discrimination starts from the households with preference on son, and female feticide, differential distribution of household resources including food, sometimes leading to higher malnutrition and mortality indicators, differential access to public services such as education, health and legal systems(discriminatory laws), lack of representation and voice in decision making bodies in the community, unequal pay, occupational exclusion or segregation into low skill and low paid work limit women's earnings in comparison to those of men of similar education levels etc. (Reeves and Baden,2000)

Anna-Maria Lind (2006) stated that India's population still leads traditional lives in rural areas. Religious laws and traditions still determine the lives of many people, particularly women. Even if women are formerly entitled to own land and resources social and religious factors make many women refrain from this right in order not to cause distortions within the family. The preference for having sons permeates all social classes in India, which sets the standard for girls throughout their entire lives.

Desai (1994) observed that parents' reluctance to educate daughters has its roots in the situation of women. Parents have several incentives for not educating their daughters. Foremost is the view that education of girls brings no returns to parents and that their future roles, being mainly reproductive and perhaps including agricultural labor, require no formal education.

Berta Esteve – Volart (2004) described that gender discrimination against women in the market place reduces the available talent in an economy, which has negative economic consequences. Gender discrimination takes many forms. Many social practices seen as normal from a religious or cultural point of view (which may have deep historical roots) have women out of the economic mainstream. These social practices may have profound

economic consequences because they do not allow society to take advantage of the talent inherent in women.

This universally accepted principle of equal enjoyment of human rights by men and women, reaffirmed by Vienna declaration, adopted by many countries at World conference on Human rights in 1993. It has various dimensions such as equal access to basic social services, including education and health, equal opportunities for participation in political and economic decision-making, equal reward for equal work, Equal protection under the law, Elimination of discrimination by gender and violence against women, Equal rights of citizens in all areas of life, both public-such as the workplace-and private-such as the home.

The recognition of equal rights for women along with men, and the steps taken to combat discrimination on the basis of gender, is central to the development process. (Vienna Declaration and Programme of Action, 1993) 'If development is not engendered, it is endangered' (UNDP, 1997:7)

2.1.11. Gender Mainstreaming

In almost all traditional societies, women have limited access to many of the resources and hence their prospects to improve their economic potential are also limited. Gender mainstreaming is a holistic approach to include gender issues and gender awareness at all spheres of development activities and policies. This is done by assessing the impact of all activities on gender equity and gender equality. It is an integrative approach to take up all policies and activities in order to attain gender equity and equality by considering all possible effects and impacts on men and women. The objective is to ensure a balanced distribution of responsibilities and opportunities between women and men.

The relative status of men and women and their interaction, the right, control, ownership, and power distribution among them etc have pivotal role on the success and sustainability of every development intervention.

Gender mainstreaming' is defined by the United Nations Economic and Social Council(UNESCO) in 1997 as 'a strategy for making women's as well as men's concerns and experiences an integral dimension of the policies and programmes in all political, economic and societal spheres so that women and men benefit equally and inequality is not perpetuated. 'Gender mainstreaming is recognized as a global strategy for the promotion of gender equality in the platform for action from the fourth world conference on women, Beijing, 1995).

Basic principle of Gender mainstreaming is the systematic consideration of the differences between conditions, situations and needs of women and men in community policies and activities. Gaesing and Becker enlisted the objectives of gender mainstreaming include equal distribution of power and influence, the same chance of achieving financial independence, equal conditions and opportunities with regard to

establishing business enterprises, working conditions and development at work, equal access to education, training for developing personal ambitions, interests, talents, shared responsibility for the home and the children, freedom from gender related violence. (Gaesing and Becker, practitioner's guide on gender mainstreaming)

Furthermore, India witnessed many legislations, statutes and government policies after independence that is targeted at "Gender Mainstreaming. Articles 14, 15 and 16 provide equal rights to all men and women. The right to inherit property came in 1956 through legislation. Article 39(a) assure equal right to have adequate means of livelihood and Article 39(d) guarantee equal pay for equal work for both men and women. 73rd and 74th Constitutional Amendments came in 1993 was made way in to women in the political process by providing power to women in the LSGs. Furthermore statutory bodies like National Commission for Women (NCW, 1992) safeguards women's rights. In addition to that National Health policy gives highest priority to programs relating to women's health and special programs in the education sector have helped to increase women's literacy and reduced the gender gap in the school system.

2.1.12 Empowerment:

The term empowerment has word 'power' which may be defined as a control over material assets, intellectual resources and ideology. Power thus accrues to those who control or are able to influence these. The extent of power headed by particular individuals/groups corresponds to the number of kinds of resources they can control and the extent to which they can shape prevailing ideologies whether social, religious or political. This control confers the power of decision making.

Empowerment is about people -both women and men- taking control over their lives: setting their own agendas, gaining skills, building self-confidence, solving problems and developing self-reliance (UNESCO).

According to Kieffer (1984), empowerment is an interactive process which occurs between the individual and his environment, in the course of which the sense of the self as worthless changes into an acceptance of the self as an assertive citizen with sociopolitical ability. The outcome of the process is skills, based on insights and abilities, the essential features of which are a critical political consciousness, an ability to participate with others, a capacity to cope with frustrations and to struggle for influence over the environment

There is a point of view that women's empowerment may mean the loss of privileged position that patriarchy allotted to men. But as a prelude to this view, women's empowerment also liberates and empowers men, both in material and psychological terms. Women provide new insights, leaderships and strategies. Struggle of women groups for access to material resources and knowledge directly benefit men and children of the families and communities and a better quality of life. When women become equal partners, men are freed from the roles of gender stereotyping which limit

their potential personality development in men as much as in women. In addition to losing traditional privileges they also lose traditional burdens.

2.1.13 Women empowerment

According to Hazels and Sally (2000) Women empowerment is a 'bottom-up' process of transforming gender power relations, through individuals or groups developing awareness of women's subordination and building their capacity to challenge it. Empowerment basically refers to the process of raising women status by way of promoting economic, social, political and legal empowerment. Empowerment is a process of awareness and capacity building leading to greater participation to greater decision making powers and control and to transformative action. The goals of women empowerment are to challenge patriarchal ideology, to transform the structures and institutions that reinforce and perpetrate gender discrimination and social inequality and enable poor women to gain access to and control over both material and information resources.

The paradigm of empowerment means increasing the social, political, spiritual or economic strength of individuals and communities. A lot has already been echoed in the mainstream media and research perspective about the significance that gender equality and empowerment of women play in the overall modernization of any society. Empowering women in a society where they have been treated like doormats for centuries is a Herculean task. There is bound to be an internal resistance practically. It would be pertinent to make an attempt for the practical empowerment of women in the context of community development.

IFAD considers three pillars to achieve gender equality and women's empowerment, which include

- a. Economic empowerment: Improving women's access to income-earning opportunities and productive assets. Improving rural women's economic status and helping them build an asset base contribute to breaking down gender stereotypes. Eliminating the barriers that prevent women from getting access to fundamental assets is crucial for broad-based economic growth and poverty reduction.
- b. Decision-making: Increasing women's say in community affairs and strengthening women producers' organizations. Rural poor people need to be able to influence the public and private decisions that affect their lives, if change is to be sustainable.
- c. Well-being: Improving access of rural people, in particular women, to basic services and infrastructure. Rural women give high priority to basic needs such as health services, water, education and infrastructure when consulted during planning of development initiatives. IFAD recognizes that lack of, or limited access to, essential services and infrastructure is a major obstacle to

women's advancement because it prevents them from participating in the mainstream of economic development and community life.

2.1.14. Economic empowerment

Economic empowerment may be defined as a state wherein the fisherwomen are able to fulfill their basic needs through reasonable opportunities for income generation and to own assets, liquid or immovable properties such as land through individual or group activity. Economic empowerment has been shown to occur in most SHG activities which is its most natural result. Economic empowerment has been measured in terms of control of their loans, profit and savings, family assistance in enterprise, taking product to market and doing most of the accounting. Women in India constitute about 50 per cent of the total population and comprise one third of the labour force. It is therefore, important that when considering the economic development of this segment of the population, due attention is given to their socio-economic empowerment.

CIDA (1997), suggested the economic empowerment indicators as the changes in employment/unemployment rates of women and men, Changes in the time-use in selected activities, particularly greater sharing by household members of unpaid housework and child-care, salary/wage differentials between women and men, average household expenditure of female/male headed households on education/health, ability to make small or large purchases independently, percentage of available credit, financial and technical support services going to women/men from government/non-government sources.

2.1.14.1 Fisherwomen *vis a vis* economic empowerment

Fisherwomen are engaged in several fisheries vocations. The major activities in which women's contribution can be noticed throughout the country are fish processing and marketing. The contribution of women in post harvest operations has impacted positively on the social status and economic power of women. The woman's involvement has helped to increase her family's meager income, thereby contributing to sustainable livelihood and enhancing the social well-being. An estimated 0.15 million women are engaged in the seafood processing sector in India, mostly at the floor level in the units. The industry has been a major source of employment for women in the coastal regions of the country and has significantly contributed to the socio-economic conditions of the poor fisherfolk in the country. (Nikita Gopal et al, 2007).

With regard to the women's role and importance in marine fisheries sector of the country, Self Help Groups for women fisherfolk do play a pivotal part and it is a matter of great consideration that despite the economic and socio cultural significance of fishing, women fisherfolk at large are outside the main stream of the society in the economically disadvantaged category without accruing the benefits from fishing industry.

Even though women are as efficient as men, earnings are not always the same. Different payments to males and females are prevalent. It is through economic, social development and political struggles one can achieve economic progress. Although women comprise about half of the population, their role in development is not significant because of lack of empowerment. In fisheries, fisherwomen are generally engaged in marketing but their social status remains poor.

2.1.15. Social empowerment

Kraft, Julia (2000), define social empowerment as a process by which people reclaim their power, the power to shape their own lives and to influence the course of events around them. They use their power against oppression and exclusion, and for participation, peace and human rights. This power is not “power-over”, or domination, but the power to be and to do, “power-with” others that can be used to change oppressive or disempowering circumstances.

This power works against political domination, subjugation by institutions and also against the social power structures that spread through the society which diminish the quality of peoples’ lives. Power and control within in society should be redistributed. The social empowerment helps them to have critical consciousness about the unequal distribution of goods and services, opportunities and knowledge within society. Empowerment is also facilitating them in locating their own resources, finding out new resources available, and learning to use them.

CIDA, 1997 enlisted the social empowerment indicators as number of women in local institutions (e.g. women’s associations, consciousness raising or income generating groups, local churches, ethnic and kinship associations, worker associations) relative to project area population, Numbers of women in positions of power in local institutions, extent of training or networking among local women, as compared to men, control of women over fertility decisions (e.g. number of children)and Mobility of women within and outside their residential locality, as compared to men.

2.1.16 Political empowerment

Traditionally women in India are shorn of the right of decision-making and of effective political participation and representation. Political empowerment and equal representation of women in decision making institutions at all levels are the two important requirements in the struggle for freedom from patriarchal suppression. (Shamim and Nasreen, 2002). However in Kerala women are not adequately represented in political decision making subsequently the process of policy formulation relating to women issues are still under the control of men (Chowdhury, N., 1994).

CIDA (1997), enlisted the political empowerment indicators which includes percentage of seats held by women in local councils/decision-making bodies, percentage of women in decision-making positions in local government, percentage of women in the local civil service, percentage of women/men registered as voters/per cent of eligible women/men who vote, percentage of women in senior/junior decision making positions within unions and percentage of union members who are women/men and the number of women who participate in public protests and political campaigning, as compared to the number of men.

2.1.17 Legal empowerment

Legal empowerment activities mainly aiming at providing confidence, information, training and assistance to women and other marginalized groups'. It is intended that women and marginalized groups will apply these skills in protecting their legal rights and claiming benefits under development programs. ADB(2009) defines legal empowerment is as the ability of women and disadvantaged groups to use legal and administrative processes and structures to access resources, services, and opportunities.

According to Golub and McQuay (2001) legal empowerment of the poor involves the use of law to increase disadvantaged populations' control over their lives through a combination of education and action."

CIDA(1997), enlisted the legal empowerment indicators as enforcement of legislation related to the protection of human rights, number of cases related to women's rights heard in local courts, and their results, number of cases related to the legal rights of divorced and widowed women heard in local courts, and the results, the effect of the enforcement of legislation in terms of treatment of offenders, increase/decrease in violence against women and the rate at which the number of local justices/prosecutors/lawyers who are women/men is increasing/decreasing.

2.1.18 Problems

Essentially the women fisherfolk are confronted with a plethora of problems most of which are an offshoot of the inherent hurdles threatening the marine fisheries sector. Some issues of concern are marginalization due to automation, unemployment and drudgery, indebtedness due to motorization that demanded heavy investment, inter-sectoral conflicts, shifting of job opportunities and migration to other states, vanishing traditional skills etc. On a personal level, many of the women suffer from poor health, hygiene, and nutrition, along with a lack of education, child care, and transportation to carry them long distances to their jobs.

A number of specific social, economic, and cultural constraints limit the opportunities for women to participate in fisheries as producers. The extent of these constraints is location-specific and therefore special provisions are often required to overcome them.

- Technical problems, such as the need for basic resources of seed, feed, fertilizer, and equipment are constrained more by access to capital or credit than by anything else. Again this constraint affects women more than men.
- Training of women in extension work, equipment maintenance, hatchery and farm management and operations, and skills for dealing with local administration, have been almost totally neglected and are of prime importance.
- In terms of raw material, the women deal with uncertain catches of varying quality, a highly perishable product, lack of cold storage, and intense competition. For those in traditional processing, there are a scarcity of potable water and space for drying, adverse climates, losses through insect infestation, product quality issues, and low profit margins.

Women's role in aquaculture is also invisible even when they do pond maintenance, remove weeds, collect crabs and snails, feed fish, put inputs and are involved in a number of activities. In Thailand, women are involved fish hatchery operations, nursery management, grow out production, harvesting and marketing of fish seed. With male migration from the rural areas on the increase women are managing the fish farms. Unpaid work by women isn't unimportant work, say women involved in fisheries throughout the South Pacific. In fact, women's traditional roles in Pacific societies are often a bonus in helping conserve marine wildlife.

In a traditional setting, women who glean from reefs and fish to feed their families have power to influence village leaders, such as their husbands, and take part in women's village committees. But, as women move away from subsistence and artisanal fishing into a more industrialized workplace the type of work they perform becomes limited. They then become marginalized into low paying unskilled jobs and overlooked for promotion and training, which reduces their control and influence over the decision-making process.

Since market forces determine wages, and jobs assigned to women require few skills, women are often the most vulnerable group of workers in the labour market. "Women don't have the bargaining power," Ram-Bidesi said. "Women are really the backbone of the industry, but they bear the instability of market conditions."

In studies conducted by CIFE, it has been found that the work done by women in aquaculture is a combination of 'heavy' and 'moderately heavy'. (Sharma et. al 2006) So it is wrong to categorize the work done by women to be considered as ancillary, marginal and supporting, complementary and marginal.

The presently undergoing empowerment strategies of women empowerment often neglect the crucial role of suitable gender specific HRD interventions those provide an enabling entrepreneurial context.

2.1.19 Prospects:

Women could probably be involved equally to men in processing, preservation, and marketing of fish products in the state. The involvement of women in these activities generates supplemental income to support their families. Fisheries processing and marketing is considered as the vehicle for achieving empowerment of the women, in all spheres *viz.*, social, cultural, political and economic. Much of India's national food security rests on the shoulders of its fisherwomen. Affording comprehensive care for these women is correct in principle and a practical necessity if India's fisheries sector is to be satisfactorily sustained and the fisherwomen empowered, both socially and economically. This can only be done through education about nutrition, health, sanitation, and child care, and training on current technologies and best practices techniques.

The 'harvest' activity is mistakenly viewed as a male dominated activity. It may be true to some extent that harvest sector is dominated by men. But there are cases which contradict this. In fact, William *et.al* (1998) has correctly stated that 'women do not fish' is a myth. In Japan and Korea women harvest fish. In India, Mandappam, West Bengal (Sunderbans), North East and in many parts of Orissa and Assam women are actively involved in fishing.

Women are the potential tools for effective conservation and management practices through the alternative livelihood programmes. The major role of women in fisheries and small-scale aquaculture activities are noteworthy, considering that aquaculture has been recognized as an alternative to meet the increasing demand for fish of the growing population the development of aquaculture.

Improved nutrition and food self-sufficiency are the two main priorities in the policies of governments of developing countries and aquaculture is being recognized increasingly as a sector which can provide nutritious products of quality and contribute either directly or indirectly to food resources of country.

National sector management of aquaculture as a whole has been weak in both developed and developing countries. Most governments must still determine their need for aquaculture, and establish a policy and development plan accordingly. In those countries, where development has been established, there remains the need to maintain an enabling environment to maximize the national resources - and this includes the participation of women.

In the present times, there are a number of migrant workers undertaking the fishing operations especially in the urban areas. Here it is important to emphasis that the responsibility of sustaining links of urban labour is primarily borne by women members of the family. In effect, the male workforce can retain its urban profile largely because women hold the rural buffer in place. This work of women is an important element in sustenance of industrial labour but invisible.

Fisheries research and development activities are currently in the early stages of growth; hence, there is a great opportunity for promoting the participation of women. Fisheries management will soon be essential and human resource development is a constraint. Women will have to assume important roles in research and development efforts, and will therefore require equal opportunities for advanced education and practical field experience. In research, it is encouraging to see that women are occupying positions from project director to field research technician with support from the Department of Livestock and Fisheries. Because women are so active in almost all aspects of capture fisheries and aquaculture, it is essential for them to be genuinely involved in research and development efforts focusing on the users and resources. Aid projects have an opportunity and responsibility to advance the role of women in the sector, and all groups, including women, need to be given the opportunity to engage in fisheries research and development.

The FAO (1986), through its fisheries and aquacultural sector projects, initiated a world conference on fisheries management to enhance the role of women in the fisheries sector. Also, the United Nations, in 2004, urged governments to consider the developing and issuing of strategy changes necessary to cruminate constitutional, legal, administrative, cultural, behavior, social, and economic obstacles to women's full participation in sustainable development and public life.

The income-generating activities and micro enterprises identified for women in fisheries sector are:

- Mari culture: mussel, seaweed and oyster culture, crab fattening.
- Aquaculture: backyard nurseries and hatcheries, freshwater fish & scampi farming and seed production.
- Fresh and marine ornamental fish culture.
- Fish and fishery product processing: value addition, hygienically fish pickle, smoked and dried fish, breaded and battered fishery products, fish silage preparation and shell craft production.
- Services: fish fast food counters, fish supply chain and cold chain, fish vending stalls, setting up and maintenance of aquaria, contract cleaning for fish markets, net-making.
- Agriculture: Organic farming of vegetables, ornamental plant nurseries, vermin-compost and mushroom farming.

B. Review on the past studies done in India and abroad

Ojha (2001) opined that women prefer working where energy requirement per unit time is less, duration for work is more, working area is nearby, work is related to domestic chores, work timings does match with household activities. Hence programe for women should be developed keeping these issues in consideration. He cautioned that the statistics regarding participation of women based on age, caste/religion, size of holding, person days, family size, wages, technology adoption and income reveal women need special attention in the development program.

Shyam(2001) opined that compared to women in other sections, fisherwomen are more exposed to media and spent more time in their primary occupation. Decision making power varies in different operations and is less when compared to men. He also suggested that it is important to identify changing roles of women in fisheries and aquaculture, develop women oriented specific technology, involve social workers, NGO's and policy making bodies to promote activities for women in fisheries, develop schemes exclusively for women training programs for the women clients and to provide credit facilities and market access to women and favored the introduction of female extension workers.

Mayadevi (2001), explained on the institutional support to women in agriculture and Allied activities and suggested that SHGs plays a very important role in providing credit facilities to women .Again it is important that the collateral security cannot be provided by women because ownership is vested with men and lack of literacy is a major constraint in providing credit

Sangita M Kini (2001), highlighted the concerns about the marketing of the product in Vasai area of Mumbai and expressed the need to set up more retail outlets where the sales can be carried out directly by the women.

Tripathi S.D (2001) expressed that the women should be made aware of intellectual property rights .He also suggested that the scientific community should help the women to understand the significance of Indigenous Technical Knowledge that they possess and help them to derive proper economic benefits and the women should be made aware of the new developments of WTO which may affect their socio-economic conditions.

Warrier (2001) studied the nature of the fish processing industry in India, focusing on issues concerning the migrant women workforce specifically. The fish processing industry employs migrant women workers on contract in almost all parts of the country. A detailed questionnaire was used to elicit information from the workers and the data collected have been supplemented with detail derived from observation and informal discussions with women workers. Information from the villages from where the women were recruited and from discussions with their friends, neighbours and relatives also formed a major part of the database.

Myrada (2002) studied to measure the changes in various spheres of women's lives as an impact of the SHG. The study revealed that in old group, 89 per cent interviewees agreed that their financial position had changed for the better and more members in the older groups (above three years) than in the younger groups (less than one year) reported a positive influence on their share in the family income during this period. They also reported that the average share of earning SHG members in the family income was also higher in the older SHGs; the reason for which may be that over 66 per cent of these members are either CWEs or earning members in their families. It tested the level of confidence of respondents on several tasks of varying difficulty. It found that

on all the 7 tasks specified, the old group members expressed a higher level of sense of ease and in the old group, more members reported a positive influence on confidence level in dealing with people and institutions. It concluded that the old group had a substantially larger percentage of respondents reporting an increase in awareness about health and hygiene.

Nag. *et al* (2003) found that biological and environmental aspects of work had relatively greater weightages among the work stressors for the women in fish processing. This finding was supported by the high prevalence of musculo-skeletal pain and discomfort among these women (67 per cent). The lower back (45 per cent) was the most affected area, followed by the shoulder (20 per cent) and upper back (25 per cent). The cold induced blanching and numbness of hands and Raynaud's like phenomena (61 per cent) were observed among the women workers. Data indicated that the wearing of gloves substantially improved the skin temperature profile of the hand, compared to those situations when working bare hand. This observation was further substantiated by the remarkable improvements in the onset of Raynaud's phenomena.

The Hindu (2004) reported that peeling was earlier a part of the processing industry where big players ran their own peeling centres offering decent working conditions. But the spurt in demand for the product required more manpower as well as establishment costs, which ushered in labour contractors who set up independent peeling centres which operate without registration and had very little set-up costs. An unauthorized peeling shed could be with or without walls, and might not have the facility for water and electricity. The sanitary conditions were deplorable and there were no separate toilets for women. The flooring was often of mud. Here 50-250 women squat, with the basin containing ice-cold water and prawns. The workers did not come under the Factory Act and there were no welfare measures. Moreover, the work was neither permanent nor regular.

Ragunathan. (2005) reported that after the tsunami attack, there has been a phenomenal increase in the number of women's Self-Help Groups (SHGs) in the coastal villages in Cuddalore district. Ever since the disaster, more than 175 new SHGs had come up; and still more were in the offing. With all their sources of livelihood washed away, fisherwomen were finding the SHG an attractive proposition for their rehabilitation and economic empowerment. The cash-strapped women felt that the SHGs would help them earn a decent living, besides bringing immediate cash assistance for the household. The fisherwomen identified that the SHG idea had plenty of support. This has spurred the proliferation of the SHGs, as fisherwomen badly need money for their daily chores. SHGs was trained in modern trade practices — drying fish with solar devices, crab fattening, preparation of fish-pickles and so on.

Suma *et al* (2005) focused on the various enterprises taken up by the self-help groups in the selected area and the identified entrepreneurial qualities of women members of these groups organized in the rural areas of Dharwad district. The study revealed that out of the 15 self-help groups, three were registered and all groups had the bank account with joint signatories and conducted regular meetings. The women self help

groups played an important role in the entrepreneurship development in the rural areas. As high as 85.97 per cent members participated in the wholesale purchase and sale of consumer goods with marginal profit to the society or self-help group. The traditional enterprises of leaf plate production and marketing was taken up by maximum percentage of women (31.7 per cent). About 40.2 percent members were identified to have the quality 'co operation' followed by the qualities 'contribution of new ideas in meeting' (17.95 per cent) and 'purchasing abilities' (17.56 per cent).

Jayaraman (2008) attempted to assess the performance of fisherwomen's self help groups (SHGs) in Tamil Nadu. Primary data required for the study were collected from 725 fisherwomen SHG members representing 41 SHGs from five coastal villages - Tharuvaikulam, Pazhayakayal and Therespuram in Thoothukudi district and Kootapuli and Uvari in Tirunelveli district - during May & October 2004. The fisherwomen SHGs were found to have regularly contributed to the savings and had paid the installments towards repayment of loans taken from the group. The study showed that out of 41 SHGs, 25 SHGs fisherwomen SHGs (61 per cent) received Rs. 1,91,300 and Rs.3,50,000 towards RFA in Thoothukudi and Tirunelveli districts,. Out of 19 fisherwomen SHGs, 17 fisherwomen SHGs (89.5 per cent) are engaged in economic activities. The study concludes that contrary to the common belief that poor women are not credit worthy, they are far more credit worthy, honest and most importantly 'bankable'. This study showed that the SHGs did play a positive role in helping the fisherfolk in their socio-economic development, emancipation and empowerment.

The Hindu (2008) reported that the micro-enterprise programme launched in nine coastal districts as part of rehabilitation schemes in the tsunami-affected areas was all set to become an alternative livelihood support initiative for women self-help groups in the coastal areas. The project was launched by the Society for Assistance to Fisherwomen (SAF) of the Fisheries Department. The Development of Micro-Enterprise (DME) projects, initiated for the benefit of fisherwomen, are being implemented under the Tsunami Emergency Assistance Project (TEAP) and the Tsunami Rehabilitation Project (TRP). They have drawn good response from the coastal areas. Four hundred micro-enterprise units each have started functioning under TEAP and the TRP in the coastal districts.

Immanuel and Rao (2009) studied fisherwomen from a village in Andhra Pradesh in which data were collected from 1,180 respondents. It presented facts of the women's home and work lives and the areas where there is room for their betterment.

Nikita Gopal *et al* (2009) assessed the status of the women work force and the role played by them in the growth of the fish processing sector. Cross sectional data was collected from 128 randomly selected women working in five EU approved processing factories in Veraval, Gujarat state. They found that women from Kerala dominated the migrant labour workforce in the seafood processing sector and 66.1 percent of the migrant women workers in processing units in Veraval were from Kerala. They also revealed that the women are generally low-paid and compliant work force that aids in these sectors became highly competitive in the export market. The supply of this

workforce was highly elastic and could be replaced continuously. This was true for the seafood processing sector as well and there was a high degree of casualization in the processing industry.

Ohlsson.K *et al* (1994) studied the association between personal factors and physical and psycho-social work environment factors and disorders of the neck or upper limbs among women in the fish processing industry. A cross sectional study was performed on 206 women in the fish processing industry and 208 control women. Several physical and psychosocial work environment factors were evaluated. Subjective complaints about the neck or upper limbs were assessed by questionnaire and by a clinical examination. The study showed a high prevalence (35 per cent) of diagnoses in the neck or shoulders of the exposed women. All prevalence odds ratios (POR's) were substantially higher in young women. There was a pronounced dose-response relation between disorders of the neck or shoulders and duration of employment for women < 45 years old. When studying 322 former workers, the proportion who claimed musculoskeletal complaints as the reason for leaving was highest among the older women. Muscular tension, stress or worry, work strain, and the largest fraction of the work time spent with highly repetitive work tasks were clearly associated with disorders of the neck or shoulders. The measurements of the wrist movements also showed that the work was performed almost without any pauses and that the median flexion and extension velocity was high (41 degree/s). The results of observation showed good agreement with the measurements of wrist motion. It concluded that work in the fish processing industry is a risk factor for disorders of the neck and upper limbs.

Tewari R *et al* (1998) studied group of 60 fisherwomen, aged 20 to 50 yrs to evaluate their occupational workloads. Of the eight activities involved in fish handling, only four, *viz.*, sorting, washing, drying, and selling, which are most frequently carried out by the fisherwomen, were selected. The heart rate responses and rating of perceived exertion (RPE) were used as measures of occupational workload. Based on the findings, the occupational workload could be classified as moderately heavy. A significant influence of age and body weight on the physiological workload was observed, being negatively correlated with age and positively with weight.

Jayaraman (2000 and 2002), reported on the role and performance of fisherwomen SHGs in India. He found the fisherwomen SHGs performing well in availing microcredit, utilising it and repaying it in time. The microcredit programme implemented through SHGs contributed to the socio-economic welfare and empowerment of the fisherwomen.

Jeebhay *et al* (2004), identified that in 1990, the number of people engaged in fishing, aquaculture, and related activities worldwide doubled to 28.5 million from 1970. Among these workers 52 per cent worked aboard fishing trawlers, 32 per cent were involved in aquaculture production (marine and freshwater), and 16 per cent worked inland as capture fishers or in other land based activities such as processing. Ninety five per cent of these workers were from developing countries, producing 58 per cent of the

98 million tons of world fish. Increased levels of production and processing of seafood have led and continue to lead to more frequent reporting of occupational health problems such as asthma among fish processing workers. They found that these occupational health problems resulted in increased incapacity and absenteeism among affected workers, with women more affected as a result of differences in physical exposures and psychosocial work environments.

Immanuel and Sathiadhas (2004), studied employment potential of fisherwomen in the collection and post harvest operations of seaweeds in India. The study was conducted in the Ramanathapuram district of Tamil Nadu. It revealed that nearly 5000 women depended on the seaweed industries for their livelihood and if the available resources were harvested to its optimal level, it could provide employment to another 20,000 coastal fisherfolk in harvesting sector and an equal number in post harvest activities. It recommended that since the domain of seaweed collecting industry is mainly dominated by women, special efforts should be taken for its optimum exploitation and market expansion through diversified product development and their popularization.

Sathiadhas *et al* (2004), focused attention on the need for empowerment of women involved in clam fisheries in the Vembanadu and Ashtamudi lakes of Kerala. They found that in clam fisheries, exclusively women performed the entire activities pertaining from its collection, from the backwaters and ultimate disposal to consumers. It revealed that women in clam fisheries were performing time consuming and prolonged labour intensive works, which left very little time for rest, leisure or the pursuit of any other activities.

Khadar *et al* (2005), studied role of women in fisheries in coastal eco-system of Andhra Pradesh, Karnataka, Kerala and Tamilnadu and revealed that fish eaters in the study area comprised 47 per cent of the total population 237 per cent in Tamil Nadu to 85 per cent in Kerala. It found that though the position of Tamil Nadu in terms of number of coastal districts and possession of coastal line including the number of landing centers were more, the number of fish eaters in the state was minimal. It further revealed that Andhra Pradesh employed 32 per cent of its fisherwomen in fish curing/drying/net making and 27 per cent in processing plant works.

Patterson and Samuel (2005), revealed that womenfolk of Vellapatti fishing village in Tuticorin coast, Gulf of Mannar were adopted community-based crab-fattening project for proper utilization of their available resources and their leisure time for income generation. The mud crab, *Scylla serrata* and blue swimming crab, *Portunus pelagicus* were chosen for crab fattening which is 'First of its kind' in India and the women were successful in fattening and creating alternate income through this project. The participation of women and the effectiveness of this project were discussed in this paper.

Khadar *et al* (2006), assessed nutritional status and socioeconomic empowerment of fisherwomen in the coastal ecosystem of Andhra Pradesh, Karnataka, Kerala and Tamil Nadu and indicated that very few households (15.4 per cent) maintained livestock for

income generation. About 60 per cent of the fisherwomen carried out post harvest activities to earn income. It further revealed that food expenditure comprised 60.7 per cent of the earned income contributing to the major share of spending. It found that debt servicing was a serious problem faced by 44.9 per cent of the respondents who had procured loans mostly from non-institutional sources.

Saha *et al* (2006), initiated cross sectional survey to understand the frequency of occupational injury occurrence and the associated factors in the fish processing industries of western India involving 185 randomly selected women subjects. Logistic regression method was used to analyze the data in order to obtain the contribution of individual factors on occupational injuries. This study has shown that work related morbidity like blanching of hand (OR; 2.30, 95 per cent CI; 1.12–4.74) and nature of job like grading (OR; 3.99, 95 per cent CI; 1.41–11.27) and packing (OR; 5.68, 95 per cent CI; 1.65–19.57) had a significant impact on injury causation. This study eventually concluded that apart from nature of job of fish processing workers occupational hazards prevailing in the work environment contribute significantly to the occurrence of work related injuries and prevention of such occupational hazards may help in protecting workers from occupational injuries also.

Hassan and Sathiadhas (2007), studied technological changes and its implications on the empowerment of fisherwomen and found that women dominate the processing lines of fishing companies where they were involved in handling, unloading, quality control, sorting, trimming, packing etc. It revealed that women had to adapt to technological changes as quickly as the market require them. It concluded that while mechanization had freed from many tedious operations, it had also replaced an important source of income to many women who depended on these tasks to generate additional income for their families.

Nag and Nag (2007) examined work-related stresses and health hazards of women in fish processing works ($N=185$) to explore interventions to mitigate the hazards. This study used principal component analysis which yielded three components of stressors that explained 80.4 per cent of the total variance. The cold injuries—blanching of fingers to hand numbness, and Raynaud's phenomena in the palm areas, might be attributed to the stressors of component 1 that explained 32.5per cent of the total variance. The T_{sk} of hand areas during work were as low as 20.7 ± 1.9 °C, i.e., 8 °C less than the pre-exposure values. One-way ANOVA showed that the T_{sk} of the hand areas differed with the exposure conditions ($F_{(2,95)}$ ranged from 44.2 to 107.3; $p<0.001$ for T_{sk} of back of hand and fingers, respectively). The drop in T_{sk} during work were statistically significant ($p<0.001$), compared to pre-exposure T_{sk} . About 67 per cent of the workers complained of musculoskeletal pain and discomfort. The highest prevalence of discomfort was reported for the lower back, followed by knees, upper back, calf, and other areas, that explained the stressors grouped under component 2. The women were at risks of repeated cut injuries from the unsafe cutting knives, and handling of fish materials. Principal component 3 (9 items)—the psychosocial variables explained about 22.8 per cent of the total variance. The study reiterated for the much needed work design interventions to mitigate the documented risk factors. Since the hands were the

most affected body parts, the regular wearing of latex gloves was advocated and in using gloves for 2 h work, the women substantially improved T_{sk} of the hand and fingers, compared to the situations when working bare hands, and 84 per cent of the women did not show any cold induced symptoms. An overall impression prevailed that the use of gloves gave the women good feelings of working better.

Singh *et al* (2007) studied performance of women's self help groups (SHGs) in district Moradabad, U.P. and concluded that almost all the group characteristics had positive and significant relationships. The SHGs followed normal patterns of group behavior. A greater percentage of women were impacted positively by being members of SHGs. Women's participation in SHGs enabled them to discover inner strength, gain self confidence, social and economic empowerment and capacity building. Women also gave suggestions for strengthening their groups and actively participated in them.

Karoline (2008) focussed on reducing poverty among coastal villages by improving livelihood activities in women's groups through providing opportunities for further adult education, and access to ICTs through the ICT livelihood project being implemented in Kenya and India which seeks to alleviate poverty in the coastal villages of India and Kenya through an integrated approach. In India, the local fisher women SHGs in 5 coastal villages in Tuticorin district of the Gulf of Mannar (GoM) in the South-eastern India were being trained through provision of Information and Communication Technologies (ICT), adult education, environmental education and alternative livelihood schemes in order to enhance literacy, and to uplift socio-economically, aimed to reduce pressure on marine resources and economic vulnerability of coastal communities. The support to SHGs had been successful in demonstrating the potential as a non-threatening mechanism for mobilizing resources, providing affordable finance and social benefits to poorer fisher women, including self-reliance, awareness creation, capacity development, social solidarity and the empowerment of women.

Patterson *et al* (2008) studied that local fisher women Self Help Groups (SHGs) were empowered through provision of Information and Communication Technologies (ICT) and adult education in five coastal villages in Tuticorin district of the Gulf of Mannar (GoM) in South-eastern India to reduce pressure on coral reef resources and economic vulnerability of coastal communities. The support to SHGs demonstrated their potential as a non-threatening mechanism for mobilizing resources, providing affordable finance and social benefits to poorer fisherwomen, besides promoting self-reliance, awareness creation, capacity development, social solidarity and the empowerment. The creation of awareness about the environment along with the adult education, computer training and other livelihood options helped the fisherwomen to earn additional income for their families, the key factor in reducing the destructive fishing practices and enhancing living conditions in the coastal areas of GoM.

"It is a challenge to convince planners, policy makers, government and communities that what women do are essential tasks although much of what they do may be 'unpaid' work," said Vina Ram-Bidesi of the Women in Fisheries Network during a two-day workshop on women in fisheries management. Although statistics show women play a

vital role in the economies of Pacific Island countries, women say they are struggling to have their say in community fisheries management because governments, industry, and banks often don't recognize their informal day-to-day fishing activities as work. Women are therefore less able to receive loans for creating small businesses; less likely to receive skills training in industrialized positions; and less likely to be reached with valuable information about conservation practices. But, to achieve sustainable fisheries development, both men and women need be recognized and involved in fishing discussions and training, she said. Nodding their heads in agreement, female academics and village women spoke out about their efforts to have their role in fisheries recognized during the seminar at the 1999 International Ocean Institute's Pacem in Maribus (Peace in the Oceans) conference in Suva, Fiji. Fisheries and oceans are very important to women in the Pacific," MacKay said. "They supply food and income to many rural women and women are involved in harvesting, processing, and marketing. But, their role is often overlooked by governments and development projects."

Srinath (1986) opined that the major areas of participation of women in coastal fisheries in Kerala are, prawn peeling, curing, drying and trading of fish, net making and clamshell collection. Younger age group of women is making prawn peeling and net making. Availability of infrastructure was the major constraint in participation of women in fisheries

The information obtained around Kainji Lake, Nigeria indicates that women participate to a considerable extent in actual fishing activities. The number of women owning and operating fishing equipment is equal to that of men; the fishing intensity, as well as, the diversification of fishing gear is rather low. Women fish more in the inshore than offshore. The collection of data for catch statistics concentrates at present entirely on male fisherfolk; access to fisherwomen for data collection purposes is presently impossible because of the tradition that strangers are not allowed to talk to Muslim women. In order not to underestimate the catches, extrapolation from catches of male fisherfolk has to be done (Rettberg, -S.; Alamu, -S.O.; Mdaihi, M, 1995). The survey in Nigeria showed that the women are involved in 3 combinations of activities: fishing-processing-marketing; fishing-marketing; and, processing-marketing. (Verstralen, K.; Isebor, -C, 1997)



**WOMEN
EMPOWERMENT
IN FISHERIES:
AN APPROACH**

C.WOMEN EMPOWERMENT IN FISHERIES: AN APPROACH

In consonance with the objectives under study, the appropriate methodology for the conduct of the study was finalized regarding sampling design, data collection and tools of data analysis. This section thus deals with the criteria for the selection of the study area, sampling design in determining the respondents under question, collection of data and analytical tools or the methodology followed in the study.

Objectives

The overall objectives of the study is to document the empowerment status of women in fisheries across the different occupation in which they are involved

However the specific objectives are

- To analyse the role of fisherwomen in processing and marketing of fish and fishery products as a source of income generation and livelihood option in Kerala
- To compare the levels of employment and income between fisherwomen involved in low value fish processing vis-à-vis value added fishery products and between fisherwomen as retailers and vendors
- To estimate the social, political and economic empowerment of fisherwomen involved in processing and marketing of fish and fishery products in Kerala
- To suggest policy options for empowerment of fisherwomen through fisheries oriented activities in Kerala

Locale of the study:

The state selected for the purpose of the study was Kerala State, as the state is endowed with a tremendous potential for fishery resources which in turn makes it an exorbitant export zone of seafood products. Kerala state possess a coast of 590 kilometers with 360535 hectares of inland water resources and equipped with a fishermen population of 10,74,591 numbers and among them these are 2.21 lakh active fishermen.

The number of fishing crafts in the state is as follows:-

(i) Mechanised crafts	-	4120
(ii) Motorised crafts	-	29144
(iii) Non-motorised crafts	-	21854

The coastline distribution of the districts selected for the study is as follows:-

Table 1: Coastline distribution of the districts in Kerala

Sl. No.	District	Length of Coastline Area (km)	% of total
1	Thiruvananthapuram	78	13.2
2	Kollam	37	6.30
3	Alappuzha	82	13.90
4	Ernakulam	46	7.80
5	Thrissur	54	9.20
6	Malappuram	70	11.80
7	Kozhikode	71	12.00
8	Kannur	82	14.00
9	Kasargode	70	11.80
10	Kerala State(total)	590	100.00

The coastline of Kerala is passing through 222 fishing villages and 14 landing centers across 9 coastal districts. The coastal districts of Kerala include Kasargode, Kannur, Kozhikode, Malappuram, Trissur, Ernakulum, Alappuzha, Kollam, and Thiruvandapurum which is shown in the map. For the prupose of this study the coastal districts of Kerala is further classified in to three groups *viz.* Northern Kerala (Kasargode, Kannur, Kozhikode and Malappuram) Central Kerala (Thrissur and Ernakulam) and Southern Kerala (Alappuzha, Kollam, and Trivandrum) based on its location.

Table 2. Sampling distribution of the respondents

Location	Occupational group				
	Fish retailer	Fish vendor	Dry fish maker	Value added fish producer	Total
Northern Kerala	10	19	18	21	68
Central Kerala	10	10	10	10	40
Southern Kerala	30	21	22	19	92
Total	50	50	50	50	200

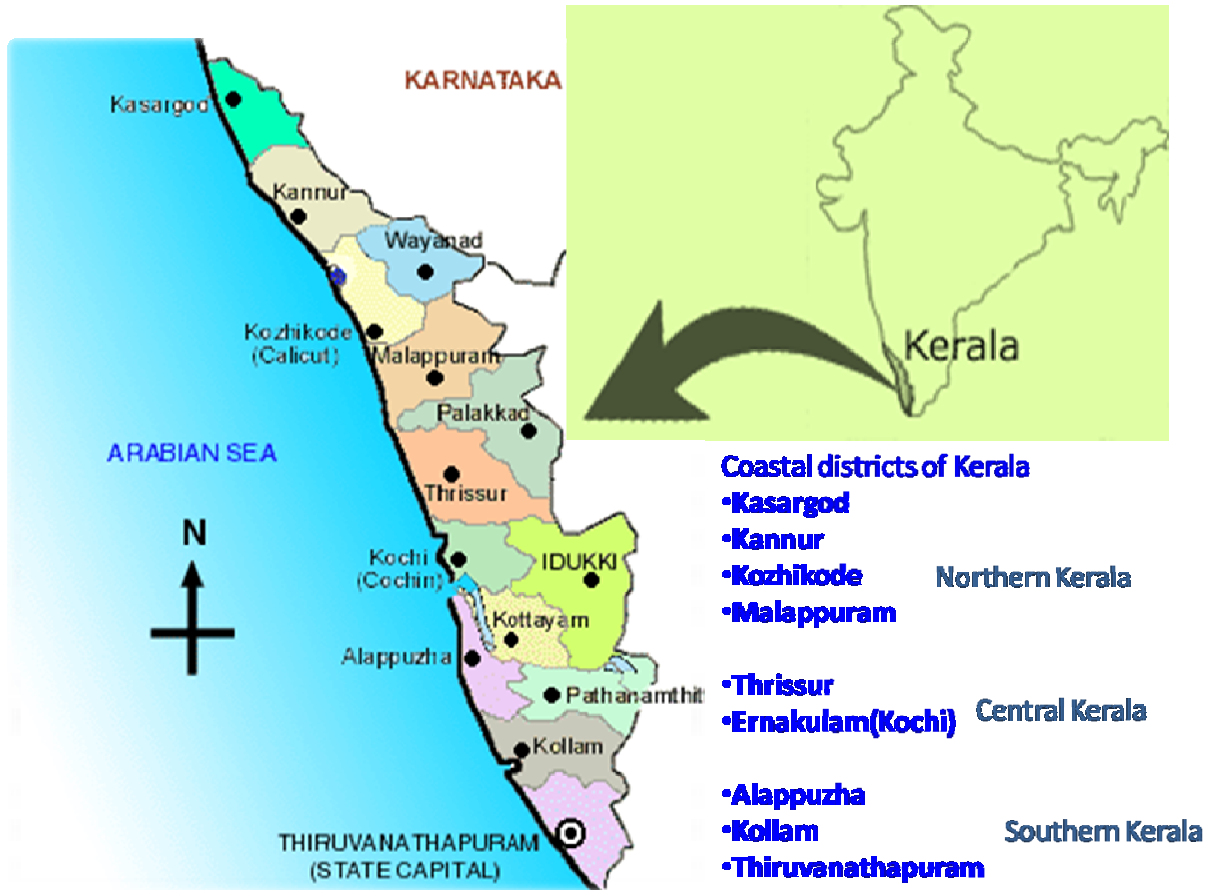


Figure 4 : Sampling Locations in Kerala

The study is designed to conduct among the fisherwomen, especially among four occupational groups of Kerala *viz.* fish retailer, fish vendor, dry fish makers, and value added fish producers. 50 samples from each occupational group were selected purposively with an equal distribution from all the major three regions of Kerala including Northern Kerala, Central Kerala, and Southern Kerala.

Period of Study

The study was conducted during May 2010 – February 2011

Data Collection and Methodology

The study is based on primary data collected from the sample respondents, in the selected coastal districts of Kerala. Keeping in view the objectives set for the study, a structured questionnaire was developed which was unbiased, concise, clear, complete and comprehensive. The personal interview was conducted with the help of a pre-

structured, comprehensive questionnaire (interview schedule), specially designed for the purpose. The primary data were recorded on gender, age, religion, caste, family particulars, education, occupation, annual income, assets, average monthly income, average monthly expenditure, details on production and marketing of fish and fish products. As per their priority and preferences, respondents were asked to rank various parameters like the problems they face in the market places, in their families, in their communities, and their awareness levels on various social, political and health aspects etc.

The questionnaire (interview schedule) was pre-tested to overcome the ambiguities and redundancies if any. On the basis of the information obtained through pre-testing, required modifications were made to make the questionnaire and interview schedule perfect. The questionnaire and interview schedule is presented in the Annexure.

The selected respondent was personally interviewed and in order to furnish reliable data, an effort was made to clarify the questions by repetition. The purpose and objectives of the study were explained to the respondents and they were assured that the information would be used for research purposes only. The responses were recorded and the collected data were tabulated for statistical analysis. The existing literatures were also used as an important source of information for the study. So the secondary data was collected from sources like various journals, periodicals, magazines, reports of the different state fisheries departments and websites. This secondary information was very important in reflecting the past trends in consumption of fish and fish products, profile of the state, fish production of the state, status of fish markets, *etc.* From the collected primary and secondary data; suitable technological and institutional interventions necessary for improved value-addition and scope for public-private partnership in the future were found out.

Tools of Analysis

The data obtained from the respondents were systematically tabulated for the purpose of analysis. The study used the following methods of analysis to present the facts in a cogent manner, to draw meaningful conclusions and to generalize the level of empowerment of the respondent fisherwomen

1. Average and Percentage Analysis:

Average and percentage analysis were used to examine the different variables pertaining to the respondents survey. Male-female ratio, adult-children ratio, literacy ratio, earner-dependent ratio etc were prepared for the analysis. Additionally respondents' species preferences, income and expenditure, savings and debt, networking etc. were analysed using average and percentage analysis

2. Scoring method:

The different empowerment parameters like social, economic, legal and political were analyzed with the help of scoring indices. The scoring index is based on binary continuum of 0 and 1 indicating Yes or No or a three point continuum with (0, 1 and 2 indicating or 1,2 and 3 indicating low ,medium and high.



KERALA FISHERIES: AN OUTLOOK

D. KERALA FISHERIES – AN OUTLOOK

Fisheries is one of the top priority sectors in Kerala because this sector provides employment and income to more than one million people, either directly or indirectly, satisfies the protein requirements of a considerable chunk of the population and provides considerable revenue, especially in foreign exchange, to the exchequer of the State. Hence the Government of Kerala have undertaken projects and programs for increasing production, for conserving and ensuring sustainable exploitation of fisheries wealth, for promoting cultivation of fish and prawns, for development of fishing harbours and facilities for landing of fish, for strengthening facilities for marketing of fish, and for the upliftment and welfare of the fisher-folk. In this context, a SWOL analysis of Kerala fisheries is attempted here.

SWOL Analysis

SWOL analysis is done for the fisheries sector of Kerala. The study was conducted by analyzing fisheries in the sector, which would give the present status and help in prediction of the future potentials of fisheries sector of the region, which will ultimately help in enhancement of the production and give better suggestion on management accounts. Before going into the details about SWOL-Analysis of fisheries of the region, a brief account on SWOL-Analysis, and what does it signifies becomes necessary. SWOL-Analysis is an informative tool for assessing the potential and status of any industry or any sector of production. It provides a complete picture of its Strengths (S), Weaknesses (W), Opportunities (O) and Limitations (L). However, the analysis of its strengths and weaknesses, which is essential, is possible only when the threats are taken into consideration while also identifying the opportunities available too. The analysis of the strengths, weaknesses, opportunities and limitations are very important to upgrade the sector and to flourish it, since it helps in problem identification, planning, decision making, appropriate technology implementation, precautionary measures for accelerating fish production at sustainable level. etc.

SWOL-analysis of any production sector or system will help us in:

1. Providing a basis for future action.
2. Decision making process.
3. Providing a proper feedback *i.e.* it will provide information regarding the performance and the steps to be taken for its improvement.
4. In setting up standard performance.
5. In taking up vision based research to convert weaknesses in to strengths and threats into opportunities.
6. In formulating management measures and its implementation.
7. All together it helps in smooth operation.

The fisheries sector is a crucial constituent in the state's economy. It contributes about two percent of the state income and provides the primary livelihood source for over three percent of the state population involved in the harvesting, processing and distribution of fish and fishery products. Fish is an important source of inexpensive protein and constitutes about the 70 percent of the per capita protein intake of the state. The state has a long coastline of 590 km length and a continental shelf area of 39000 sq km latter being equal to the area of the state. The major inland water resources of the state having much fishery importance are the 44 rivers (85000 ha), 53 reservoirs (42890 ha), 53 backwaters and other brackish water bodies (65213 ha). Around 8 percent of the Indian waterways are found in Kerala. Most of the Kerala rivers are small and entirely fed by monsoon rain which results in nearly year round water logging of such western regions as Kuttanad which lies 500 sq km below sea level.

Present status

The estimated potential of the marine area is said to be 7.51 lakh tons. Out of this around 5.89 lakh tons has been exploited. The current level of exploitation of marine stocks is said to be beyond MSY. The number of trawlers has shown an exponential increase along the coastal waters of the state with a view of exploiting shrimp resources in the inshore waters, especially bottom shrimp trawlers. The number of crafts used in Kerala waters was found to be around 29,177 including all non-motorized, motorized and mechanized vessels. Besides, over exploitation the major issue is discards at sea. A large number of species caught in the trawl are not marketable. Only 10 per cent of the fishes caught are economically valuable. The rest including scheduled species are killed and dumped back at sea. On an annual basis, around 2.4 lakh tones of discards are thrown back into the sea from bottom trawlers operated along Kerala waters. There are 222 marine fishing villages and 113 inland fishing villages in the state where fishing and relative activities provide livelihood to a vast majority of the population. The estimated fisher folk population of the state is 11.12 lakh which include 8.558 lakh in the marine sector and 2.56 lakh in the inland sector. The number of fishermen actively engaged in sea fishing is estimated to about 2.2 lakhs.

Strengths

- i. Prolific resources: Kerala accounts for 12,570 sq km of coastal sea area, which has an estimated Maximum Sustainable Yield (MSY) of 400,000 t. This highly productive inshore area is being exploited intensively by more than 4,000 mechanized boats and nearly 26,000 traditional crafts, of which about 17,362 are motorized. The coastal sea which has the same area as the terrestrial area is one of the most productive areas as far as fishing is concerned. The major share of exports in this sector from India is from Kerala. More than a million people belonging to the fishing communities live in 222 fishing villages in the State. The traditional skill in fishing, courage and sense of adventure are their assets. About 2 lakh people depend on ancillary professions like processing of prawns and fish and marketing of fish for a living in Kerala.

- ii. Biologically productive inland, estuarine and coastal waters: The state has one of the most biologically productive estuarine and coastal waters. The state has a vast resource potential of inland water area also.
- iii. Resource potential of candidate species: The state has the highest natural resource potential of internationally valued crustaceans and cephalopods resources (penaeid shrimps and cuttle fish) as well as highest potential of nutritious pelagic resources (oil sardine, mackerel and anchovies).
- iv. Scientific and academic man power: The state has the highest concentration of national level fishery research and training institutes and fishery scientific and academic manpower in the country.
- v. Skilled human resources: The state has the greatest skilled human resources, among those who traditionally follow the fishery occupation and those who acquire it through formal training.

Weaknesses

- i. Source of inexpensive, nutritious food: Insufficient stress has been given to highlight fish as a source of inexpensive, nutritious food for local consumption. There exists a lack of awareness on the consumption of fish as a cheap source of protein
- ii. Lack of sufficient infrastructure and marketing facilities: There is no common landing centre for the inland fish production. Lack of sufficient infrastructural facilities for the market as well as landing centers may create problem to the fishermen.
- iii. Absence of long-term credit and subsidy policy: There was no sound and long-term credit and subsidy policy and adequate funds weren't made available to steer investments in the right direction.
- iv. The development of the fisheries sector and processing units in the State is not pursued in a scientific or sustainable manner. Much more remains to be done to bring the existing landing centres to international quality and hygiene standards.
- v. The State has one of the highest concentrations of processing units and marine export houses in the country. The quality standards should not be restricted to the export units alone, but should extend to the catch, landing centres, peeling and processing units as well. This alone will ensure the marine products from Kerala qualify to meet the stringent requirements of the global market.
- vi. To supplement the resources of the sea and to meet the growing needs, the State will also have to pursue aquaculture in a more systematic and scientific manner. The State will have to supplement the resources of the seas through scientific

and sustainable aquaculture and the lack of it has resulted in the fall in contribution from the State in both volume and value to the total marine exports from the country.

- vii. Inland fishery and export revenue: The export is mostly obtained from marine fishes. Inland fishery sector is not in a position of getting revenue through export other than some shrimps as it is primarily meant for domestic sale and consumption.
- viii. Lack of sponsored initiatives and organization of co-operatives: There were no early state sponsored initiatives to generate and disseminate intermediate technologies in fish harvesting, processing and distribution. There has been a long history of failures of fishers's organizations due to lack of clear and stable approaches to the organization of co-operatives for fishers.
- ix. Mass mortality of fish: Over 200 medium and large scale industries and 2000 small scale industries discharge effluents containing heavy metals such as mercury, zinc, and cadmium above the permitted level causing mass mortality of fish.

Opportunities

- i. Growing consumer demand: On account of the rich protein source, readily availability and increased awareness on the health benefits of consuming fish there is an evergrowing demand for fish consumption.
- ii. Periodical assessment of fishery resource potential and revalidation of the exploited marine fishery: The fishery resource potential of the state and its level of production and harvest should be periodically assessed. To achieve a sustainable yield from the fishery, concerted effort should be made to ensure a sustainable harvest and production of fish from all water bodies under the jurisdiction of the state. The exploited marine fishery should be revalidated on the basis of data generated while framing any policies and legislation of conservation and management of marine fisheries of the state.
- iii. Scope of using inland water bodies: There is immense scope of using our inland water bodies for fish production so that we can produce more to meet the demand.
- iv. Aqua ranching: Aqua ranching by hatchery produced seeds of critically endangered species of the water bodies of the state should be carried out.
- v. Reducing the discards at sea: Utilization of by-catch for the preparation of protein rich products for local as well as export market thereby reducing the discards at sea.

- vi. The freshwater ornamental fish resource potential of the state is not properly tapped yet. Rehabilitation of the exploited ornamental fishes in the wild has to be taken care of and captive breeding techniques for many of the commercially important species has to be developed and commercialized.
- vii. Coldwater fisheries development: There is wide scope of developing coldwater fisheries of the state since it is in an infant stage.

Limitations

- i. Like the world over, the resources of the seas along the Kerala coast are also dwindling. Marine fish landings in Kerala showed wide fluctuations over the years, especially during the post mechanization period. Massive changes in the species composition of the catch and the disappearance of previously important species with an increase in unmarketable or small-sized species are signs of overfishing. The fishing pressure exerted by the increasing number of crafts using innovative gears in the narrow near shore regions has resulted in heavy competition leading to inter- and intra-sectoral conflicts. Active fishing with synthetic fibers, propulsion with outboard motors and modification of craft and gears, indigenization of fishing techniques such as mini purse-seining and mini-trawling, have contributed to the overfishing. This has also coincided with an enormous increase in fishing by the mechanized sector, which has led to large scale destruction of egg bearing fishes and juvenile fishes.
- ii. Absence of international quality and hygiene standards: The development of the fisheries sector and processing units in the State is not in a scientific or sustainable manner. Much more remains to be done to bring the existing landing centers to international quality and hygiene standards. Little emphasis was placed on value addition to improve the quality of the product. This resulted in the lopsided development of infrastructure in the public sector which now remains largely unutilized.
- iii. Prohibited fishing methods: Unsustainable and unethical fishing by using fish poisons, dynamiting and a wide array of prohibited fishing methods are very rampant at the uplands and lowlands of most of the inland water bodies.
- iv. Population decline and endangerment of the fishes: Habitat destruction of natural spawning and breeding ground of fishes through sand mining and construction of physical obstruction across the water bodies contributed to the population decline and endangerment of the fishes mainly freshwater species.
- v. Pollution: Agriculture in the catchment area has aggravated the pollution by the application of pesticides and insecticides and it also brought about a reduction in the available space for the free movement of the fishes. Anthropogenic activities have resulted in the decline of fish population in alarming rate from most of the water bodies of the state. The efforts made to stem the reduction and pollution

of inland waters by the activities of the other sectors of the economy was not adequately coordinated.

- vi. Inadequate recognition of the existing artisanal technological diversity: A socio-economic dualism was initiated in the fishery sector by state sponsored capital intensive technological modernization which was undertaken without adequate recognition of the merits and worth of the existing artisanal technological diversity.
- vii. Lack of integrated planning for fisheries development: The importance of the intricate links among riverine, lacustrine, estuarine, and marine waters was not adequately appreciated and consequently there was no integrated planning for fisheries development and management within the whole aquatic terrain under the state's jurisdiction.
- viii. With over 1,500 fishing boats operating in excess of the carrying capacity of the Kerala coast, there is extensive unregulated and over-fishing. There are over 9,000 fishing boats registered in Kerala. Over and above this, fishing boats from neighbouring States intrude into the Kerala coast.
- ix. Use of unsuitable fishing gears that result in a high level of wasteful by-catch and destruction of egg bearing and juvenile fish should be controlled. The main socioeconomic problem brought about by the trawl ban is the displacement of the labour force working on inshore trawlers. The current practice of trawlers throwing the unwanted fish catch back into the sea creates further pressure on the fish resources. It is necessary to explore ways of reducing the by catch from prawn trawling to make it more target specific. As literacy in the coastal areas is low, the results of research reach the fishers very slowly.

Strategies and policies

There is an inherent need for having well formulated policy to chart a course of action which will restore the vitality and the dynamism of the state. This calls for a multi-pronged approach which will focus on the sustainability of the resource base, the economic viability of the industry, the provision of the decent level of living to the persons who labor in the sector and ensure a good supply of fish for local consumption and export. The main focus should be towards those who have involved in the traditional fishing and related activities particularly the weaker sections of the community.

Steps will be initiated to undertake gradually and aquarian reform in the states territorial waters will ensure that the rights of ownership of fishing assets will rest only with those who fish. Emphasis will be laid on encouraging technologies which are appropriate to the ecosystem as well as appropriate by the user. This will be accompanied by the efforts to raise the level of skills and productivity of the users by

imparting the required training and transfer of knowledge. Special attention will be given to enhance the level of institutional finance. Conscious efforts will be taken to encourage value added exports which are not detrimental to domestic consumption. Recognizing the central role of women, it will be the endeavor to rectify the earlier imbalances in the fruits of fishery development which accrued to them.

Considering the negative impacts from developments undertaken in many other sectors of the economy affect the public water bodies, any use of such water bodies shall be done in consultation with department of fisheries. An appropriate leasing policy for water bodies will be evolved. Since most of the fisheries harvest and production is undertaken in the common property of water bodies, priority will be accorded to assessment of the present status as well as to the organized management and fisher folk participation in resource co- management should be ensured. Strong action plans should be formulated to solve the issues and constraints related to the sector.

Below given is the gist of the draft of the Fisheries policy of the Government of Kerala, which in fact is the blue print of the action plans for the developments in the sector and the welfare activities, envisaged for the next twenty five years.

The Fisheries Policy

It is inevitable to ensure international standards in cultivation of fish, and the quality of fisheries products in the background of the liberalized market system that came into being as per the World Trade Treaty. Hence, the fish landing centers, and fishing harbours have to be maintained according to international standards. Government will ensure their proper maintenance utilizing the user charge and toll collected through Harbour Development Societies and Fish Landing Societies. The construction activities of the Harbour Engineering Department will be limited to the fishing harbours and fish landing centers. Fisheries Organizations will either do by the Fisheries Department or all other construction works by tendering them as per the existing rules.

Government will give priority to export of fisheries products, to let the products from Kerala to compete in the International markets, and to the production of Value Added Products. Further government will facilitate private investment in the field of installation of ice plants, cold storages etc.

The ban on trawling during the monsoons in Kerala to ensure protection of the fisheries wealth will be implemented with the co-operation and backing of all sectors in this field. Since the fisher folk, traders and exporters have difference of opinion regarding the duration and period of trawling ban, so trawling ban will be implemented during a period and duration taking into consideration the opinion of all these sections.

Government of India usually enforce banning deep sea fishing near the Kerala coast, for large scale fishing vessels, during the trawling ban period. The Government of Kerala will demand that this ban on large fishing vessels in the deep seas near the Kerala coast should be enforced during other periods also. During the period when the ban is in

force, mechanised country boats with outboard engines and inboard engines above a specified horse power will not be permitted to fish.

Registration with the Kerala State Fisheries Department will be made compulsory for all boats fishing in the seas near the coast of Kerala State. Controls will be enforced on boats utilizing the ring-seine regulating the size of the boats, and weight and size of the nets.

Government will ban mini-trawling in utilizing country boats in areas where traditional country boats operate. This ban will be made applicable to pair trawling also.

Detailed discussions will be held on the report of Special Officer on the formation of the Coastal Development Authority. The functioning of this authority will be structured in such a way as to provide maximum benefits to the fishermen operating in the coastal areas and inland waters.

Government of India will be requested to amend the Coastal Area Regulation Act so as to enable the fisher folk to utilize of the coastal area for construction of houses and for occupations ancillary to fisheries.

The marine fish wealth of the Kerala seas will periodically be assessed with the help of agencies like CMFRI. Appropriate steps will have to be taken to regulate the excess number of boats in Kerala seas in consultation with experts, trade union leaders and people's representatives.

Steps will be initiated to strengthen the Enforcement Wing and to bring in better efficiency to the Fisheries Stations with the help of patrolling boats to enforce efficiently the provisions of the Kerala Marine Fisheries Regulation Act.

At present, the Fisheries Department has to bear considerable financial liability since too many police personnel are deployed in Fisheries Stations. Since these police personnel could not render their services during life saving missions at sea in recent incidents, groups of actual fishermen who have experience at sea will be constituted at Fisheries Stations and they will be deployed to undertake life rescue missions at sea, paying them remuneration. Those patrol boats now in disuse will be auctioned off and large fishing boats that can be repaired locally will be put in use. Walkie-talkies will be supplied to fishermen venturing out into sea, and the wireless net work linking fisheries stations, Matsyabhavans, Patrolling boats and personnel of the Department of Fisheries (DoF) will be expanded. This network system will be utilized for ensuring the security of the fishermen. Fishermen will be informed of the details of current movements of shoals of fish, received from remote sensing agency, over the walkie-talkies. This wireless system will be made compatible with cellular technology so that market price trends of fish could be received by the fishermen without delay.

It will be ensured that only actual fishermen are included in the annual list of fishermen prepared by the Kerala State Fishermen's Welfare Fund Board (KSFWFB). Complaints have been received that people engaged in other professions register themselves as fishermen to obtain the benefits extended to fishermen. In this context, the Welfare Fund Board will be asked to publicize the draft list before finalizing it at

major points and the fishermen will be asked over newspapers, radio and television to bring to the notice of the authorities if they find that anybody engaged in other professions are included in the list. If any ineligible persons are included in the list, their names will be removed from the list and action will be taken against the officers responsible.

All fishermen will be supplied with identification cards with photographs at government cost. This will help in ensuring that ineligible people do not get the benefits meant for fishermen. Since the supply of kerosene oil from the central government made available as central assistance are limited, actual fishermen do not get sufficient quantity of kerosene oil for their outboard engines. One of the reasons for this is that, some people purchase kerosene oil for engines not currently in use and sell it in the black market. If this practice can be stopped, the real consumers will get more oil for their use. So permits issued for engines not in use, if any will be cancelled.

The Kerala State Fishermen Welfare Fund Board now disburses pension to the fishermen who are not able to work because of old age etc. But there have been complaints that ineligible people also get pension. Disbursement of pension to the ineligible will be stopped.

Since more than half of the fishermen now live in huts, a time-bound-program to provide houses to actual fishermen will be launched. For this, assistance from Central Fishermen's Welfare Board, Housing Development Corporation (Hudco) and other housing finance agencies will be sought. Taking into account the limitation in the availability of land in the coastal area, architectural modifications will be made in the designs of fishermen's houses.

Efforts will be made to provide sanitation facilities in all fishing villages. For this financial assistance will be sought from Hudco, other financial agencies and international financing agencies. Steps will be taken to install solar lamps in fishing villages where electricity is yet to reach. For this the Ministry of Non-conventional Energy or international agencies will be approached for financial assistance. Steps will also be initiated to set up function the Matsyabhavans in coastal panchayats as agencies for satisfying the various needs of the fishing communities as a single window system.

The local self governments will be asked to entrust the responsibility of scrutinizing and approving fisheries related projects with officers of the fisheries department, Matsyafed or Adak considering them as technical experts. All efforts will be made to treat fish production, aquaculture and related activities as agricultural occupations for all practical purposes and benefits given to farmers for electricity, water and other basic amenities extended to fisheries sector also.

Since basic data is of vital importance for planned development of the sector, the FIRMA will launch a website on the fisheries sector. Further a map of the water bodies suitable for aquaculture will be prepared with the help of the local self governments and research institutions. Further, the government will persuade commercial banks to

provide loans to farmers for aquaculture in tanks and ponds. farmers' clubs will be set up locally and unemployed will be persuaded to take up activities like fish-feed production.

Fish and prawn farmers will be persuaded to go for group farming and technical assistance and effective supervision provided to them. Special programs will be formulated for the conservation and development of fish and prawns under the threat of extinction. Further the government will go for legislation to protect common water sources from the threat of pollution. Group insurance facilities will be introduced in the field of aquaculture.

Projects will be formulated for developing fisheries wealth in the hither-to unexploited fields like integrated fish farming in inland waters, game fisheries etc. Further, projects will be prepared for cultivating cold water fish like the trout. For this, the Kerala State Electricity Board will be approached for permission to utilise all reservoirs for aqua farming. Private investment will be permitted in areas like farm house tourism, aquariums, oceanarium etc.

For preventing of the fish wealth from extinction and for ensuring the growth on a large scale, steps like by constructing artificial reefs in the sea and lakes, sowing fish seed in public water bodies etc. will be taken. The existing acts and rules relating to land use will be amended to promote integrated farming of paddy-fish, paddy-prawn combinations. To ward off any fears that this will harm the paddy cultivation and lead to loss of employment opportunities, awareness programs will be organised under ADAK.

Government will take steps to check disease to prawns and fish which causes heavy loss to fish farmers. Restrictions and controls will be imposed on importing fish/prawn seed from hatcheries outside the state. As part of these regulations, licensing system will be brought for hatcheries and those hatcheries that have facilities for various laboratory tests including PCR tests. Only those organizations and individuals having prescribed qualifications will alone be permitted to work as consultants in future. A high power committee under Agency for Development of Aquaculture in Kerala (ADAK) will be constituted to supervise all these matters. This committee will be given the powers to conduct checks in such farms and give technical suggestions.

Government will go for a unified Inland Fisheries Act, modifying the Travancore-Cochin Fishing Act and Indian Fishing Act suitably, since there are no unified laws incorporating provisions for the development of inland fisheries. Steps will be taken to obtain the license from the National Aquaculture Agency for cultivation of prawn in areas under the purview of Coastal Regulation Act and government will promote aquaculture maintaining the ecological balance as per the guidelines of the National Aquaculture Agency.

Government will also prepare projects for the establishment of PCR laboratories having all the facilities for ensuring the quality of fish seed and controlling the white spot

disease of prawns, in cooperation with local self governments. The panchayats, municipalities, and corporations should give only to the FFDA, the inland waters under their administrative control for lease for short term periods from five to seven years and for long term lease for fifteen years or more. The FFDA's will impart training to fish farmers and set them up as groups and make them prepared for undertaking fish farming in natural water bodies. Efforts will be made to make loans available from commercial establishments for fish farming.

Taking into consideration the importance of maintaining the ecological balance of the estuaries, the maximum number of fixed nets and chinese nets will be assessed. The existing nets owned by actual fishermen and its licensed will be re-registered under the proposed Inland Fisheries Act. All the existing unlicensed nets will be removed in phases within the next five years, without taking into account the nature of ownership. However, those nets that have been operated for more than ten years and licensed to welfare organizations will be protected.

Steps will be initiated to bring in efficiency to the fish seed production centers under Matsyafed and fisheries department. Government will promote establishment of new hatcheries that observe all the norms, in the private sector also. All fisheries development projects except centrally sponsored schemes, model farms and aquaculture training centers will be entrusted with ADAK

It is estimated there exist in Kerala, reservoirs to the extent of 40,000 hectares plus. Out of these, scientific aquaculture is done only in 10 reservoirs. The majority of the reservoirs in the state are under the administrative control of Kerala State Electricity Board or the forest department. Steps will be taken to see that the fishing rights in these reservoirs are given to the fisheries department.

Though Kerala has made rapid strides in the field of Tourism, we are yet to launch fisheries tourism. The reservoirs, lakes, ponds, rivers and rivulets offer new potential for the development of fisheries tourism. The reservoirs in the high ranges are suitable for angling of Mahasir fish. Hatcheries will be established for the development of such fish wealth here. Steps will be taken to attract foreign tourist to such areas with the help of angling associations.

Seminars and exhibitions will be conducted to make people aware of the potential of development of ornamental fisheries roping in the services of all agencies in this sector, on a national level. So also programs for the development of this sector will be formulated on a time bound basis.

To conserve the genetic diversity of fish which is facing the threat of extinction, mangroves will be developed on the beaches of lakes in the State.

In Kerala there is about 20000 hectares of lakes suitable for the development of aquaculture. Steps will be taken to promote aquaculture that includes cultivation of prawns, crabs etc. in these lakes. Assistance will be provided to farmers for this through Brackish Water fish farmers Agency. In the context of the natural regeneration of certain fresh water and brackish water fish being prevented by various reasons, a

program to rear the young ones of such fish in artificial environment and then releasing them to the natural water bodies will be implemented.

The activities of Matsyafed which is a producer co-operative will be strengthened in the field of marketing. Strong auction system will be introduced to rescue the fisherfolk from exploitation. Matsyafed will set up clean fish markets with all modern amenities with the help of local self governments (LSG). The tenure of the Matsyafed and affiliated primary cooperative societies will be brought down to three years from the existing five years. Many of the 654 primary cooperative societies under Matsyafed are now defunct. Moreover they impose financial burden on the government. Hence such defunct primary cooperative societies will be abolished and their members affiliated to neighboring societies. There are cases where the same individual has membership in more than one cooperative society

Thus that individual is able to obtain assistance from more than one society while many other eligible are denied such benefits. So no labourer in the fisheries sector will be permitted to be member of more than one cooperative society. Government will ensure that membership to fisherfolk's co-operatives is restricted only for actual labourers in the field. The provision to give two per cent of the membership to others will be given up. This move will eliminate the chances of those who are not labourers in the fisheries sector becoming members of the administrative committee of the Matsyafed.

Taking into account the incidence of unemployment among the women of the fishing communities, small self help groups of such women will be organised and job-oriented training imparted to them. For this the existing fishermen's bank will be reconstituted and their activities extended. To bring in better efficiency in the fisheries department and related agencies, the professional management system will be introduced and better training offered to the personnel. Graduates in fisheries sciences will be given priority for appointment to the cadre of officers in such organizations.

In certain organizations like the Fishermen Welfare Fund Board, so many officers from other departments work on deputation. Many of them are in no way related to the fisheries sector. Since higher pay scale and amenities have to be given to such officers, the administrative expenses of the organization increase and the regular staff of the organization become unsatisfied. Hence the deputation system will be continued only for those posts for which such posting is absolutely necessary.

The NIFAM which is nearing completion will function as an autonomous organization. All the training needs of the Fisheries Department, Matsyafed, Fishermen's Welfare Fund Board, and Fish Farmers Development Agencies will be met by this organisation. There will be separate wings to handle staff training, cooperative training, and technical training and expert trainers will be appointed for all these wings. All the Awareness Centers of the Fisheries Department will be brought under this organisation. The working system of the Fisheries Technical Schools will be improved.

The fruits of the research and studies conducted by the research centers of national importance at Kochi will be made available to the fisheries sector in the State. In the past, Fisheries department had spent lakhs of rupees for assisting fisheries related studies to universities and other research organizations. But many of these organizations have not completed the studies within the specified period or have not provided the accounts of the expenses for the conduct of these studies. In certain other cases, after spending hefty amounts, they have dropped the studies half way. In this context, in future, such studies will be conducted by the fisheries department and related agencies directly.

A special literacy program concentrating of fishing villages will be launched. The women's associations of the community will be provided with assistance for organising activities for empowerment of women.

Special projects will be launched for providing safe drinking water in fishing villages. Projects to harvest rain water will be implemented. The schemes to provide incentives for the education of the children of the fishing folk will be extended to cover the occasional courses and other services in self-financing institutions also. Steps will be taken to bring down the rate of drop-outs belonging to this community from schools. Voluntary organisations working for this will be promoted. Many of the girls are compelled to stop education and act as baby sitters where both the parents have to go to work. To solve this problem, child care centers will be opened in the fisher villages.

This is the gist of the draft of the fisheries policy announced by the government. This new fisheries policy opens up ample opportunities for development of fisheries in Kerala.

Conclusion

From the SWOL analysis it has been clear that tremendous potential resources of the state should be utilized commercially through effective and sustainable management. Proper co ordination is essential to implement the policies and strategies formulated. Successful implementation of the policy should be backed up by sound data and information base, scientific back ground and a core of well trained management experts. The SWOL analysis shows that Kerala is rich in natural fishery resources and have good opportunities to develop. The main constraints lie in the unscientific methods of exploitation of the resources and their inevitable wastage during utilization.



**REFLECTIONS
AND
UPSHOT**

E. REFLECTIONS AND UPSHOT

The data collected from the respondent fisherwomen across the four different occupational groups including fish retailer, fish vendor, dry fish maker and value added producer were tabulated, analyzed and the results and discussions are presented in this chapter. The results are organised under the following sub-heads.

- A. General characteristics
- B. Family profile
- C. Composition of fish species marketed by fisherwomen
- D. Income generating activities of fisherwomen
- E. Economic empowerment
- F. Social empowerment
- G. Political empowerment
- H. Legal empowerment

A. General characteristics of the respondent fisherwomen

The general characteristics of the respondent fisherwomen comprises of respondent fisherwomen's age, educational status, religious orientation, caste and family type of the respondents across the four occupational groups *viz.* fish retailer, fish vendor, dry fish maker, and value added producer is presented in this section.

i. Agewise distribution of the respondent fisherwomen

The agewise distribution of the respondent fisherwomen is furnished in Table 3 below. The age of the respondents are categorized into three sub groups *viz.*, young (15-35 year), middle age (36-55 year), old (>56 year) etc.

Table 3 – Age wise distribution of the respondent fisherwomen

Sl.No	Occupation	Age (year)			
		15-35	36-55	>56	Total
1	Fish Retailer	1 (2)	30 (60)	19 (38)	50 (100)
2	Fish Vendor	2 (4)	28 (56)	20 (40)	50 (100)
3	Dry fish maker	6 (12)	36 (72)	8 (16)	50 (100)
4	Value added fish producer	12 (24)	35 (70)	3 (6)	50 (100)
5	Total	21 (11)	129 (65)	50 (25)	200 (100)

Figures in parenthesis indicate percentage to total

Majority of the respondent fisherwomen who were involved the fishing business represents the middle age group of 36-55 and constituted 65 per cent of the total respondents followed by old group (25 per cent). The younger fisherwomen from the age group of 15-35 represented least in the fishing business indicate the diminishing popularity of fishing business among the younger generation.

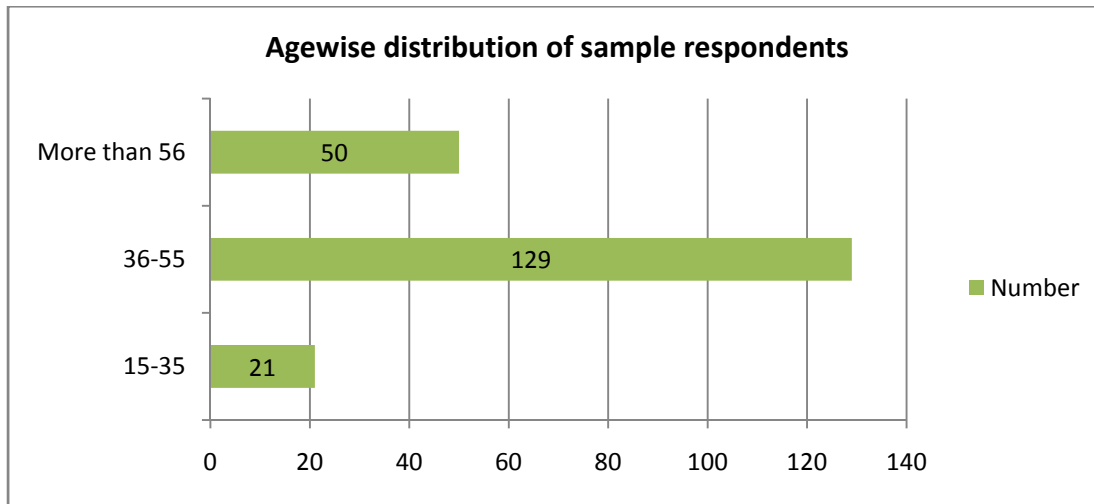


Figure 5. Age distribution of respondent households

Agewise distribution demonstrated significant differences across the four occupational groups of fisherwomen. Highest distribution of the respondent fisherwomen among fish vendors and retailers were found to be in middle age group (56 to 60 per cent) and in old group (38 to 40 per cent). The higher representation of fish vendors and fish retailers above the age group of 56 could be due to their strive for economic independence even at the age of late sixties and also part of their sustained and perpetual emotional attachment to this profession. The representation of younger generation was very low among both fish vendors (four per cent) and retailers (two per cent).

In the case of value added fish producers a higher per cent of the (70 per cent) respondents was from the middle age group followed by 24 per cent of the respondents from younger age group. The value added fish producer of elder group was found to be 6 per cent and was represented least. Dry fish makers also exhibited very similar pattern of age distribution like that of value added fish producer in which higher per cent (72 per cent) of the respondents constituted middle age group. It was found that 11 per cent of the dry fish makers also represented younger age group.

It was found that number of respondents from the younger age group represented more of value added fish producers (24 per cent) and dry fish makers (12 per cent) than other two occupational groups. Results clearly indicated that production and marketing of value added fish products could attract more number of youngsters than traditional fish marketing occupations.

ii. Educational status of respondent fisherwomen

Educational qualification of the respondent fisherwomen is furnished in Table 4.

The educational profile of the respondent fisherwomen analyzed in this study was based on literacy parameters- number of illiterates and literates. The total literates are further classified into primary, secondary and collegiate for further analysis. The primary level indicated schooling till fourth grade, secondary level indicated by high school, secondary and vocational education. The collegiate level of education was denoted by collegiate and professional education.

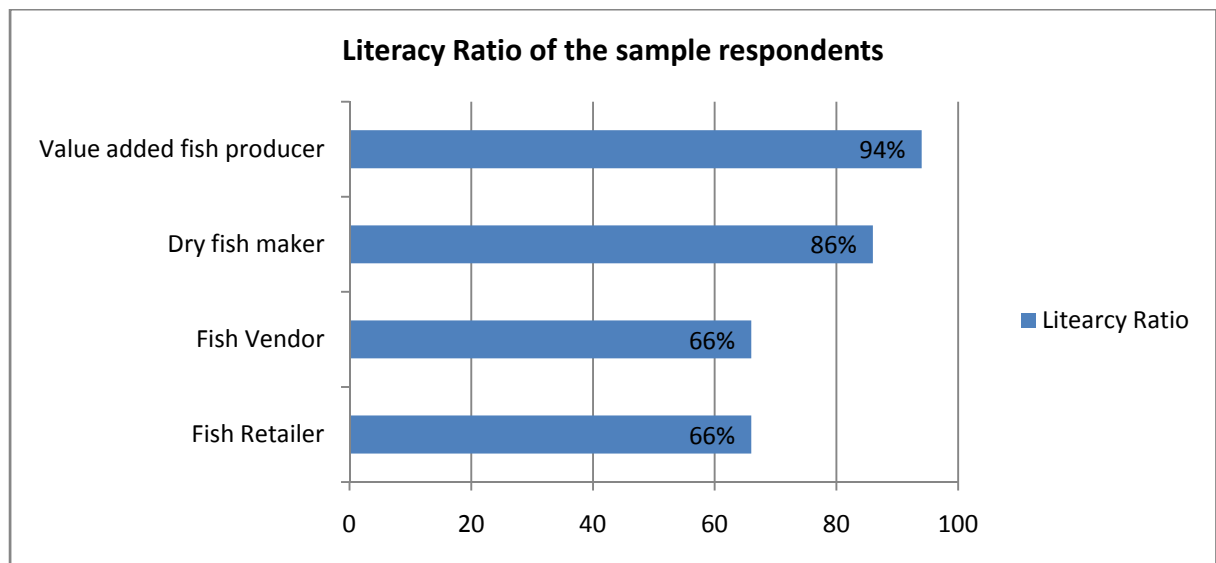


Figure 6 Literacy Ratio of respondent fisherwomen

It was found that 78 per cent of the total respondents across the four different occupational groups had basic functional literacy. While comparing the literacy rate of respondent fisher women across four occupational groups, value added fish producer occupied first position (94 per cent) followed by dry fish makers (86 per cent). Both fish vendors and fish retailers had comparatively lower literacy rate of 66 per cent each.

High percentage of illiteracy level among fish vendors and retailers indicated that being traditional fisher folk they got hardly limited opportunities in terms of money, facilities and family support to study. They got entered in to this profession at a younger age group forcefully and continuing their profession even in late sixties.

Table 4. Educational status of the respondent fisherwomen

Sl.No	Occupation	Total	Educational Qualifications				
			Illiterate	Literate	Primary	Secondary	Collegiate
1	Fish Retailer	50	17	33 (100)	26(79)	7 (21)	0 (0)
2	Fish Vendor	50	17	33 (100)	26(79)	7(21)	0(0)
3	Dry fish maker	50	7	43(100)	31 (72)	10(23)	2 (5)
4	Value added fish producer	50	3	47 (100)	15(32)	28(60)	4(9)
5	Total	200	44	156 (100)	98(63)	52(33)	6(4)

Figures in parenthesis indicate percentage to total

The results indicated that among the literate population 63 per cent have primary level of education, 33 per cent have secondary level of education and hardly 4 per cent have collegiate level of education. The person with collegiate education was only among value added fish producers and dry fish makers.

Total number of primary educated fisherwomen was found to be high among fish vendors (79 per cent) and retailers (79 per cent) than the other two occupational groups. However the number of fish vendors and retailers were falling when we move towards higher education levels up to collegiate and professional education. Whereas in the case of value added fish producer the number of fisherwomen comparatively increases with the level of education. Number of fisher women studied in higher secondary level were high among value added producer (60 per cent) and 9 per cent of the respondents among value added producer have college/professional education.

The results indicated that the higher education does not seem to be skewed towards traditional fisherwomen including fish vendors and retailers. Age group of the value added producers has a direct relationship with their higher rate of education. Since majority of the dry fish makers and value added producers were either from younger group or middle age group, they got more exposure to the present education system than others.

iii. Family type of the respondent fisherwomen

Family type of the respondent fisherwomen based on the number of family members is discussed in the Table 5. The major family types existing in Kerala fishermen

households include joint and nuclear. Over the years the concept of joint family had paved way for the nuclear.

Table 5. Family type of respondent fisherwomen

Sl.No:	Occupation	Type of family		
		Nuclear	Joint	Total
1	Fish Retailer	39 (78)	11 (22)	50 (100)
2	Fish Vendor	39 (78)	11 (22)	50 (100)
3	Dry fish maker	41 (82)	9 (18)	50 (100)
4	Value added fish producer	41 (82)	9 (18)	50 (100)
5	Total	160 (80)	40 (20)	100 (100)

Figures in parenthesis indicate percentage to total

The nuclear family culture is mostly adopted by all the fisherwomen (80 per cent) across the four different occupational groups. Among the respondents who belonged to nuclear family, the highest number occupied by value added fish producer and dry fish maker (82 per cent each) followed by fish vendor and fish retailer (78 per cent each). Generally the family orientation of the households in Kerala tends to be nuclear (Census 2001). This general tendency of growing nuclear family culture was reflected in family type of all categories of fisherwomen. The tendency was marginally higher among dry fish makers and value added fish producers due to their higher level of education.

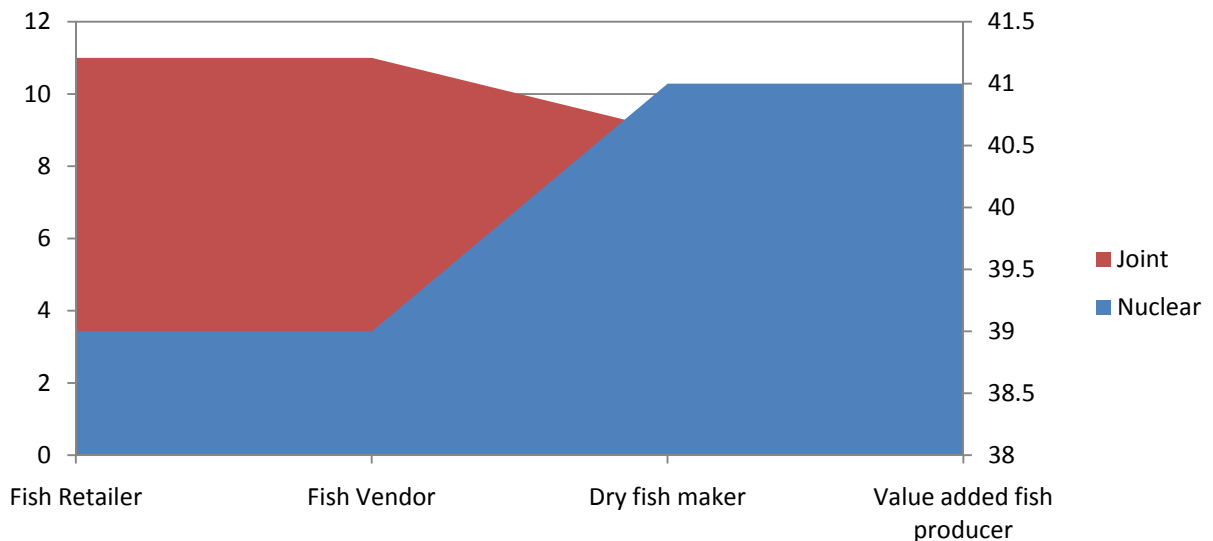


Figure 7. Family type of respondent fisherwomen

iv. Community orientation of respondent fisherwomen

Community orientation represents the religious faith practiced by the respondent fisherwomen. In Kerala the major religious faith practiced includes Hinduism, Christianity and Islam. The community orientation of respondent fisherwomen is furnished in the Table 6 below.

Table 6. Community orientation of respondent fisherwomen

Sl.No:	Occupation	Religion			
		Hindu	Muslim	Christian	Total
1	Fish Retailer	28 (56)	1 (2)	21 (42)	50 (100)
2	Fish Vendor	29 (58)	1 (2)	20 (40)	50 (100)
3	Dry fish maker	28 (56)	1 (2)	21 (42)	50 (100)
4	Value added fish producer	29 (58)	5 (10)	16 (32)	50 (100)
5	Total	114 (57)	8 (4)	78 (39)	200(100)

Figures in parenthesis indicate percentage to total

It was found that the majority of the respondent fisherwomen (57 per cent) were from Hindu community followed by Christian community (39 per cent). The general community orientation pattern of Kerala indicated that majority of the population constituted by Hindus (56.2per cent) followed by Muslims (24.7per cent), and Christians (19.00per cent) (Source –Census 2001). In contrast with the general community orientation pattern of Kerala, representation of fisher women from Muslim community was very low (4 per cent) and they were mainly engaged in making value added fish products (10 per cent).A particular group of Christian community (Latin) and Hindu community(Dheevara) were known for traditional fishing and fishery allied business, were representing more among the total respondents which is further explained in the Table 7.

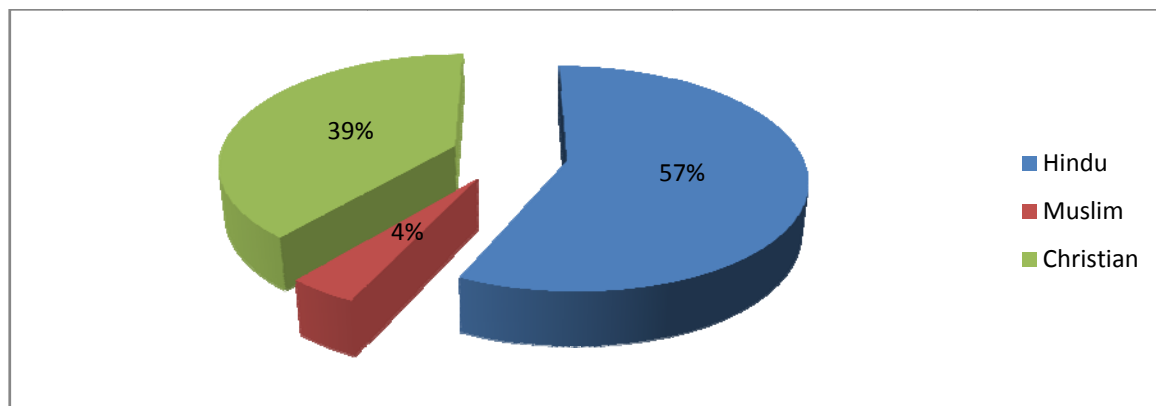


Figure 8. Community orientation of respondent fisherwomen

The first three occupational groups of fisher women including fish retailer, fish vendor, and dry fish makers were following the similar pattern of distribution in their community orientation. Among fish retailers and dry fish makers the representation of Hindus was higher (56 per cent) followed by Christians (42 per cent) and Muslims (2 per cent). The representation of the Muslim community was marginally higher (10 per cent) the case of value added fish producers from than that of all other respondents. The Muslim community known for their entrepreneurial skills is engaged mostly in making value added fish products.

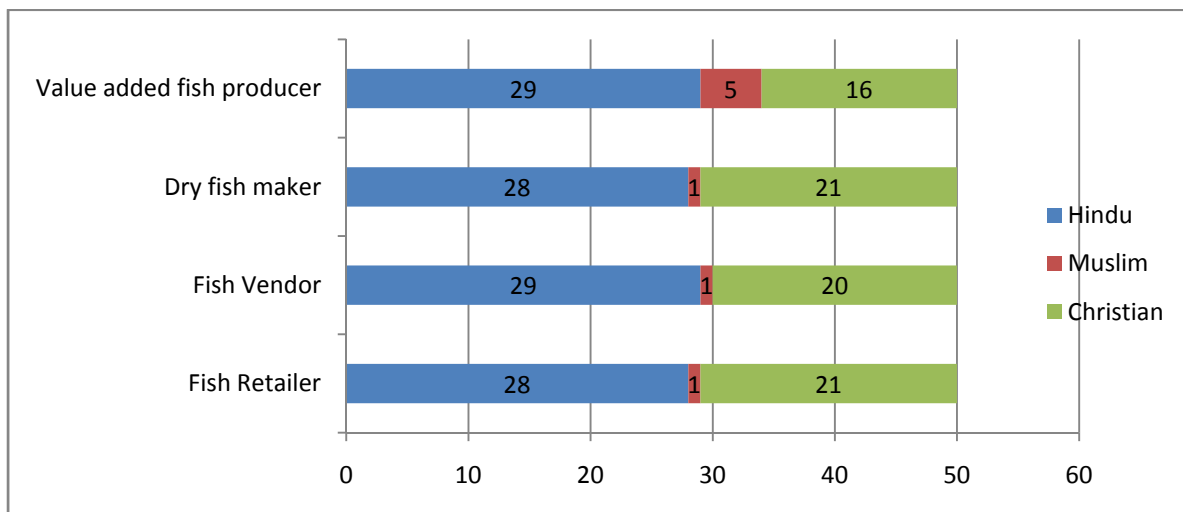


Figure 9. Community orientation across the four occupational groups

v. Caste distribution of respondent fisherwomen

The caste wise distribution of the respondent fisherwomen across the four occupational groups is discussed in the Table 7. The major caste groups represented in the study includes backward caste (BC), other eligibility caste, scheduled caste (SC), scheduled tribe (ST), most backward caste (MBC) and other caste (OC) etc in which major representation of the respondent fisher women was from backward community(BC)

The results indicated that majority (63 per cent) of the respondent fisherwomen belonged to backward caste followed by other eligible caste (31 per cent). Major chunk of the BC population constitute Latin Catholics, a sub division of Christian religion which is known for traditional fishing (62.4 per cent).

Table 7. Castewise distribution of respondent fisherwomen

Sl. No	Occupation	Caste						Total
		OC	BC	OEC	MBC	SC	ST	
1.	Fish Retailer	0 (0)	30 (60)	15 (30)	0 (0)	5 (10)	0 (0)	50 (100)
2.	Fish Vendor	2 (4)	29 (58)	17 (34)	0 (0)	2 (4)	0 (0)	50 (100)
3.	Dry fish maker	3 (6)	31 (62)	15 (30)	0 (0)	1 (2)	0 (0)	50 (100)
4.	Value added fish producer	0 (0)	35 (70)	14 (28)	0 (0)	1 (2)	0 (0)	50 (100)
5.	Total	5 (3)	125 (63)	61 (31)	0 (0)	9 (5)	0 (0)	200 (100)

Figures in parenthesis indicate percentage to total

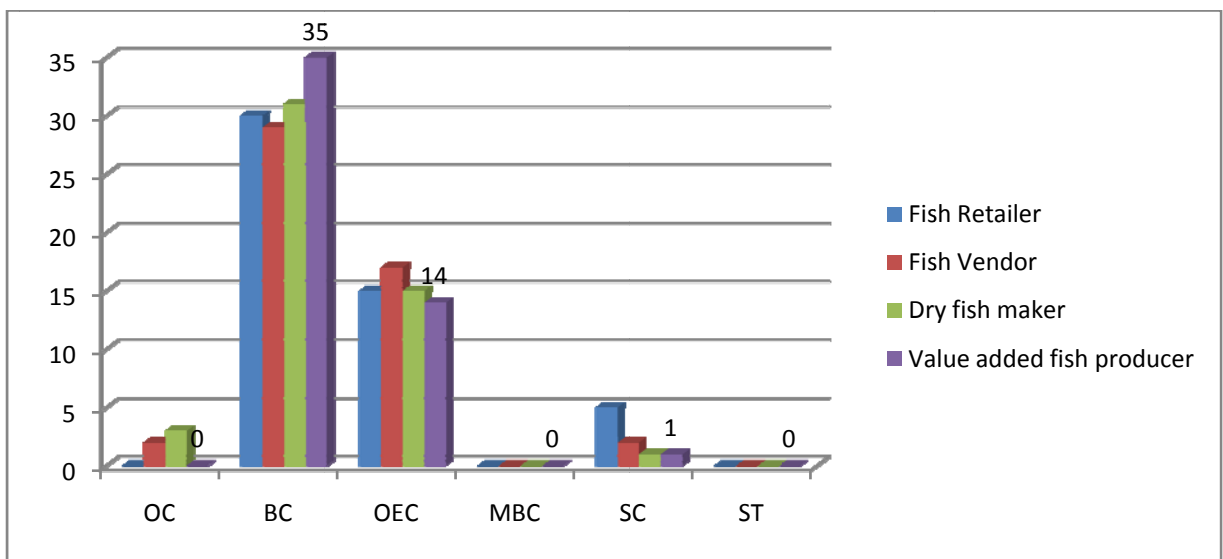


Figure10. Castewise distributions of respondent fisherwomen

OEC is a sub group of Hindu religion specially known for traditional fishing, termed 'Dheevara caste' in local language also belonged to backward community. It was found that 2.5 per cent of the total fisherwomen belong to other castes which include castes like Nair-an upper caste and Moopan -another division of Hindu religion.

The schedule caste constituted 4.5 per cent of the total respondent fisherwomen. There is not even a single respondent belonged to most backward caste and scheduled tribe. Mostly scheduled tribe population habituated in the high land areas of Kerala state and they do not have any direct linkage with fish and fishery allied activities.

The caste distribution of the fisherwomen explained that majority of the respondents belongs to traditional fishing family, and they were eligible to avail benefits from government like pension, fishing equipments, relief fund during the period of trawl ban etc. from *Matsya Thozhilali Kshemanidhi* of fisheries department for being involved in fishing and allied activities for many years. Therefore they were continuing to be in their traditional business in one way or another. Nevertheless, it was not easily possible for the other caste people those who are entering in to this profession at a later stage. Therefore involvement in fishery related work by other community members was very low which is reflected in the data. However the proximity of the households to the sea and landing center could be the reason that made a marginal number (3 per cent) of people from other castes also to get involve in fishery business.

B. Family Profile

Family profile of respondent fisherwomen comprises of details about the family members including age, family size, educational status, occupational status etc.

vi. Family profile of respondent fisherwomen

Family composition of respondent fisherwomen is illustrated in the Table 8.

Table 8 .Family composition of respondent fisherwomen

Sl.No	Occupation	Households	Male	Female	Total
1	Fish Retailer	50	88(44)	114(56)	202(100)
2	Fish Vendor	50	105(49)	111(51)	216(100)
3	Dry fish maker	50	99(48)	106(52)	205(100)
4	Value added fish producer	50	102(48)	110(52)	212(100)
5	Total	200	394(47)	441(53)	835(100)

Figures in parenthesis indicate percentage to total

It is seen from the above Table that the females (53 per cent) outnumber the males (47 per cent) across the four different occupational groups of fisherwomen. The calculated male female ratios are 1.29 among fish retailers 1.05 among fish vendors, 1.07 among both dry fish makers and value added fish producers. The male female ratio was found to be 1:1.11 for the total respondent households exhibits similarity with that of Kerala's sex ratio (1058 females for 1000 males-Census2001).

vii. Age composition of respondent fisherwomen

The classification of fisher population as adults (above 15 years) and children (less than 15 years) are given in Table 9.

Table 9. Age composition of the family members

Sl.No	Occupation	Households	Adult	Children	Total	Child-Adult ratio
1	Fish Retailer	50	171(84)	32(16)	203(100)	1:5.34
2	Fish Vendor	50	168(82)	37(18)	205(100)	1:4.54
3	Dry fish maker	50	174(85)	31(15)	205(100)	1:5.61
4	Value added fish producer	50	170(80)	42(20)	212(100)	1:4.07
5	Total	200	683(83)	142(17)	825(100)	1:4.80

Figures in parenthesis indicate percentage to total

The child to adult ratio was found to be 1:4.80 for the total sample. The calculated child adult ratios of respondent households across the various occupational groups were as follows 1:5.34 among fish retailers, 1:4.50 among fish vendors, 1:5.61 among dry fish makers and 1:4.04 among value added fish producers.

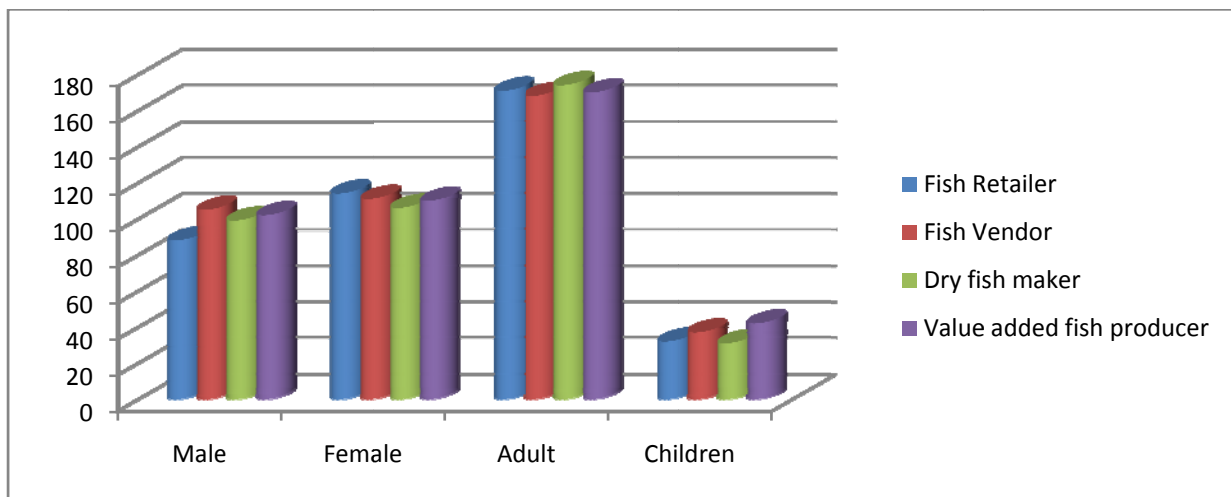


Figure11 . Age composition of the family

viii. Family size of respondent fisherwomen

Family size of the respondent fisherwomen is explained in the Table 10.

Table 10 – Family size of respondent fisherwomen

Sl. No	Occupation	Family size				Average family size
		2-4	5-6	7-10	Total	
1	Fish Retailer	39 (78)	10 (20)	1 (2)	50 (100)	4.16
2	Fish Vendor	37 (74)	9 (18)	4 (8)	50 (100)	4.32
3	Dry fish maker	34 (68)	13 (26)	3 (6)	50 (100)	4.10
4	Value added fish producer	46 (92)	2 (4)	2 (4)	50 (100)	4.20
5	Total	156 (78)	34 (17)	10 (5)	200 (100)	4.19

Figures in parenthesis indicate percentage to total

The family type and family size of the respondent fisherwomen exhibited quite similar pattern of distribution in which greater part (78 per cent) of the total respondents were from small family having a size between 2-4, *i.e* most of them were from nuclear family. It was found that 26 per cent of the dry fish makers and 20 per cent of the retailers are belonged to the category of family size between 5-6 and hardly 5 per cent of households were having more than 7 members in their family (Fig:12).

Majority of the value added fish producers (92 per cent) were from nuclear family. Age and educational profile of the value added fish producers had an important role to make them follow nuclear family culture which is prevailing in our current society. Family sizes of the respondent households are given in Table 3. The average size of family among respondent fisher women worked out to be 4.20 ranging from 4.10 among dry fish makers to 4.32 among fish vendors.

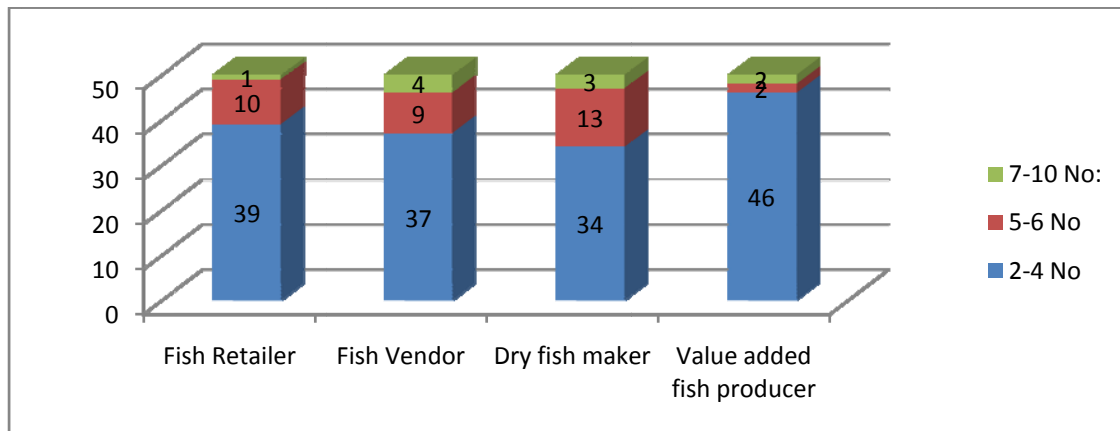


Figure12. Family size of respondent fisherwomen

ix. Educational profile of the respondent fisherwomen's family members

The educational profile of the family members of respondent fisherwomen includes the level of education as indicated by primary, secondary and higher secondary, collegiate and professional/technical education. The primary level indicated schooling till fourth grade, secondary level indicated by high school, higher secondary level indicated pre degree or plus two. The professional education was denoted by technical or professional education.

The literacy rate among the family members of respondent fisher women across the four occupational groups was found to be high with 89.2. The highest literacy rate was reported among value added fish producers' family with 95 per cent followed by dry fish makers (90 per cent)

Major share of the illiterates was from fish retailers' (37 per cent) and fish vendors' family (26 per cent). Comparatively lesser number of illiterates was found to be from value added fish producers' family due to the influence of educated members within their family, which could be substantiated by the results on increased literacy level and education status among the respondent value added producer.

The results indicated that among the literates 39 per cent have primary level of education, 42 per cent have secondary level of education and 10 per cent have higher secondary level of education and 7 per cent have collegiate level of education. Hardly 2 per cent of the total respondents have professional or professional level of education which is mainly distributed across value added fish producers and fish retailers.

A forward move on awareness exists in education among dry fish makers and value added fish producers as many has been continuing their education even after secondary education . It is further explained by the number of college level educated members among value added fish producers (19) and dry fish makers (14).

The Educational profile of the respondent fisherwomen's family is discussed in the Table 11.

Table 11. Educational profile of the respondent fisherwomen's family members

Sl. No	Occupation	Total	Educational status						
			Illiterate	Literate	Primary	Secondary	H. Secondary	Collegiate	Professional / Technical
1	Fish Retailer	207	32	175 (100)	82 (47)	68 (39)	13 (7)	7 (4)	5 (3)
2	Fish Vendor	183	23	160 (100)	70 (44)	69 (43)	13 (8)	8 (5)	0 (0)
3	Dry fish maker	203	21	182 (100)	68 (37)	75 (41)	23 (13)	14 (8)	2 (1)
4	Value added fish producer	206	10	196 (100)	66 (34)	86 (44)	20 (10)	19 (10)	5 (3)
5	Total	799	86	713 (100)	280 (39)	298 (42)	69 (10)	48 (7)	12 (2)

Figures in parenthesis indicate percentage to total

Results revealed that most of the respondent families across the four occupational groups were trying to educate their children as much as possible by understanding the value of education. However dry fish makers and value added fish producers are taking more effort to educate their children than other two groups.

x. Occupational status of respondent fisherwomen's family members

Occupational status of the respondent fisherwomen's family members is discussed in the Table 12 below.

The results on the occupational status of the family members of respondent fisherwomen revealed that earner-dependent ratio was comparatively high with 1.35 across the four occupational groups. Similarly all the categories of fisherwomen having higher ratio with 1.49 among dry fish makers, 1.45 among fish vendors 1.29 among fish retailers and 1.21 among value added fish producers. Dependent people were less compared to the earners in each category of fisherwomen. It revealed that most of the people in each family were working and economic empowerment is being attained by each fisherwoman.

Table 12 – Occupational status of respondent fisherwomen’s family members

Sl.No:	Occupation	Occupational status		
		Earner	Dependent	Total
1	Fish Retailer	118(56.46)	91(43.54)	209(100)
2	Fish Vendor	127(59.35)	87(40.65)	214(100)
3	Dry fish maker	121(59.90)	81(40.65)	202(100)
4	Value added fish producer	115(54.76)	95(45.24)	210(100)
5	Total	481(57.60)	354(42.40)	835(100)

Figures in parenthesis indicate percentage to total

Fish Species handled by respondent Fisherwomen

xi. Type of fish species handled by respondent fisherwomen

The type of fish species handled by respondent fisherwomen is described in Table 13 below. A total of 38 fish species are handled by total respondents across the four different occupational groups of fisher women. The highest number of fish species handled by fish vendors (30 species) followed by fish retailers (26 species), fish dry fish makers (25 species) and value added fish producers (20 species).

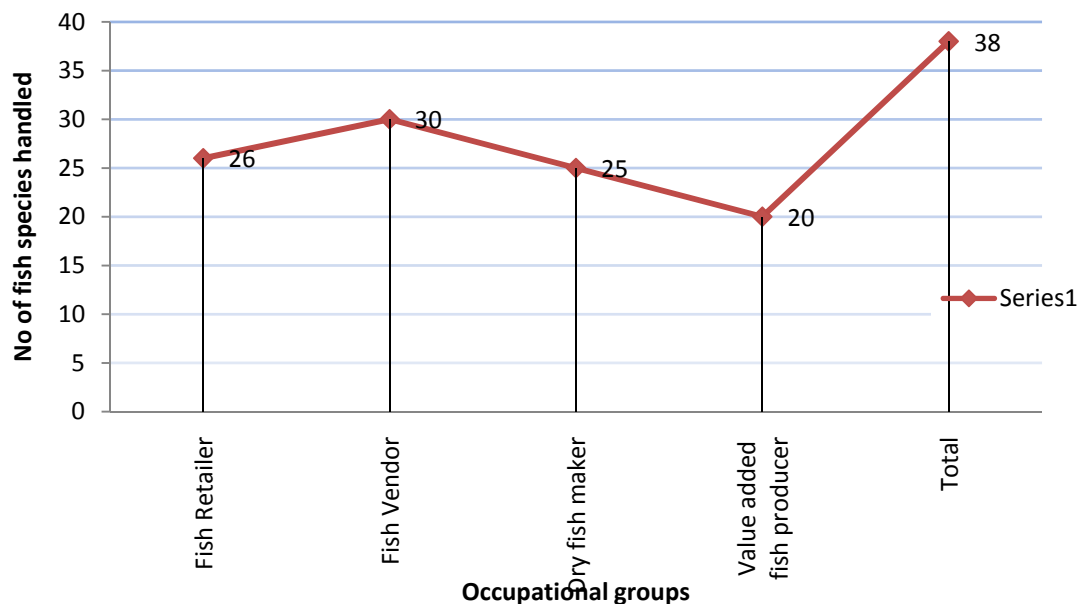


Figure 13. Number of fish species handled by respondent fisherwomen

Most popular fish species handled among all the occupational groups of fisher women were Sardine, Mackerel, Prawn, Anchovies, and Tuna etc. Generally fish retailers and fish vendors marketed low value fishes than other two groups in accordance with their scale of business and demands of the target population. Most popular fish species handled and marketed by fish retailers and vendors includes Sardine, Mackerel, Stolephorous and Prawn. Generally fish retailers are of two types based on the quantum of marketing. In many cases fish vendors become fish retailers in late 50s, in order to overcome the burden of carrying and marketing heavy baskets of fish on a door to door basis and consequently they used to market small quantities of fish by sitting in the market places and they had high specificity in species selection.

Fish vendors were having specific target group for marketing their fish so that they used to handle specific fish species according to the consumer demand. Occasionally they opt for new varieties of fish species if the consumer demanded so.

Table 13. Fish Species handled by respondent Fisherwomen

Sl.No	Common Name	Vernacular Name	Occupation				
			FIR	FIV	DFM	VAP	Total
1.	<i>Ambasis</i> sp.	Chooda, Nandan	8	9	16	1	34
2.	<i>Lethrinus</i> sp.	Eari	1	1	0	0	2
3.	<i>Croaker, Sciaenids</i>	Kuttan,Palli kora,Kora	6	6	15	9	36
4.	<i>Crab</i>	Njandu	12	9	0	1	22
5.	<i>Cuttle fish</i>	Kallan kanava	0	1	0	3	4
6.	<i>Carangid Decaptures ruselli,</i>	Vatta	3	1	2	0	6
7.	<i>Etroplus</i>	Karimean	3	5	0	0	8
8.	<i>Fresh water cat fish</i>	Bral	1	2	6	4	13
9.	<i>Halfbeak /Full beak Hemiramphus</i>	Kolan	2	0	0	0	2
10.	<i>Lactarius(white fish)</i>	Parava	2	2	4	1	9
11.	<i>Leognathus</i> sp.	Kurichil, Mullan	2	3	19	0	24
12.	<i>Lizard fish</i>	Uluvachi	0	0	9	0	9
13.	<i>Mackerel</i>	Aila	30	39	24	9	102
14.	<i>Mullet Mugil cephalus,</i>	Kanambu, Thirutha	5	3	0	3	11
15.	<i>Green Mussels</i>	Kallummekkaya	0	2	0	23	25
16.	<i>Clam</i>	Kakka					
17.	<i>Oyester</i>	Muringa					
18.	<i>Mussels</i>	Total					

19.	<i>Pellona sp.</i>	Thody, Thada	0	1	6	0	7
20.	<i>Pomfrets</i>	Aavoli	0	0	2	0	2
21.	<i>Prawn</i>	Chemmean	25	23	15	43	96
22.	<i>Ray</i>	Therandy	1	0	5	0	6
23.	<i>Ribbon Fish</i>	Vala	4	7	7	0	18
24.	<i>Sardine</i>	Chala	38	40	22	3	103
25.	<i>Seer fish</i>	Neymean	3	3	11	5	22
26.	<i>Shark</i>	Sravu	3	2	12	4	21
27.	<i>Sole fish</i>	Nanku, Manthal	11	11	19	5	46
28.	<i>Squid</i>	Koonthal	2	4	4	16	26
29.	<i>Anchovies</i>	Kozhuva, Natholy Veloory	25	25	21	6	77
30.	<i>Thread Fin Breams</i>	Kily	4	9	4	3	20
31.	<i>Thryssa sp.</i>	Manangu	1	0	1	1	3
32.	<i>Tilapia sp.</i>	Piloppy	0	1	0	0	1
33.	<i>Tuna sp.</i>	Choorra	16	17	9	20	62
34.	<i>Spotted butter fish</i>	Nutchara	1	0	0	0	1
35.	<i>Whip fin mojarra</i>	Prayal	0	3	0	0	3
36.	<i>White sardine</i>	Veloory	0	1	5	0	6
37.	<i>Indian flathead</i>	Vetten	0	0	1	0	1
38.	<i>Pony fish</i>	Karal	0	1	0	0	1
39.	<i>Blacktip sea catfish</i>	Etta	0	2	0	0	2
42.	<i>Little tuna</i>	Kudutha	0	0	0	4	4
43.	<i>Mixture of small fishes</i>		12	5	1	0	18
44.	Total		222	238	240	164	864

Species like sardine and mackerel were not popular among value added fish producers. Since value added fish producers had high specificity of species like prawn, mussels, squid, tuna etc and they used quality check of fish species in order to assure the compatibility of their products with the consumer demands. Furthermore they need to target a wide range of population than their immediate customers in comparison with fish vendors and retailers. Prawn was found to be the most popular fish species among value added fish producers as it is used for making variety of products such as prawn pickle, prawn roast, prawn powder, prawn masala etc. Usage of prawn among fish retailers and fish vendors was also high.

The choice of fish species among dry fish makers also was limited. They were very specific about the selection of fish species for drying and marketing which is mainly in accordance with market demand, availability and seasonality of fishes, and possibility of drying etc. Popular species handled by dry fish makers includes mackerel, sardine,

stolephorous, and leognathus. In addition to this Ambasis prawn, shark, seer fish and were also dried and marketed by dry fish makers.

D. Income Generating Activities of respondent fisherwomen
xii. Quantum of marketing of fish and fishery Products

The average weekly quantum of marketing fish and fishery products by respondent fisherwomen are discussed in the Table 14. Marketing of fresh fish, dry fish, value added fish products like pickle, fish curry, fish cutlet, fish powder, and fish roast, packed dry fish and prawn masala etc. contributed to the major income generating activities of respondent fisherwomen. The products were disposed either onsite (<2 km) or nearby market (2-5 km) or distant market (>5 km). However, there were instances of marketing fish and fishery products in multiple sites by the fisherwomen. At times, fish retailers became fish vendors to finish their leftover fishes on a daily basis to avoid spending money for storage.

It was found that fish retailers contributed to a major quantum of fish marketing (741 Kg) on a weekly basis where as fish vendors found at 366 Kg. The dry fish makers and value added fish producers sold around a total quantum of 570 Kg and 599 Kg respectively. As expected fish retailers sold more at onsite with 53 per cent followed by 33 per cent at distant market. For them it is more convenient and profitable to market the fish in onsite markets than transporting fish from onsite to other locations, which lead to higher quantum of business at onsite markets among retailers.

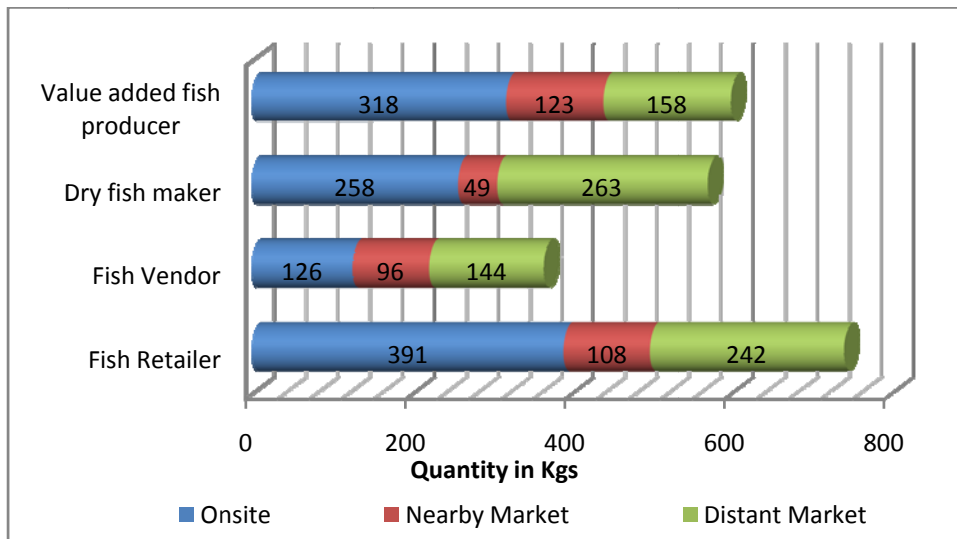


Figure 14. Average weekly quantum of marketing by respondent fisherwomen

In comparison with the respondents from other occupational groups fish vendors were handled lesser quantity of fish products (8 per cent). They achieved their maximum quantity of business from distant markets which is around 39 per cent, than other marketing locations. Since they were carrying fresh fish by head load from the landing

centers or from harbour, they used to carry small quantities of fish to the very specific number of customers on a daily basis. Generally each fish vendors have specific niche area for marketing of fish which will not overlap with others in most of the cases. Furthermore they used to spend less time in marketing of fish compared to fish retailers. It was found that 34 per cent of the fish vendors marketed their fish from onsite markets which was 28 per cent of the total value of fish marketed by fish vendors. Age of the fisherwomen is the major determining factor behind onsite marketing since it is more convenient for them to market in very nearest locations. Once the number of vendors in onsite locations got saturated, the remaining has opted for marketing in other locations which was also comparatively nearby areas.

Table 14 –Average weekly quantum of marketing of Fish and Fishery Products

Sl. No	Occupation	Type of product	Average quantum of marketing of fish and fishery products						Total	
			Onsite		Nearby Market		Distant Market		Qty (Kg)	Value (₹)
			Qty (Kg)	Value (₹)	Qty (Kg)	Value (₹)	Qty (Kg)	Value (₹)		
1	Fish Retailer	Fresh fish	391 (52.77)	12792 (40.73)	108 (14.57)	6733 (21.44)	242 (32.66)	11879 (37.83)	741 (100)	31404 (100)
2	Fish Vendor	Fresh fish	126 (34.43)	4929 (28.85)	96 (26.23)	4678 (27.38)	144 (39.34)	7479 (43.77)	366 (100)	17086 (100)
3	Dry fish maker	Dry fish	258 (45.26)	11216 (37.86)	49 (8.60)	4398 (14.85)	263 (46.14)	14010 (47.29)	570 (100)	29624 (100)
4	Value added fish producer	Pickles	13	3241	6	1969	44	6894	63	12104
		Fish curry	24	4000	50	5000	0	0	74	9000
		Fish cutlet	3	533	4	400	75	8333	82	9266
		Fish powder	3	1567	8	2167	7	2580	18	6314
		Fish roast	0	0	42	15450	20	8000	62	23450
		Packed dry fish	268	32300	13	1244	12	2070	293	35614
		Prawn masala	7	2100	0	0	0	0	7	2100
		Total	318 (53.09)	43741 (44.70)	123 (20.53)	26230 (26.81)	158 (26.38)	27877 (28.49)	599 (100)	97848 (100)
5	Total		1093 (48.02)	72678 (41.30)	376 (16.52)	42039 (23.89)	807 (35.46)	61245 (34.81)	2276 (100)	175962 (100)

Figures in parenthesis indicate percentage to total

Marketing of dry fish was found high at onsite as well as at distant market with 45 and 46 per cent respectively of the total quantity marketed by dry fish makers. Since the shelf life of dry fish is more, dry fish makers have wide choice of market across the state and outside than local markets and immediate users. Results indicated that majority of the dry fishes were disposed at distant markets, which was mainly of two ways. One by direct marketing of dry fish in distant markets (46 per cent), and second through traders from distant market, who come down to purchase from the site of production itself (45 per cent). It was found that dry fish makers sold very limited quantity of fish in nearby market which was of 8 per cent of the total quantity.

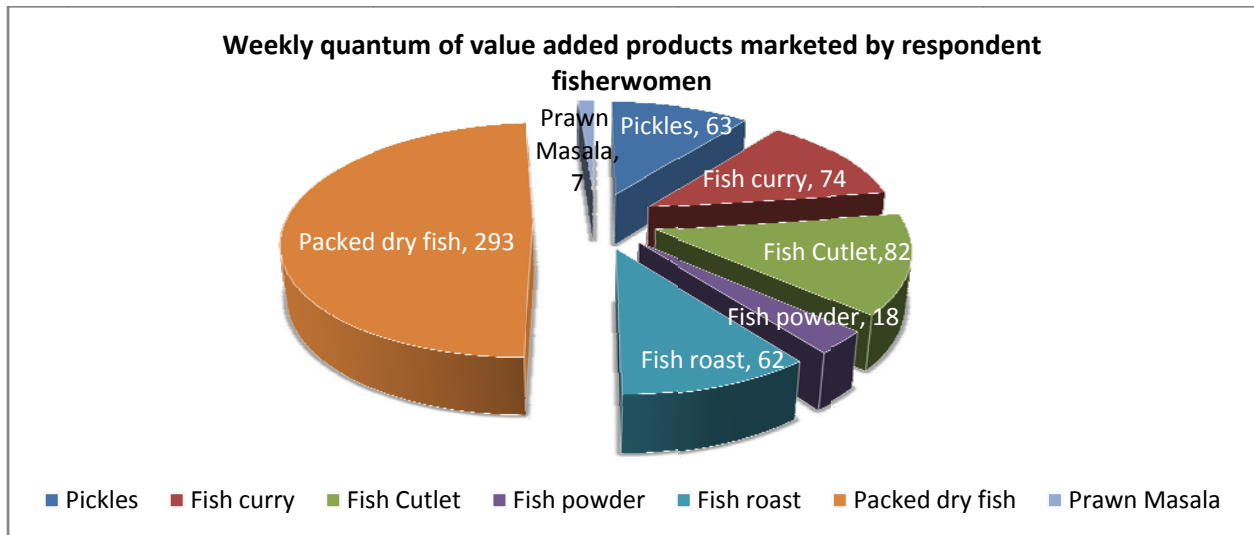


Figure:15 Types and quantity of value added products marketed by value added fish producers

The results explained that the most marketed item among the processed products of fish was packed dry fish with 49 per cent of the total value of fish products, followed by fish cutlet, fish curry and fish pickle with 14, 12 and 11 per cent respectively. It was found that the major quantum of the packed dry fish is marketed at onsite (91 per cent). Whereas fish cutlet is marketed mostly through distant market *i.e.* 91 per cent of the total quantity. Major quantum of fish curry is sold at nearby markets with 56 per cent of the total value.

Most of the value added producer traded packed dry fish, fish cutlet, fish pickle and fish curry only in small quantities. Since the number of fisherwomen involved in making products like fish roast (5), fish powder (7) and fish masala (12) were less, their products were getting momentum in the market .

Average quantum of marketing among fisherwomen was lower in nearby markets across the occupational groups. However average revenue per unit is higher at nearby market except in the case of fish vendors. Average revenue obtained by fish retailers per unit kg was found to be low with ₹32 at onsite where the average quantum of marketing is high with 53 per cent of the total quantity. Average quantum of marketing

is low at nearby market qualify highest revenue per unit with ₹62. Value added fish producer gained highest average revenue per unit in all the marketing locations than other fisherwomen.

xiii. Unit marketing cost incurred by respondent fisherwomen in handling fish and fishery products

The unit marketing cost incurred by respondent fisherwomen across four different occupational groups is discussed below in Table 15. Results indicated that fish retailer has lesser transportation expenses per unit compared with other occupational groups.

Table 15 – Unit marketing cost incurred by respondent fisherwomen in handling fish and fishery products

Sl.No:	Occupation	Transportation cost per unit (Rs)	Storage cost per unit (Rs)	Total (Rs)
1	Fish Retailer	0.98	0.62	1.61
2	Fish Vendor	1.34	0.33	1.67
3	Dry fish maker	1.14	1.26	2.4
4	Value added fish producer	1.23	1.33	2.56
5	Total	4.7	3.54	8.23

Fish vendors and value added fish producers realised high unit transportation cost with ₹1.34 and ₹ 1.23 respectively. Fish vendors used to go for more travel since they have to reach distant locations for selling their product. There exists a practice of hiring vehicles collectively to transport their fish baskets to a common point, from where they disperse to their individual locations for marketing. Mostly value added producers are part of a group and they have a practice of marketing their products by hiring vehicles so that they could cover maximum number of shops or households.

It was found that unit storage cost is low among fish vendors (₹ 0.33) and fish retailers (₹0.62) as they used to finish off their products on daily basis. The storage cost for dry fish makers (₹1.26) and value added fish producers (₹1.33)were high due to the additional inputs they used to apply in order to improve the shelf life of their products. Value added producers have additional cost to make the fish products in another forms such as pickle, cutlet, fish powder, fish masala etc.

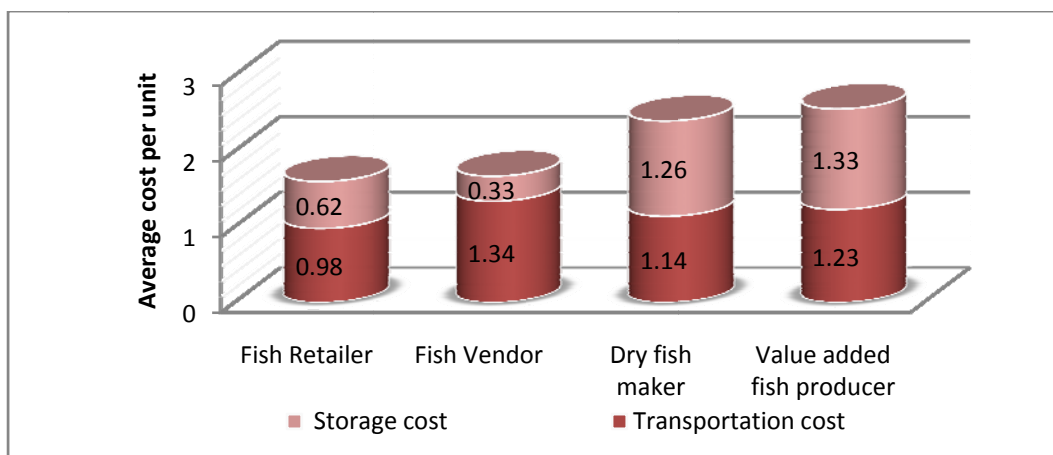


Figure: 16. Unit marketing cost of fish and fish products

E. Economic empowerment indicators of respondent fisherwomen

xiv. Income sharing pattern among respondent fisherwomen

Income sharing pattern among respondent fisherwomen across four different occupational groups are described in the Table 16. Economic empowerment indicators of the fisherwomen encompasses income sharing pattern of respondent fisherwomen, their freedom to spend money for parents, income and expenditure pattern, pattern of savings and borrowings and level of gender discrimination in the economic activities of fisherwomen.

Table 16 – Income sharing pattern among respondent fisherwomen

Sl.No:	Occupation	Sharing of Income			Total
		No	Partial	Full	
1.	Fish Retailer	31(62)	18(36)	1(2)	50(100)
2.	Fish Vendor	29(58)	16(32)	5(10)	50(100)
3.	Dry fish maker	18(36)	13(26)	19(38)	50(100)
4.	Value added fish producer	25(50)	10(20)	15(30)	50(100)
5.	Total	103(51)	57(29)	40(20)	200(100)

Figures in parenthesis indicate percentage to total

In general the income sharing pattern increases with we move from fish retailers to dry fish maker. The data revealed that dry fish makers' income sharing pattern was high when compared to other groups. There exists full income sharing pattern for 38 per

cent of dry fish makers, and 30 per cent of value added fish producers. Fish retailers' income sharing pattern was very low in which 62 per cent were not sharing their income. Income sharing pattern exists mostly with dry fish makers and value added fish producers since the involvement of their husband or other family members in the business was found to be very high. There are cases observed among dry fish makers, in which the profit was not even flowing to respondents' hands, if both of them were involved in the business.

xv. Freedom on expenditure among respondent fisherwomen

Freedom on expenditure among respondent fisherwomen across four different occupational groups is detailed in the Table 17.

Table 17 – Freedom to spend money among respondent fisherwomen

Sl.No:	Occupation	Freedom to spend money for their parents		Total
		Yes	No	
1.	Fish Retailer	40(80)	10(20)	50(100)
2.	Fish Vendor	45(90)	5(10)	50(100)
3.	Dry fish maker	38(76)	12(24)	50(100)
4.	Value added fish producer	32(64)	18(36)	50(100)
5.	Total	155(77.5)	45(22.5)	200(100)

Figures in parenthesis indicate percentage to total

In continuation with the earlier results on income sharing pattern, results on freedom to spend money across the occupational groups revealed that fish vendors and fish retailers exercised a higher degree of freedom in spending money for their parents with 90 per cent and 80 per cent respectively compared to dry fish makers (76 per cent) and value added fish producers (64 per cent). Lesser freedom associated with spending money among value added fish producers was due to the limited level of income available from the business which has a direct link with the tied credit from funding agencies and hand loans from family members.

xvi) Household expenditure pattern among respondent fisherwomen

The details of annual average household expenditure among respondent fisherwomen across four different occupational groups are furnished in the Table 18 below.

Major responsibility of household management in the areas of food, cloth, education, medical & health care and buying social gifts was mostly on the women's shoulders in

the respective families of respondents. It is seen from the Table 18 that all except one among the respondents of fish retailers and fish vendors were contributing towards the food expenditure of the family. It was found that 94 per cent of the dry fish makers and 64 per cent of the value added fish producers were also sharing their expenditure on household food.

Highest average share of food expenditure was done by fish retailer followed by fish vendor at a rate of ₹23488.96 and ₹ 21081.63 per year respectively. Fish vendors and retailers were receiving their daily profit from their business and they used to purchase groceries which are needed for their family on a daily basis. Whereas dry fish makers and value added fish producers were not receiving their profit on a daily basis and in most of the cases their mobility related to work was also comparatively low.

Table 18. Annual household expenditure pattern

Sl No	House hold expenditure	Occupation									
		Fish Retailer		Fish Vendor		Dry fish maker		Value added fish producer		Total	
		Number	Amount	Number	Amount	Number	Amount	Number	Amount	Number	Amount
1	Food	49	23488.96 (65)	49	21081.63 (72)	47	16536.17 (50)	35	9680 (20)	180	70786.7 (51)
2	Cloth	36	6130.56 (58)	44	2867.05 (61)	41	3817.07 (48)	32	2921.88 (38)	153	15736.56 (51)
3	Educati on	10	3935 (58)	9	18077.78 (94)	15	4786.67 (27)	10	7110 (13)	44	33909.45 (33)
4	Medical & Health	38	6830 (62)	36	4272.78 (42)	41	6224.39 (46)	18	2515 (17)	133	19842.17 (44)
5	Social Gifts	25	4868 (46)	28	3982.14 (34)	32	6273.44 (49)	13	1961.54 (6)	98	17085.12 (32)
6	Total	158	45252.46 (62)	166	50281.38 (65)	176	37637.74 (47)	108	24188.42 (18)	608	157360 (46)

Figures in parenthesis indicate percentage share of the total expenditure by respondent fisherwomen

When it moves to the case of dry fish makers and value added fish producer it gradually decreases and value added fish producers had least average share on food expenditure (₹9680 per year). Mostly the value added producers were working in small groups and they were sharing their profit among the group members equally. Mostly the profit generated for their business was comparatively lesser than that of other occupational groups, as their business require huge initial capital than that of other occupations. It was observed that most of them started their business quiet recently and they had generated their initial capital through loan from various financial institutions.

Repayment of their loan was the main focus of the team members during the initial period and hence they were not able to share much of their profit among them, justifies their least average share on family expenditure. The level of participation in sharing household expenditure was also low among value added fish producers, which can be inferred from the number of fisherwomen spending their income to meet their household expenditure. Yet they were having highest average annual share on education expenditure, indicate their effort they were making in educating their children.

Expenditure on health was high among the family members of first three occupational groups and they spent a large amount on their health and medical expenses. Fish retailers spent 62 per cent of the total health expenditure of their family with an average annual share of ₹ 6224.39. Share on health expenditure also was low among value added fish producers with 17 per cent of the total respondent families' health expenditure.

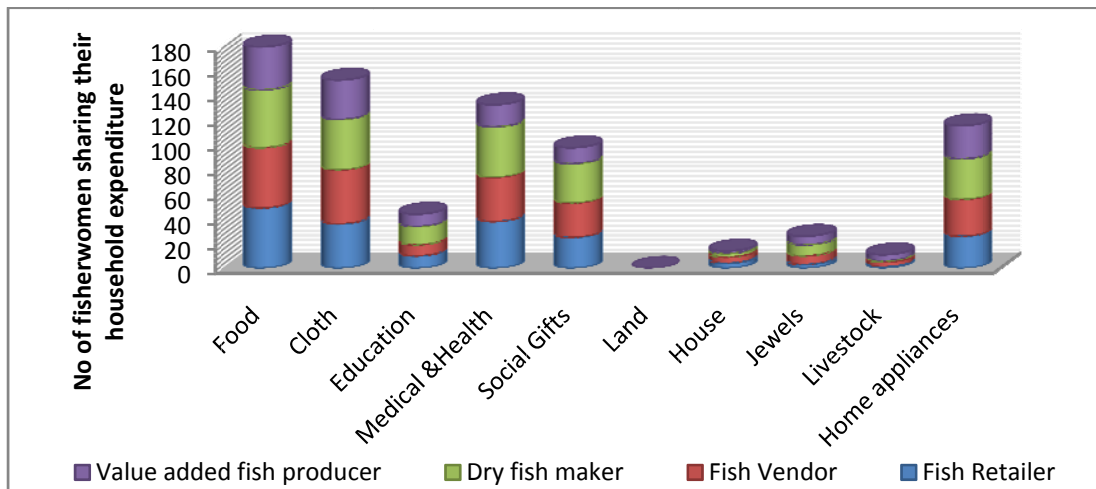


Figure 17: Participation of fisherwomen in sharing their household expenditure

The practice of giving gifts on social functions was high among value added fish producer. Dry fish makers were sharing 49 per cent of the total expenditure on social gifts followed by fish retailers and fish vendors with 46 per cent and 34 per cent respectively. In most of the cases they were obliged to give money as a gift being connected to a network established by a social practice existing in certain locations as well as among certain caste groups of Kerala called *Polivau* or *Kuri Kalyanam*. It is a practice of collecting money from invitees on social occasions like marriage, house warming etc which will be documented and accounted by an appointed person by the family. This is considered as a support service offered to the family by their neighbors and community members to help them in financial difficulty associated with social functions. Likewise the family also has to repay the same money or a higher amount to each and every person/family on similar social functions. Mostly in each month many respondent fisherwomen have the obligation to repay the money back also reflected in the results.

xvii. Average annual expenditure pattern on assets among respondent fisherwomen.

The average annual expenditure on assets among the respondent fisherwomen is discussed in the Table 19.

All the fisherwomen had low participation in sharing expenditure on assets like land, house, jewels, livestock, and home appliances in comparison with other household expenditure. Within these assets land and house require huge investment in which share of the fisherwomen across the four different occupational groups was very low. However share of fisherwomen was high in the case of jewels, home appliances and livestock. It was observed that not even a single fisherwoman sharing their income for purchasing land. During the time of study majority of the respondent women inhabited in their own land or in their family land. Nobody among respondents' family invested on land during last year.

Table 19 –Average annual expenditure pattern on assets

Sl. No	Assets	Occupation									
		Fish Retailer		Fish Vendor		Dry fish maker		Value added fish producer		Total	
		Number	Amount	Number	Amount	Number	Amount	Number	Amount	Number	Amount
1	Land	0	0	0	0	0	0	0	0	0	0
2	House	4	103933.3 (21)	5	32500 (11)	3	34666.67 (3)	2	75000 (4)	14	246100 (7)
3	Jewels	3	14233.3 (59)	7	17142.8 6 (43)	9	16333.33 (47)	7	12142.86 (32)	26	59852.3 8 (43)
4	Livestock	1	1000 (100)	4	1037.5 (51)	1	8000 (33)	5	2216 (68)	11	12253.5 (49)
5	Home appliances	26	11196.54 (65)	30	9361.33 (53)	33	6062.24 (31)	27	5781.11 (28)	116	32391.2 2 (43)
6	Total	33	23093.21 (33)	46	16690.8 8 (25)	46	13106.4 (9)	41	14363.3 (9)	166	67253.7 1 (15)

Figures in parenthesis indicate share of total expenditure incurred by respondent fisherwomen

Among the limited number of fisherwomen shared their income on construction/repair of their household, fish retailer had highest share with ₹ 103933.3 followed by fish vendor with ₹ 32500.

The share of investment on purchasing jewels was high among all the respondent fisherwomen irrespective of their occupational groups. The highest annual average share on jewels was taken by fish vendor at a rate of ₹17142.86 followed by dry fish makers with ₹16333.33. Generally the usage of ornaments and jewelery are common among women in Kerala and it is considered to be a good investment which was also reflected in the case of fisherwomen. Additionally jewels and gold ornaments are considered as an inevitable part during the marriage function.

A total of 11 fisherwomen were spending money on purchasing livestock, among them highest number (5) was from value added producers followed by fish vendors (4). In many cases it was observed that fisherwomen are the one who managed the livestock in their family in order to get an additional income. Hence they took initiatives to purchase livestock by investing major share of its cost. On the contrary least investment on livestock among fisherwomen is probably due to the constraints like space, time and location (coastal area) etc.

Monetary participation was high among all categories of fisherwomen for purchasing home appliances like television, refrigerator, mixer grinder, furniture, fan, telephone etc. Highest percentage share was taken by fish retailer with 65 per cent of the total expenditure followed by fish vendors (53 per cent). Mostly they were depending on installment scheme in which they could purchase home appliances by paying a small amount on weekly/monthly basis so that the burden of generating the entire cost will get reduced. Furthermore it was easy for the fish vendors and retailers to pay the price in small installments on weekly basis.

xviii. Pattern of savings among respondent fisherwomen

Saving pattern of respondent fisherwomen are discussed in the Table 20. Most popular schemes of savings in which fisherwomen possess stakes includes self help groups (SHGs), *Kshemanidhi*, post office, Kuri and LIC etc. Easy accessibility, small and recurrent pattern of investment etc. made the fisherwomen to participate more in these savings schemes. Number of fisherwomen having savings in commercial and co operative bank was very low (0.75 per cent each) among the total respondents.

Among the four occupational groups value added fish producers have comparatively high average savings in cooperative bank, post office, SHGs, *Kshemanidhi*, Kuri and LIC. Since they had better level of education and more exposure in the financial dealings of SHGs, their level of awareness about the benefits of savings also was found to be high which is reflected in their higher degree of participation in saving schemes. Though their income level is low compared with other groups, they are having high average saving which could be possible by the support of their husband or family members.

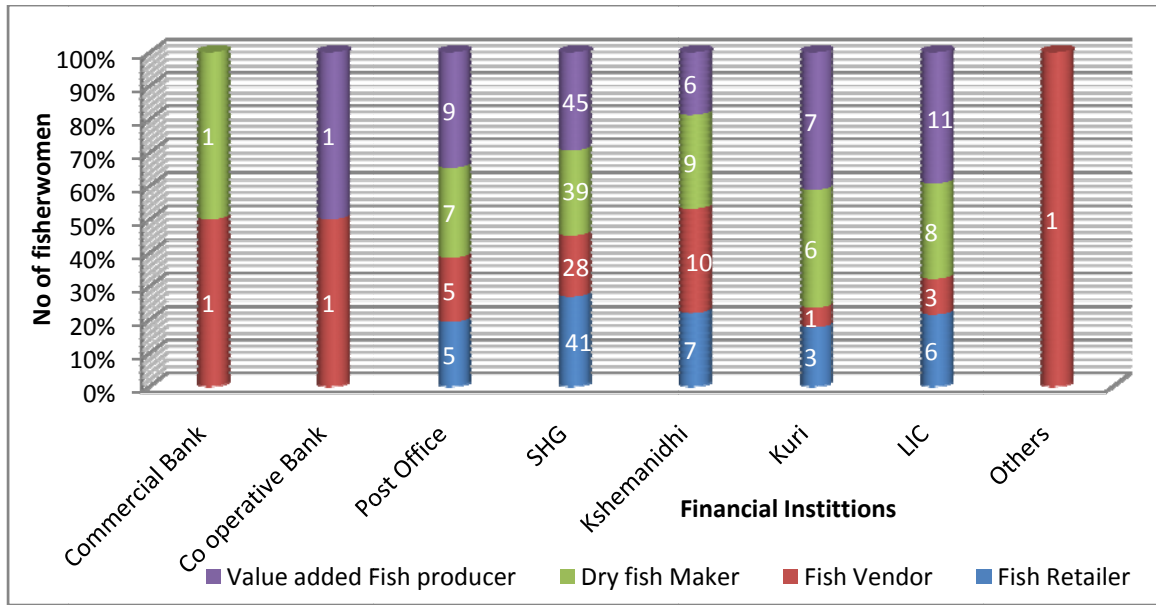


Figure 18. Distribution of fisherwomen having savings in different financial institutions

Table 20– Pattern of Annual savings among respondent fisherwomen

Sl. No	Financial Institutions		Occupation				
			Fish Retailer	Fish Vendor	Dry fish Maker	Value added Fish producer	Total
1	Commercial Bank	Number	0 (0)	1 (50)	1 (50)	0 (0)	2 (100)
		Amount (Average)	0.00 (0)	10000.00 (50)	10000.00 (50)	0.00 (0)	20000.00 (100)
2	Co operative Bank	Number	0 (0)	1 (50)	0 (0)	1 (50)	2 (100)
		Amount (Average)	0.00 (0)	7000.00 (93)	0.00 (0)	500.00 (7)	7500.00 (100)
3	Post Office	Number	5 (19)	5 (19)	7 (27)	9 (35)	26 (100)
		Amount (Average)	250.00 (8)	310.00 (10)	234.30 (7)	2439.00 (75)	3233.20 (100)
4	SHG	Number	41 (27)	28 (18)	39 (25)	45 (29)	153 (100)
		Amount (Average)	44.10 (21)	50.10 (23)	52.30 (26)	66.70 (31)	213.20 (100)
5	Kshemanidhi	Number	7 (22)	10 (31)	9 (28)	6 (19)	32 (100)
		Amount (Average)	30.00 (11)	76.00 (29)	64.20 (24)	95.00 (36)	265.20 (100)
6	Kuri	Number	3 (18)	1 (6)	6 (35)	7 (41)	17 (100)
		Amount (Average)	466.70 (22)	600.00 (29)	283.30 (14)	736.00 (35)	2085.70 (100)
7	LIC	Number	6 (21)	3 (11)	8 (29)	11 (39)	28 (100)
		Amount (Average)	161.70 (10)	531.30 (34)	554.80 (36)	310.00 (20)	1557.90 (100)
8	Others	Number	0 (0)	1 (100)	0 (0)	0 (0)	1 (100)
		Amount (Average)	0 (0)	1500.00 (100)	0.00 (0)	0.00 (0)	1500.00 (100)
9	Total	Number	62 (24)	49 (19)	70 (27)	79 (30)	260 (100)
		Amount (Average)	91.00 (7)	498.10 (38)	291.80 (22)	438.00 (33)	1318.70 (100)

Figures in parenthesis indicate percentage to total

Table 20 revealed that greater part of the fisherwomen (59 per cent) were participated in SHGs and they were invested an amount of ₹10 on weekly basis which extended up to ₹25 as recurring deposit. There are cases of fisherwomen having membership in more than one SHGs was also observed. SHGs are of different types, in which government supported SHGs are known as Kudumbashree. There are many other institutions also involved in organizing SHGs comprised of non government organizations, political parties, fisheries department etc. Value added fish producers had highest number of participants in SHGs (29 per cent) across the different occupational groups. SHGs played a great role among fisherwomen in triggering saving habits among them. Fairly good number of respondents from other groups such as fish retailers (27 per cent), dry fish makers (26 per cent) and fish vendors (18 per cent) also had membership and savings in SHGs. Furthermore the amount of savings per week will not make any additional burden on them and hence they used to save the money on regular basis.

Next to SHG, *Kshemanidhi* (12 per cent) also played an important role in triggering saving habit among fisherwomen. Participation of fish vendors (31 per cent) and dry fish makers (28 per cent) in *Kshemanidhi* was also high in comparison with other groups. Being members of *Matsya Thozhilali Kshemanidhi* they are eligible to avail many welfare services from fisheries department like pension, fishing equipments, interest free loan, and relief fund during trawl ban period. Each member has to pay an annual membership fee of ₹230 without any fail till the age of 60. After that they are eligible to receive monthly pension of ₹250 from *Matsyafed*. There is another scheme for a particular group of members of *Kshemanidhi* in which each one has to invest ₹75 on a monthly basis. In that they will get a relief fund of ₹1500 during the trawl ban period every year. Both are good investment scheme for fisherwomen in terms of financial support will get back during the most critical period. The complex formalities to get membership coupled with screening of traditional fisher folk by *Matsyafed* caused lesser number of participation in *Kshemanidhi*. LIC, Post office and Kuri also contributed towards fisherwomen's savings.

xix) Borrowing pattern among respondent fisherwomen

The volume of borrowing and its distribution among fisherwomen across the four different occupational categories are discussed in Table 21 below.

Financial borrowings were high among fisherwomen irrespective of the occupational groups. They were depending on various sources for borrowing money such as commercial bank, co operative bank, money lenders, informal credit, self help groups etc. Self help groups and money lenders were the most popular sources which have high number of borrowers. Since borrowing money from SHGs and money lenders is quiet easy with less formality, in which repayment could be possible in small installments on daily/ weekly basis. Furthermore they do not need to spare much time on availing money since it is easily accessible in their market or household premises.

However the amount of borrowing from SHG was less since it should be in proportionate with the savings. It was found that 26 per cent of the total fisherwomen were borrowed from SHGs which represented by 36 per cent of the dry fish makers, 28 per cent of the value added fish producers, 22 per cent of the fish retailers and finally 14 per cent of the fish vendor. Since the number of fish vendors involved in SHGs was low, they constitute lesser number of borrowers.

Table 21 – Borrowing pattern among respondent fisherwomen

Sl. No	Financial Institution		Occupation				
			FIR	FIV	DFM	VAP	Total
1	Commercial Bank	Number	4 (5.71)	12 (12.76)	11 (12.22)	10 (11)	37 (11)
		Amount	45000 (35)	28541.7 (16)	47545.5 (18)	158000 (41)	279087.2 (29)
2	Money lenders	Number	12 (17.14)	22 (23.40)	24 (26.66)	21 (23)	79 (23)
		Amount	34583.33 (27)	42613.64 (24)	74375 (27)	51762 (13)	203333.97 (21)
3	Co operative Bank	Number	21 (30)	20 (22.34)	7 (7.77)	15 (16)	63 (18)
		Amount	14123.8 (11)	29075 (16)	36285.71 (13)	47000 (12)	126484.51 (13)
4	Informal credit	Number	7 (10)	12 (12.76)	6 (6.66)	3 (3)	28 (8)
		Amount	19357.14 (15)	45416.67 (25)	42333.33 (16)	47000 (12)	154107.1 (16)
5	SHG	Number	20 (28.5)	13 (13.82)	32 (35.55)	25 (27.47)	90 (26)
		Amount	7250 (6)	7353.9 (4)	8587.5 (3)	12608 (3)	35799 (4)
6	Others	Number	6 (8.57)	15 (16)	10 (11.11)	17 (19)	48 (14)
		Amount	8333.33 (6)	27800 (15.95)	61500 (23)	69705.9 (18.68)	167339.2 (17)

7	Total	Number	70 (100)	94 (100)	90 (100)	91 (100)	345 (100)
		Amount	128647.6 (100)	180800.83 (100)	270626.99 (100)	386075.9 (100)	966151.32 (100)

Figures in parenthesis indicate percentage to total

In comparison with SHGs there is no limit to borrow from money lenders, yet the interest rate is very high which goes to 50 per cent in many cases and any failure in repayment of money cause serious issues. It was found that 21 per cent of the total borrowed amount by fisherwomen was from money lenders. Of the total amount borrowed from different financial institutions, commercial bank played an important role by contributing 29 per cent of the total amount of loan. Though the total amount borrowed from commercial bank is high, number of borrowers across four different occupational groups was only 10 per cent of the total borrowers. Co operative banks and informal credits were also played significant roles in lending money to the fisherwomen.

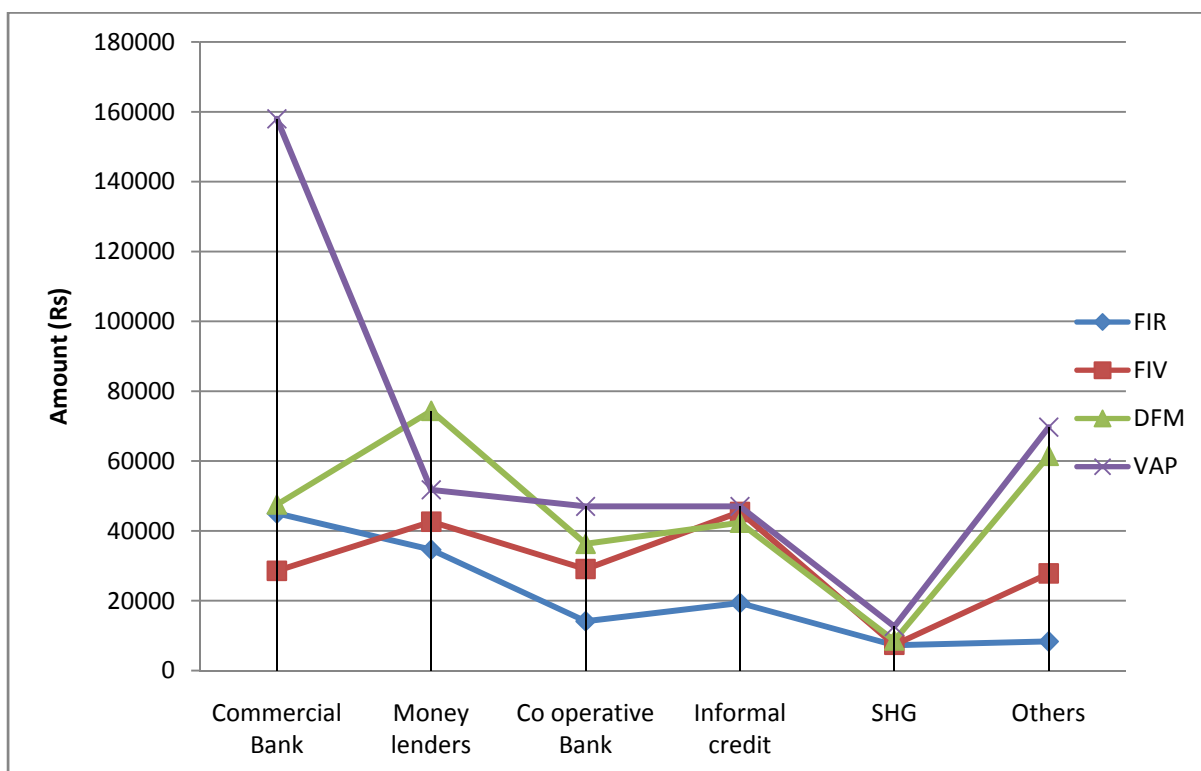


Figure 19: Average debt calculated among respondent fisherwomen

The results clearly indicated that fisherwomen depend more on non institutional financial sources for borrowing money especially for small amounts, whereas they depend more on financial institutions such as banks for bigger amounts.

xx. Purpose of borrowing among respondent fisherwomen

Purpose of borrowing among respondent fisherwomen are explained in the Table 22 below

Most of the respondents irrespective of their occupational groups, borrowed money primarily for their fish related business followed by personal consumption expenditure. Borrowing practice among fisherwomen was high on various grounds like personal consumption, fishery related business, crop and livestock, education, health, emergency, daughters marriage, giving gifts on social functions, repayment of loan, other business etc.

Table 22 – Purpose of borrowing among respondent fisherwomen

Sl. No	Purpose of borrowing	Occupation				
		Fish Retailer	Fish Vendor	Dry fish maker	Value added fish producer	Total
1	Personal consumption purpose	18(22)	16(19)	16(19)	33(40)	83(100)
2	Fishery related business	25(23)	29(27)	30(28)	24(22)	108(100)
3	Crop Livestock loan	8(50)	3(19)	5(31)	0(0)	16(100)
4	Education	0(0)	0(0)	3(33)	6(67)	9(100)
5	Health	3(23)	4(31)	2(15)	4(31)	13(100)
6	Emergency	2(13)	6(40)	4(27)	3(20)	15(35)
7	Daughters' marriage	9(26)	16(46)	9(26)	1(3)	35(100)
8	To give gift for social functions	1(14)	2(29)	2(29)	2(29)	7(100)
9	House construction/repair	3(7)	15(37)	9(22)	14(7)	41(100)
10	Repayment of loan	3(13)	6(26)	7(30)	7(30)	23(100)
11	For other business	0(0)	0(0)	2(40)	3(60)	5(100)
12	Others	2(33)	1(17)	3(50)	0(0)	6(100)
13	Total	74(20)	98(27)	92(25)	97(27)	361(100)

Figures in parenthesis indicate percentage to total

The most popular reason of borrowing money among all the respondents across the four occupational groups was fishery related purposes. Since the availability of loan for fishery related business purpose is comparatively easy, the number of borrowers also high. Additionally *Matsyafed* is providing interest free loan to its members in order to help them to escape from the vicious circle of indebtedness. It was observed that the number of money lenders operating in the market places was high and all the fisherwomen irrespective of their occupational groups borrowed money from them to make initial capital for their business. In most of the cases the repayment of the loan was also on daily basis which should be drawn from their profit. If their business did not turn out, then the repayment will be in trouble with a further increase in interest. Additionally their unmet- personal and family -financial needs shoved them in to the cycle of indebtedness and made them to borrow more money even for their personal consumption purposes which became another major reason for borrowing money among respondent fisherwomen.

Once they get trapped into the cycle of indebtedness it is very difficult for them to get out of it. Then they will start borrowing money from available sources. It was found that 23 per cent of the fisherwomen borrowed money for their personal consumption which includes 19 to 40 per cent of the fisherwomen across the four occupational groups. Low income level of value added fish producers in comparison with other occupational groups resulted more borrowing for personal consumption purpose. Across different occupational groups, borrowing by value added producer from different institutions was high due to their heavy financial requirement for storing, processing and marketing their products. The maze of indebtedness forced 6 per cent of the total fisherwomen to borrow money for the repayment of their loan/ interest.

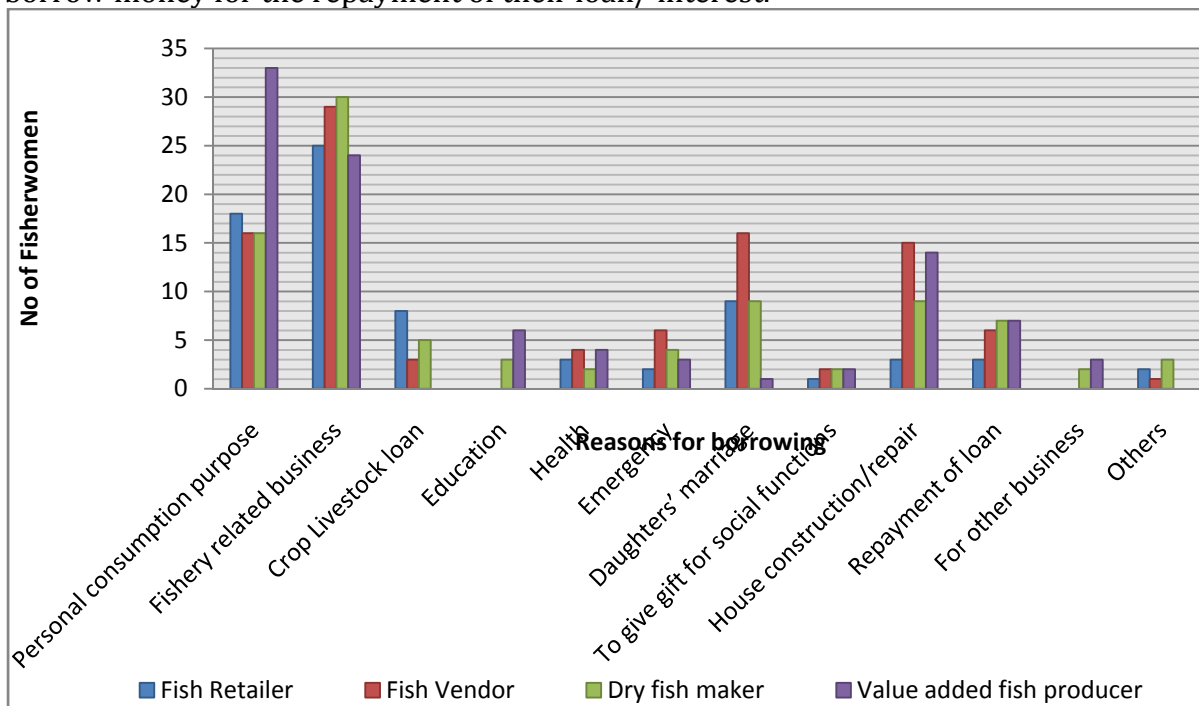


Figure 20 Purpose of borrowing among fisherwomen

Next important purpose of borrowing money was house construction or its repair. Mostly the loan for housing and repair was taken in the name of fisherwomen, though the money has managed by their husband or other family members. Highest per cent of having loan for house construction was from fish vendors (37 per cent) followed by dry fish makers (27 per cent).

Expense on marriage of their girls was the next important purpose of borrowing among fisherwomen. Though giving and receiving dowry has prohibited in Kerala, the practice is continuing among all strata of society even among fisherwomen. Hence they depend on possible financial sources to make a lump sum amount for the function. It was found that 10 per cent of the total respondents has taken loan from different financial institutions for their daughters' marriage in which highest borrowers were from fish vendors (46 per cent) followed by fish retailers and dry fish makers (26 per cent each).

Less number of dry fish makers and value added producers were availed loan on education. It was observed that there was not even a single fisherwoman among retailers and vendors borrowed money for education purposes. The other major purposes of taking loan among fisherwomen include emergency situations, health, and livestock, giving gifts for social functions, to start new business etc.

xxi. Gender differential discrimination in the economic activities of respondent fisherwomen

Gender differential discrimination of respondent fisherwomen in economic activities was analyzed under various parameters such as discrimination in purchasing price, selling price, timing of auction, equal participation in auction, bargaining power during auction, difficulty in transportation, difficulty in storage, difficulty in handling bulk quantities, difficulty in tie up with middlemen, difficulty in getting credit etc.

The highest level of gender discrimination faced by all the respondents across the four different occupational groups have seen in handling, transporting and storing of bulk quantities of fish resources. Most of the cases fisher women need to pay more in order to avail services related to handling, transporting and storing their fish. Fish vendors and retailers were facing high discrimination in most of the economic activities compared to other groups as they have direct stake in all the economic activities compared to other groups.

Timing of auction was also not convenient for fish vendors and retailers since most of the auctions are taking place in early morning between 4 am to 6 am. Even though it is very difficult for them to go in the early morning they were conditioned with the situation through years of involvement in the business. Since the scale of business is small for fish vendors compared to retailer and dry fish maker they face more discrimination in economic activities especially in purchasing and selling of their products. One of the fish vendor complained that that she will not get the actual quantity of the fish from the market for which she paid for and if she questioned them

in this regard they will not get fish from the same person from next time onwards. "There are male fish vendors also operating in the areas where we operate, with their own means of transportation, influence our target population by providing fish at a lower rate at which a female fish vendor cannot give", said by fish vendor. It is possible by them to give fish at lower price since the area of operation and scale of operation of male fish vendors is high compared with that of female fish vendors. Additionally fish vendors were having least bargaining capacity compared to others which is also have direct linkage with scale of operation. The most difficult situation faced by fish vendors were in transporting the fish from the landing center or market place. They were not allowed in the private buses with their basket full of fish. There are few buses allow them in travelling with fish basket on an agreement that they need to pay extra money with a range of ₹ 30 to ₹75 for carrying the same with them. Nowadays fish vendors started hiring vehicle to carry their basket to their destination. In some areas *Matsyfed* has provided transportation facilities for them by running buses exclusively for the fisher women.

Fish retailers used to hire vehicles to transport their fish from the market, still they have faced serious problem in handling bulk quantities of fish. Furthermore many of the fish retailers were facing the problem of storage in comparison with other fisherwomen since they need to store the balance fish within the market itself for which they need to pay extra money. Since dry fish makers and value added fish producers were involved in home based business, they faced least problem of storage. The scale of business run by fish vendors was small compared to other respondents and many of them were trying to finish off their business on a daily basis so that the problem of storage was not prominent for them as that of fish retailer.

It was observed that more number of fish vendors and dry fish makers faced problems in making tie up with middlemen and getting credit than other fisherwomen. Fish vendors and dry fish makers were the two groups of fisherwomen, who had run their business mainly on credit than other occupational groups. The least level of discrimination was found among fish vendors and fish retailers in the activities like making tie up with middlemen, getting credit, and participating in auctions etc.

Dry fish makers and value added fish producers were facing least discrimination in comparison with fish vendors and retailers since many of them were getting support from their family especially in the areas of economic activities. However dry fish makers and value added fish producers were also facing gender differential discrimination in handling, transportation and storage of bulk quantities of fish on a smaller scale compared with other two groups.

Table 23. Gender differential discrimination in the economic activities of respondent fisherwomen

Sl. No	Indicators	Level	Occupation				
			Fish Retailer	Fish vendor	Dry fish Maker	Value added fish producer	Total
1	Purchasing prices	No	24	28	28	32	112
		Little	20	11	16	14	60
		More	6	11	6	4	26
2	Selling prices	No	29	28	30	29	116
		Little	14	14	13	17	56
		More	7	8	7	4	26
3	Timing of auction	No	10	8	25	19	62
		Little	18	26	20	22	86
		More	22	16	5	9	52
4	Equal participation in auction	No	32	26	25	22	105
		Little	12	13	18	26	69
		More	6	11	5	4	26
5	Bargaining power during auctions	No	29	26	27	26	108
		Little	16	17	21	19	73
		More	5	7	2	5	19
6	Difficulty in transportation	No	7	6	22	19	54
		Little	16	14	12	15	55
		More	27	30	16	16	89
7	Difficulty in storage	No	13	18	27	20	78
		Little	12	14	10	19	55
		More	25	18	13	11	66
8	Difficulty in handling bulk quantity	No	8	9	22	16	52
		Little	12	16	15	15	58
		More	30	25	13	19	86
9	Difficulty in tie up with middlemen	No	40	32	31	31	132
		Little	3	16	7	10	36
		More	7	2	4	6	15
10	Difficulty in getting credit	No	36	26	30	30	122
		Little	6	14	9	14	43
		More	8	10	11	8	37
11	Total	No	226	197	215	177	807
		Little	129	152	129	131	532
		More	142	134	81	70	424

F) Social Empowerment Indicators of the Respondent Fisherwomen

Empowering women is a challenging task in India as we need to acknowledge the fact that we are living in patriarchal society where gender based discrimination is deep rooted since long back. Yet the situation has changed in a slow pace over the years along with the increase in educational level. In the course of activities related to women empowerment, many are trying to equip women to be self sufficient and self reliant in various facets of their life by addressing their issues under the broad areas of social, physical, economic, political and legal aspects.

Social empowerment of the respondent fisher women were analyzed in this study using various parameters like level of participation in social events and occasions, level of participation in various kinds of networking institutions, decision making ability of the fisher women in day to day issues of their life, access to various information sources, level of knowledge and awareness about health and nutritional aspects etc.

xxii. Participation of fisherwomen in social events

Participation of fisherwomen in social events indicates their relationship and exposure to external social environment. In all social events *viz.* marriage functions, religious functions, village meetings, training programs and cultural programs participation of value added producers were high which is pointing to the fact that they were having more exposure to external social environment which could be possible due to their age profile, their exposure they got through their education, availability of free time after their work and compulsion being a member of nuclear family.

All the fisherwomen irrespective of the four different occupational groups were represented marriage functions in their family or community. Yet the highest participation was from value added fish producers with an average number of 12.7 per year and 76 per cent of the marriage functions of their family was also represented by them. The lowest participation in marriage functions was by fish retailers with an average number of 9.4 per year and they represented 65 per cent of the functions of their family. It was observed that fish retailers were spending more time in their business compared to the fisherwomen from other occupational groups so that they could not participate in many of the social events of their family or community.

However, participation of fisherwomen in religious functions exhibited a similar pattern of distribution across the four occupational groups with an average number of 3 to 4 in a year. Highest representation made by fish vendors (79 per cent) and value added fish producers (77 per cent) in participating in religious functions than fish retailers and dry fish makers with 75 and 72 per cent respectively.

Table 24. Level of participation in social events by respondent fisherwomen

Sl. No	Type of Social events	Occupation				Total
		Fish Retailer	Fish Vendor	Dry fish maker	Value added fish producer	
1.	Marriage	9.36 (69)	11.9 (77)	11.2 (72)	12.7 (76)	45.16 (73)
2.	Religious function	3.2 (75)	3.7 (79)	3.7 (72)	3.6 (77)	14.2 (76)
3.	Participation in village meetings	2.3 (48)	1.9 (50)	3 (67)	3.31 (81)	10.51 (63)
4.	Participation in trainings and other programs	2.3 (52)	1.8 (53)	2.26 (59)	3.6 (85)	9.96 (70)
5.	Participation in cultural programs	1.7 (24)	1.58 (55)	1.4 (27)	2.9 (62)	7.58 (42)
6	Total	18.86 (65)	20.88 (72)	21.56 (69)	26.11 (77)	87.41 (71)

Figures in parenthesis indicate percentage (participation of fisherwomen) to total number of social events attended by family

Participation in village meeting was high among value added fish producers and dry fish makers with an average number of 3.31 and 3 per year respectively. Most of the cases value added fish producers represented their family in the village meetings (81 per cent). It was found that 67 per cent of the dry fish makers were also represented their family in village meetings. Age and educational profile of the value added fish producers and dry fish makers contributed to the higher level of participation in village meetings.

Value added fish producers and dry fish makers attended more training programs in comparison with other two groups. The average number of training programs attended by them was 3.6 and 2.3 per year respectively. Training programmes helped them to acquire additional skills and knowledge for their business. Since value added fish producers were working in association with self help groups, they could have more opportunities to participate in various training programs in comparison with other groups. Fish vendors have shown lowest participation in training programs as their involvement in self help groups also was found to be low.

Participation in cultural programs also high among value added fish producers with an average number of 2.9 per year (Table 24). The results clearly indicate that value added fish producers had more exposure to external social environment in comparison with other occupational groups.

xxiii. Mobility of the respondent fisherwomen

Mobility of fish vendors (94 per cent) and fish retailers (93 per cent) were high which is in contrast to their exposure to social environment. It was observed that fish vendors and fish retailers were not having much support from their family in running their business. Since they have started their business at a younger age and continuing it even at the age of late 60s, they have developed their own ways of purchasing, and marketing their products through their own experiences in the due course of time. Hence fish vendors and fish retailers were become self reliant at least in the case of running their business and moving around their locality freely.

Table 25 – Mobility of the respondent fisherwomen

Sl.No:	Occupation	Possibility of free movement within and outside their residential locality		
		Yes	No	Total
1.	Fish Retailer	47 (94)	3 (6)	50 (100)
2.	Fish Vendor	46 (92)	4 (8)	50 (100)
3.	Dry fish maker	41 (82)	9 (18)	50 (100)
4.	Value added fish producer	37 (74)	13 (26)	50 (100)
5.	Total	169 (85)	29 (15)	200 (100)

Figures in parenthesis indicate percentage to total

Free movement among value added fish producers and dry fish makers was less compared to the other two groups. It was observed that value added fish producers and dry fish makers had good family support in their business and their family members were involved in the purchasing and marketing their products in one way or other. Furthermore processing fish for making value added fish products and its marketing was more of a group effort in which they could avail the support of their group members. Though there were instances in which they need to move outside the locality, mostly they will get the support from family members or group members.

xxiv) Assistance to others

Great level of mutual co-operation could be seen among fisher women across the four different occupational categories. It was found that 87 per cent of the total respondents assisted each other either in cash, or in kind or by physical support. Even though the disposable income available to them was very low, highest per cent of the total population (44 per cent) helped others financially in their critical situations revealed their whole-heartedness. Of the total 44 per cent of the respondents who has provided financial assistance to others constituted by 58 per cent of the fish retailers 40 per cent each of fish vendors and dry fish maker and 38 per cent of value added fish producer. This pattern of distribution had a linkage with their level of income which is also

reflected in the results. Another 37 per cent of the total respondents extended material support to their neighbors in emergency situations and 6 per cent of the total respondents supported others by accompanying them in emergency situations.

On the contrary a total of 13 per cent of the respondents were not involved in any activities of assisting others in difficulties. Few of the respondent fisherwomen were not faced any emergency situations in their neighbourhood and they opined that they were ready to help others if any such situation come. Yet another few respondents believe that they were the most deserved persons to get help.

Table 26 – Assistance to others

Sl. No	Occupation	No	Critical situations			
			Material support	Health support	Financial support	Total
1.	Fish Retailer	2 (4)	17 (34)	2 (2)	29 (58)	50 (100)
2.	Fish Vendor	10 (20)	18 (39)	2 (4)	20 (40)	50 (100)
3.	Dry fish maker	9 (18)	17 (34)	4 (8)	20 (40)	50 (100)
4.	Value added fish producer	5 (10)	22 (22)	4 (8)	19 (38)	50 (100)
5.	Total	26 (13)	74 (37)	11 (6)	87 (44)	200 (100)

Figures in parenthesis indicate percentage to total

xxv. Networking among respondent fisherwomen

Self help groups and co-operatives are the major networking institutions found among the fisherwomen irrespective of their four different occupational groups. Generally self help groups facilitated several positive changes among womenfolk in the areas of social, economic and political development. It was evident from the data that it played a great role among fisher women. A total of 71 per cent respondents were members of various SHGs across the four different occupational groups illustrate the influence of SHGs in the lives of fisher women. Value added fish producers (86 per cent) were having highest participation in SHGs followed by fish retailers and dry fish makers with 74 and 68 per cent respectively. Production and marketing of value added fish products was more of a group effort, mostly initiated by SHGs of various government and non government institutions. There was less participation from fish vendors (23 per cent) since age was a limiting factor which interrupted them to get membership in SHGs.

Table 27 – Networking among respondent fisherwomen community

Sl. No	Occupation	Networking Institutions				
		SHG	Mahila Manadal	Co-operatives	Others	Total
1	Fish Retailer	34 (74)	0 (0)	12 (26)	0 (0)	46 (100)
2	Fish Vendor	23 (55)	1 (2)	18 (43)	0 (0)	42 (100)
3	Dry fish maker	36 (68)	0 (0)	13 (25)	4 (8)	53 (100)
4	Value added fish producer	44 (86)	0 (0)	7 (14)	0 (0)	51 (100)
5	Total	137 (71)	1 (1)	50 (26)	4 (2)	192 (100)

Figures in parenthesis indicate percentage to total

Another 26 per cent of the total respondents were involved in co operatives across the different occupational groups in which more number of participants (43 per cent) was from fish vendors followed by fish retailers (26 per cent). One of the prominent co operative society working among the fisherwomen is *Matsya Thozhilai (Kshemanidhi)* co operative society of fisheries department. Being members of *Kshemanidhi* they are eligible to avail many welfare services from fisheries department like pension, fishing equipments, interest free loan, and relief fund during trawl ban period etc. Since most of the fish vendors and fish retailers were from traditional fisher community it was easy for them to get membership in *Kshemanidhi*, resulted in highest participation of fish vendor and fish retailer in co operatives. Since the formalities involved in getting membership of *Kshemanidhi* is difficult to a person who is involved in fisheries allied business, the participation of value added producers in *Kshemanidhi* was comparatively low (14 per cent) with that of other respondent groups. It was found that some of the respondents have membership in multiple institutions such as self help groups and *Kshemanidhi* in order to avail the benefits of both.

xxvi. Involvement/Role in networking institutions

Greater share of the total respondents had membership in various networking institutions (73 per cent) in which highest number constituted by dry fish makers (29 per cent) followed by fish vendors (27 per cent) and fish retailers (25 per cent). Number of value added producers under the category of ‘members’ were comparatively low (19 per cent) and the remaining members occupied with various responsibilities in different networking institutions.

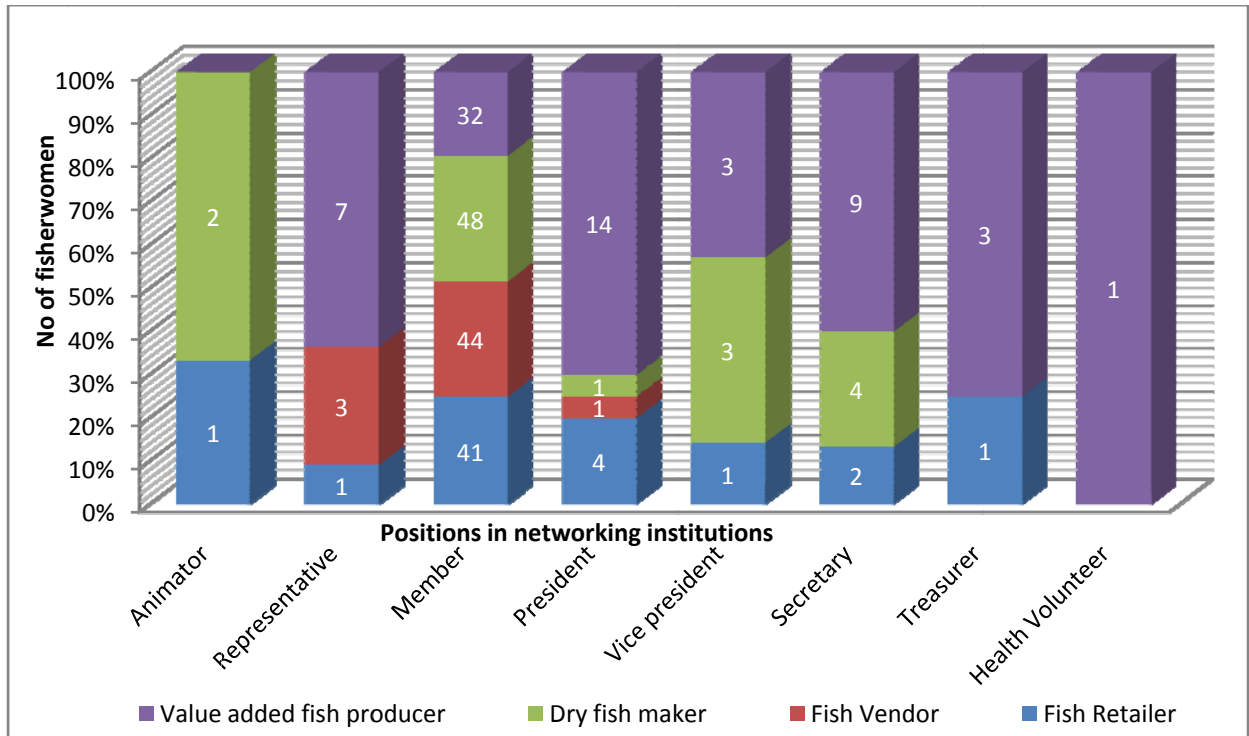


Figure 21 Role of fisherwomen in different networking institutions

Fish vendors having additional responsibilities in their networking institutions were limited (8 per cent) and the rest of the respondents shared their responsibility only as 'members'. It was found that 80 per cent of the fish retailers also remained as 'members' and the rest of the fisherwomen occupied with major responsibilities in their networking organizations. Dry fish makers also exhibited similar pattern of distribution in which majority of the fisher women (83 per cent) involved as members and a handful of fisherwomen occupied different positions in their networking institutions.

On the contrary more number of value added fisherwomen (54 per cent) occupied various positions in their networking institutions which indicated their level of empowerment in taking up additional responsibilities. Furthermore the work experience in these networking institutions as office bearers could be a reason which motivated them to start up a new venture of making value added fish products. The major positions occupied by fisher women in networking institutions were as follows; president, secretary, vice president, representative, and treasurer.

Table 28. Involvement/Role in networking institutions

Sl. No	Positions	Occupations				Total
		Fish Retailer	Fish Vendor	Dry fish maker	Value added fish producer	
1	Animator	1(33)	0(0)	2(67)	0(0)	3(100)
2	Representative	1(9)	3(27)	0(0)	7(64)	11(100)
3	Member	41(25)	44(27)	48(29)	32(19)	165(100)
4	President	4(20)	1(5)	1(5)	14(70)	20(100)
5	Vice president	1(14)	0(0)	3(43)	3(43)	7(100)
6	Secretary	2(13)	0(0)	4(27)	9(60)	15(100)
7	Treasurer	1(25)	0(0)	0(0)	3(75)	4(100)
9	Health Volunteer	0(0)	0(0)	0(0)	1(100)	1(100)
10	Total	51(23)	48(21)	58(26)	69(31)	226(100)

Figures in parenthesis indicate percentage to the total

xxvii. Type of benefits obtained by respondent fisherwomen through networking institutions

It was found that participation of fisherwomen in networking institutions was triggered by the benefits they could receive in return from these institutions. All the members were benefited by their institutions in one way or other and the range of benefits vary according to their involvement.

The most important benefit attained by the respondent fisherwomen across the four occupational groups was financial benefit. It was found that 64 per cent of the total respondents were received financial help from their self help groups or *Matsya Thozhilai Kshemanidhi*, in which all the respondent groups benefited with varying number of beneficiaries that ranges from 22 per cent to 28 per cent. In most of the cases value added fish producers started their business with the support of self help groups which gave them employment with a regular income. Self help groups helped the members to have their own savings, and enabled them to circulate their common pool resources (savings) among all the members as loan at times of their personal financial difficulty. Fisherwomen also got financial support from *Kshemanidhi* in terms of interest free loan, old age pension, and relief fund during trawl ban period.

Next to the financial benefits, 11 per cent of the fisher women acknowledged their technical skills and knowledge they have received from networking institutions. Value added fish producers (43 per cent) gained most in terms of technical skills and knowledge followed by dry fish makers (34 per cent). Comparatively lesser number of fish vendors (6 per cent) and fish retailers (17 per cent) acquired technical skills and knowledge. A good number of the production units of value added fish producers were supported either by SHGs or fisheries department in terms of finance and technical knowhow. More often these networking institutions imparted technical knowledge to

its members though various capacity building programs in the areas of technology, management and marketing.

Furthermore a small (6 per cent) per cent of the total fisher women received physical, mental and health benefits being involved in networking institutions. A four per cent of the total fisher women received recognition and status in their family / society as a member of self help groups in which higher per cent (57) accounted by value added fish producers followed by fish retailers (36 per cent)and dry fish makers (7 per cent).

Other major benefits obtained by the fisherwomen through networking institutions were social support, confidence, more knowledge and awareness on various subjects or issues, more contacts, sensitivity towards social issues and courage to take more initiatives. All these benefits were mainly obtained by the respondents of value added fish producers due to their active participation in various networking institutions.

It is evident from the data that the benefits obtained from networking organizations are directly related to the level of participation. It was found that value added fish producers had more responsibilities in various SHGs which helped them to gain more benefits out of it.

Table 29. Type of benefits obtained by respondent fisherwomen through networking institutions

Sl. No	Benefits obtained	Occupation				Total
		Fish Retailer	Fish Vendor	Dry fish maker	Value added fish producer	
1	Financial help/Employment	45(23)	44(22)	55(28)	52(26)	198(100)
2	Technical knowledge	6(17)	2(6)	12(34)	15(43)	35(100)
3	Physical/mental/health benefits	5(25)	5(25)	4(20)	6(30)	20(100)
4	Social status	5(36)	0(0)	1(7)	8(57)	14(100)
5	Social support	4(33)	0(0)	3(25)	5(42)	12(100)
6	Confidence	1(9)	0(0)	2(16)	9(75)	12(100)
7	Knowledge/awareness on various issues/topics	0(0)	1(9)	2(18)	8(73)	11(100)
8	More contacts	0(0)	0(0)	0(0)	5(100)	5(100)
9	Sensitivity towards social issues & Courage to take more initiatives	0(0)	0(0)	0(0)	5(100)	5(100)
11	Total	66(21)	54(17)	78(25)	112(36)	312(100)

Figures in parenthesis indicate percentage to total

xxviii. Decision making capacity of respondent fisherwomen

Table 30. Decision making capacity of respondent fisherwomen

Sl.No:	Occupation	Score	Type of activities													
			Family planning	Marriage decisions	Children's education	Family Health issues	Buying gifts for Social Functions	Religious events	Choice of Guest& entertainment at social functions	Giving loan to others	spending money to their relatives	Purchasing assets to home	Decisions on husband's job	Suggestions on husband's habits		
														Drinking	Smoking	Playing cards
1	FIR	No	7	3	11	2	9	7	13	11	3	4	31	27	30	27
		Little	36	24	25	28	24	14	9	21	28	20	6	9	7	10
		More	7	23	12	20	17	29	28	18	19	26	1	1	0	0
2	FIV	No	9	8	8	0	9	8	10	7	3	4	32	36	36	39
		Little	31	20	29	32	25	14	18	29	28	26	9	5	5	3
		More	10	19	10	18	16	28	22	14	19	20	0	0	0	0
3	DFM	No	12	6	7	6	11	5	11	12	7	6	25	29	32	32
		Little	26	20	25	23	26	19	18	18	26	30	13	8	5	6
		More	11	13	11	21	12	26	21	20	17	14	3	0	0	0
4	VAP	No	17	7	9	6	10	6	9	14	10	6	34	42	42	43
		Little	26	18	28	32	27	21	22	21	27	26	14	1	1	1
		More	6	12	11	12	13	22	19	15	13	18	1	0	0	0
5	Total	No	45	24	35	14	39	26	43	44	23	20	122	134	140	141
		Little	119	80	107	115	102	68	67	89	109	102	42	23	18	20
		More	32	67	44	71	58	105	90	67	68	78	5	1	0	0

Decision making capacity of the respondent fisherwomen was analysed on various parameters related to their day to day life. Decision making capacity of the fisherwomen in their day to day life has a direct linkage with their level of empowerment. At times decision making capacity of fisher women were subjected to some other external factors also. Various parameters included in measuring decision making capacity of the respondent fisherwomen like family planning, marriage of their daughter, children's education, family health issues, buying gifts for social functions, religious events, choice of guest and entertainment at social functions, giving loan to others, spending money to their relatives, purchasing assets to home, decisions on husband's job, decision on husband's habits etc

Decision making capacity of the respondent fisherwomen among fish retailers and vendors was found to be high in various activities related to their day today life which include decisions about their religious activities, purchasing assets to home, choice of guest and entertainment at social functions, decisions on their daughters' marriage etc. Value added fish producers also had decision making capacity in the above activities which is limited only to a lesser number of respondents than fish vendors and retailers. Dry fish makers have more stakes in decision making process in the activities like religious events, choice of guest and entertainment at social functions, family health issues etc. All the respondent fisherwomen irrespective of different occupational groups have least role in decisions related to husband's job and his habits.

Besides, fish vendors and retailers have more stakes in decision making related to their individual needs in comparison with other two groups. It was found that fish vendors and retailers were not depending much on their husband and their family members in meeting their financial needs, gave them more power to take decisions related to their day to day life. On the contrary dry fish makers and value added fish producers were sharing their income with their husband and family members. Hence the results clearly indicated that decision making capacity of the respondent fisherwomen related to their individual needs has a direct linkage with the economic independence.

xxix. Respondent fisherwomens' access to information resources

Respondents' access to various information resources were analysed under the following parameters such as knowledge about various government programs and subsidies, market arrival information, prices of fish and fishery products, quantities of fish and fishery products, access to terminal markets, access to market associations, knowledge about capacity building programs, knowledge about credit and financial institutions, access to village resource center (KVK) and finally gender differential access to these resources etc.

Fish vendors and fish retailers had more access to market related information such as market arrival information, prices of fish and fishery products, quantities of fish and fishery products etc than dry fish makers and value added fish producers as they were directly engaged in the purchasing of fish from market. Majority of the value added fish producers and a small number of dry fish makers were not have direct linkage with fish

markets justified their low access to information resources related to markets. Though there were differences in levels of access to different information resources found among respondents from different occupational groups, they rarely faced gender wise discrimination in accessing these information resources.

Table 31. Respondent fisherwomen's access to information resources

Sl No.	Indicators	Level	Occupation				
			Fish Retailer	Fish Vendor	Dry Fish Maker	Value added fish producer	Total
1.	Knowledge about government programs/subsidies	Low	37	38	36	15	126
		Medium	11	12	8	24	55
		High	2	0	6	11	19
2.	Market arrival information	Low	6	8	21	25	60
		Medium	26	23	15	19	83
		High	18	19	14	6	57
3.	Prices of fish and fishery products	Low	4	4	17	22	47
		Medium	19	22	16	21	78
		High	27	24	17	7	75
4.	Quantities of fish and fishery products	Low	5	7	17	27	56
		Medium	18	21	16	16	71
		High	27	22	17	7	73
5.	Access to terminal markets	Low	18	25	24	35	102
		Medium	26	20	18	12	76
		High	6	5	8	3	22
6.	Access to market associations	Low	36	39	40	43	158
		Medium	14	10	10	7	41
		High	0	1	0	0	1
7.	Knowledge about capacity building programs	Low	41	49	38	18	146
		Medium	9	1	11	26	47
		High	0	0	1	6	7
8.	Knowledge about credit and financial institutions	Low	28	33	32	19	112
		Medium	20	17	17	26	80
		High	2	0	1	5	8
9.	Access to KVK/village resource center	Low	44	47	48	42	181
		Medium	6	3	2	7	18
		High	0	0	0	1	1
10.	Gender differential in access to above resources	Low	42	41	48	38	169
		Medium	8	9	2	11	30
		High	0	0	0	1	1
11.	Total	Low	261	291	321	284	1157
		Medium	157	138	115	169	579
		High	82	71	64	47	264

Value added fish makers were having comparatively more access to the information resources such as knowledge about various government programs and subsidies, knowledge about capacity building programs, knowledge about credit and financial institutions, was high due to their higher involvement in networking institutions and their higher level of education than other respondents.

It was found that many of the respondent fisher women irrespective of their occupational groups have poor access to market associations as well as village resource center/KVK. Many of the respondents were not aware about the activities of village resource center pointing to the fact that their activities were not reaching to the grass root level or influencing the lives of fisher women.

xxx. Level of knowledge about health and nutritional aspects among respondent fisherwomen

Respondents' knowledge about health and nutritional aspects were studied using the following parameters like awareness about health care during pregnancy, minimum birth weight, infant/maternal mortality, vaccination for infants and children, early marriage of girls, sexually transmitted diseases, water borne diseases etc.

Table 32. Level of knowledge on health and nutritional aspects among respondent fisherwomen

Sl. No	Occupation	Level	Health and Nutritional aspects							
			Early marriage of girls	Health care during pregnancy	Minimum birth weight	infant/maternal mortality	vaccination for infants /children	Sexually transmitted diseases	Water borne diseases	Total
1.	FIR	No	11	8	5	15	5	34	13	91
		Partial	27	27	33	24	22	16	29	178
		Full	12	15	12	11	23	0	8	81
2.	FIV	No	8	6	6	14	9	29	22	94
		Partial	20	22	31	29	25	17	19	163
		Full	22	22	13	7	16	4	9	93
3.	DFM	No	8	10	10	19	4	21	11	83
		Partial	20	21	27	25	25	21	27	166

		Full	22	19	13	6	21	8	12	101
4.	VAP	No	4	5	4	5	5	13	2	38
		Partial	15	14	17	20	10	18	27	121
		Full	31	31	29	25	35	19	21	191
5.	Total	No	31	29	25	53	23	97	48	306
		Partial	82	84	108	98	82	72	102	628
		Full	87	87	67	49	95	31	50	466

Level of knowledge is directly associated with the level of education. It was found that level of knowledge among value added fish producers in all the parameters related to health and nutritional aspects were high than that of other respondents due to their higher educational level compared with other respondents. Furthermore their increased involvement in self help groups and other networking institutions helped them to develop their knowledge level in various aspects.

xxxi. Details about visits to health clinics during pregnancy

Unlike past scenario consulting doctor during pregnancy has increased in Kerala not only among general community but also among fisherfolk which is mainly due to the improved awareness level resulted by higher education and influence of mass media. The results explained that greater part of the respondents among all occupational groups visited doctor at least three times during their pregnancy ranged from 71 to 90 per cent of the respondents across various occupational groups in which highest number constituted by value added fish producer. Age and educational profile of the respondents functioned as an important factor behind the high rate of health consultation among value added fish producers during pregnancy.

Majority of the respondents above the age of 60 were not consulted doctors during their pregnancy, as health services and institutions available at their stage were not accessible to them either by distance, means of transportation or in monetary terms. The age group above 55 was represented mainly by fish vendors and fish retailers. Furthermore the lower level of education also had an effect on lesser number of consultations during pregnancy among fish vendors and retailers.

Table 33 – Frequency of visits to health clinics during pregnancy

Sl. No	Occupation	Visiting Health clinics during pregnancy at least 3 times		Total
		Yes	No	
1.	Fish Retailer	35(71)	14(29)	49(100)
2.	Fish Vendor	38(79)	10(21)	48(100)
3.	Dry fish maker	34(71)	14(29)	48(100)
4.	Value added fish producer	44(90)	5(10)	49(100)
5.	Total	151(78)	43(22)	194(100)

Figures in parenthesis indicate percentage to total

xxxii) Frequency of food and medicine intake as per doctor's advice during pregnancy

In continuation with the above information, details of food and medicine intake as per doctor's advice during pregnancy have explained in this table. It was found that 60 per cent of the value added fish producers were followed doctor's advice completely in the case of food and medicine intake during pregnancy followed by fish vendors (48 per cent) and dry fish makers (29 per cent).

Another 37 per cent of the total respondents were partially followed doctors' advice during pregnancy. Of the total respondents 25 per cent of them were not taken food and medicines as advised by doctors during pregnancy which consists of 31 per cent each of fish retailer and dry fish maker, 21 per cent of fish vendor and 16 per cent of value added fish producer. In connection with the above table the number of respondents who did not consult doctor during their pregnancy was included in the list of respondents who were not taken food and medicine as per doctors' advice.

Table 34. Food and medicine intake during pregnancy

Sl.No:	Occupation	Taking food and medicines as advised by doctors			
		No	Partial	Full	Total
1.	Fish Retailer	15(31)	27(55)	7(14)	49(100)
2.	Fish Vendor	10(21)	15(31)	23(48)	48(100)
3.	Dry fish maker	15(31)	19(40)	14(29)	48(100)
4.	Value added fish producer	7(16)	12(24)	30(60)	49(100)
5.	Total	48(25)	73(37)	74(38)	195(100)

Figures in parenthesis indicate percentage to total

G) Political Empowerment

Political empowerment of the women is directly concerned with their awareness and participation in the political process and their access to power and to the decision making process. Role of women in the political processes was guaranteed by the 73rd constitutional amendment made in 1993, provide 33 per cent reservation for women in the PRL's of three-tier system. In addition to this, women reservation bill passed in 2010 also provides 33 per cent reservation for women at each level of decision making starting from Lok sabha to state and local legislatures. In our state women reservation bill is working as a tool to ensure participation of the women in political decision making process at various levels. More leadership from women has emerged in the political system since the execution of women reservation bill in 1993. Yet the question remains, does the reservation itself create political empowerment among the women?

In this context political empowerment of the fisher women across four different occupational groups *viz.* fish retailer, fish vendor, dry fish maker, and value added fish producer were analyzed on various parameters such as participation and awareness on election process, membership in political institutions, awareness about the name of political representatives, participation in political/developmental process, perception about the power structure in our democratic system etc.

xxxiii. Participation in election process

The level of participation and awareness on election process by the respondent fisher women are discussed in Table 35 with following indicators like awareness about voting age, number of respondents having voter identity card and registration, number of respondents voted and contested in any elections, choice of voting etc.

It was found that all the respondents irrespective of their occupational groups have voter identity card and registration. Additionally all the respondents had exercised

their franchise at least in one election. Majority of the total respondents (96 per cent) among the four occupational groups voted as per their own choice. Most of the value added fish producers have freedom of voting, yet few of them used to consult and take opinion from their husband (8 per cent).

All the respondent fisher women were familiar about the voting age of women; however few of them were not aware about the renewed voting age across the four different occupational groups, in which highest numbers accounted by fish vendors (12 per cent) and retailers (10 per cent).

However the number of fisherwomen contested in any election was very low with only two per cent of the total respondents in which two respondents were from value added fish producer and one respondent was from fish retailer indicate their level of empowerment and leadership initiatives.

Results showed that awareness and participation of fisherwomen in lower level political process was high across all the respondents. On the contrary participation of fisher women reduces with we move to a higher level of political process such as power sharing and decision making process.

Table 35. Participation and awareness on election process

Sl. No:	Occupation	Indicators					
		Awareness about voting age	Registered voters	Respondents having voter identity card	Voted in any elections	Contested any election	Voting as per own choice
1.	Fish Retailer	45(90)	50(100)	50(100)	50(100)	1(2)	49(98)
2.	Fish Vendor	44(88)	50(100)	50(100)	50(100)	0(0)	48(96)
3.	Dry Fish Maker	46(96)	50(100)	50(100)	50(100)	0(0)	48(96)
4.	Value added fish producer	47(94)	50(100)	50(100)	50(100)	2(4)	46(92)
5.	Total	180(90)	200(100)	200(100)	200(100)	3(2)	191(96)

Figures in parenthesis indicate percentage to the total

xxxv. Membership in Political Institutions

Involvement of fisher women in political institutions across the four different occupational groups are discussed in Table 36. Participation of the fisherwomen in

political institutions is studied from their membership and the positions they hold in various institutions such as political party, trade union etc. It was found that 6 per cent of respondent fisher women had a significant role in the political institutions by holding various important positions which ranged between 4 to 14 per cent of the fisherwomen across the four different occupational groups.

In comparison with the general community, involvement of fisher women in party politics was high since they were from highly organised sector of traditional fisher folk. Among the total respondent fisherwomen 20 per cent of them were involved in political parties and 12 per cent involved in trade unions showed their strong affiliations towards political parties. It is again pointing to the fact that political parties had a very strong base among grass root level people especially among fisher community. There was no significant difference among the respondents across the four occupational groups in their participation in political institutions. It was found that 16 - 22 per cent of the fisherwomen from each category were involved in the political party and 12-16 per cent of the fisherwomen were involved in the trade union across the four occupational categories. Another 6 per cent of the total respondents were holding different positions in their local political parties ranged between 4 to 10 per cent across the four different categories; indicate their level of political empowerment.

Table 36. Membership in political institutions

Sl. No:	Occupation	Political institutions		
		Political party members	Union members	Fisherwomen holding political post
1.	Fish Retailer	8(16)	8(16)	5(10)
2.	Fish Vendor	11(22)	6(12)	2(4)
3.	Dry Fish Maker	9(18)	3(6)	2(4)
4.	Value added fish producer	11(22)	7(14)	3(6)
5	Total	39(20)	24(12)	12(6)

Figures in parenthesis indicate percentage to the total

Involvement of fisher women in political process was found to be very low as in the case of general women folk. In the light of new women reservation bill, it is mandatory to handover the power to women in 33 per cent of positions of local self government, prospects a revolution in the political scenario in the coming years. Current women reservation bill holds immense scope for transforming our political scenario. It changes the politics of 'presence' to 'representation' by law and there lies tremendous scope for the women to work on. Yet the representation of fisher women in various positions in elections was negligible. However this situation will change only with the increase in education and hence the priority should be given for supporting higher education among fisher folk.

xxxv. Awareness about the name of elected representatives

Awareness level of fisherwomen about the name of elected representatives at local self government, parliament and assembly level was questioned across the different occupational groups. Results illustrated that value added fish producers knew more about their elected representatives at various levels which could be due to their increased level of education and their outside exposure being members of social networking institutions, whereas fish vendors and fish retailers had comparatively lesser awareness about the names of elected representatives which is due to their low education.

Table 37. Awareness about the name of elected representatives

Sl. No	Occupation	Indicators					
		Name of GPP	Name of MLA	Name of MP	Name of Chief minister	Name of Prime minister	Name of Fisheries Minister
1.	Fish Retailer	34 (68)	19 (38)	17 (34)	35 (70)	34 (68)	30 (60)
2.	Fish Vendor	33 (66)	25 (50)	14 (28)	28 (56)	23 (46)	19 (38)
3.	Dry Fish Maker	40 (80)	29 (58)	17 (34)	38 (76)	31 (62)	34 (64)
4.	Value added fish producer	41 (82)	34 (68)	31 (62)	47 (94)	42 (84)	44 (88)
5.	Total	148 (74)	107 (54)	79 (40)	148 (74)	130 (65)	127 (64)

Figures in parenthesis indicate percentage to the total

Awareness about the name of their MPs and MLAs were comparatively low across all categories of the people. It was found that a total of 54 per cent of the total respondents could identify the name of MPs and 40 per cent MLAs name. Many of the respondents opined that once these MPs and MLAs got elected to the assembly or parliament their availability will be limited only to certain public occasions and programs. On the contrary 66 to 82 per cent of fisherwomen across the different occupational groups had awareness on the name of Grama panchayath president (GPP). Since GPP's work area lies in the immediate vicinity of people and mostly they belong to respondents' immediate surroundings, the level of awareness about the name of GPP among the respondents became high.

Awareness about the name of Chief Minister (74 per cent) and Prime minister(65per cent) also high among the respondents across the different occupational groups. Influence of mass media played a greater role in the increased awareness level of fisher women regarding this.

Since most of the respondents were associated in the schemes of fisheries department in one way or other, 64 per cent of the total respondents were aware about the name of fisheries minister in which highest level of awareness expressed by value added fish producers (88 per cent) followed by dry fish makers (65 per cent). Higher level awareness among value added fish producers is due to their close relationship with fisheries department and schemes in order to run their business.

xxxvi. Participation in Political process/Development activities extreme centralization of power and influence

Participation in political process by respondent fisherwomen was comparatively low across the four different occupational groups. Yet participation in social campaigns could be mainly seen among respondents those who were involved in some kind of social support institutions like trade unions, political party, SHGs, other peoples institutions etc. Political campaigning is an organised effort of expressing citizens' power in order to influence the decision making process within a specific group which can be either to fight for their needs or to protest against injustice. It was found that 33 per cent of the total respondents participated in political campaigns, inclusive of 38 per cent of the value added fish producer, 36 per cent of the dry fish makers, 30 per cent of the fish vendors and 28 per cent of the fish retailers. Since some of the fisher women had strong inclination towards political parties who participated more in political campaigning organised by the party. Comparatively higher number of value added fish producers participated in political campaigns (38 per cent) as their participation in SHGs were high. Additionally there were examples of self organised political campaigns among women folk including fisher women, were found in the midst of common issues such as water crisis, property right issues etc.

However many respondent fisherwomen demanded developmental activities within their locality such as road, water, street light etc to the elected representatives of local self governments in which major chunk of the people was from value added fish producers group (66 per cent) followed by fish vendor, fish retailer and dry fish maker with 46 per cent, 42 per cent and 40 per cent respectively. They also opined that MLAs and MPs were not approachable to them compared to LSG leaders (Local Self Government). Level of education, age and exposure in networking institutions were the supporting factors that helped value added fish producers to raise their voice for their rights

Table 38. Participation in Political process/Development activities extreme centralization of power and influence

Sl. No	Occupation	Indicators		
		Participation in political campaigning	Demanded any development activities	Participation in political discussions
1.	Fish Retailer	14 (28)	21 (42)	7 (14)
2.	Fish Vendor	15 (30)	23 (46)	10 (20)
3.	Dry Fish Maker	18 (36)	20 (40)	11 (22)
4.	Value added fish producer	19 (38)	33 (66)	13 (26)
5.	Total	66 (33)	97 (49)	41 (21)

Figures in parenthesis indicate percentage to the total

It is noticed that the level of participation of women folk in political discussions had a direct link with their level of education which is reflected among respondent fisher women. Highest participation in political discussion within their community and family was found among value added fish producers (26 per cent) due to their higher level of education, followed by dry fish makers and fish vendors with 26 per cent and 22 per cent respectively.

xxxvii. Perception on citizen's power in our democratic system

Democracy is a form of government in which supreme power is vested in people and exercise directly by them or by elected representatives. However in actual practice peoples' power is limited only to select the representatives and once representatives got selected, they exercise maximum power without much consultation with the common people and rule our system. All the respondent fisher women were questioned in this regard to get their perception on the power structure within our democratic system.

Table 39. Perception on citizen's power in our democratic system

Sl. No	Occupation	More powerful in our democratic system		
		Yourself	Political representative	Total
1	Fish Retailer	11 (22)	39 (78)	50 (100)
2	Fish Vendor	13 (26)	37 (74)	50 (100)
3	Dry Fish Maker	16 (32)	34 (68)	50 (100)
4	Value added fish producer	15 (30)	35 (70)	50 (100)
5	Total	55 (27.5)	145 (72.5)	200 (100)

Figures in parenthesis indicate percentage to the total

Majority (68 to 78 per cent) of the respondents opined that political representatives took over the public in political decision making process and in power distribution. The respondents were of the view that citizen's power in the democratic system is significantly low when compared to the political representative.

xxxviii. Exercising franchise on elections

Discontent of the general public in the present political system had not at all prevented them from exercising franchise on election process at least among the respondent fisherwomen. Furthermore voting trend in Kerala illustrated that more people from the rural areas expressed their voting rights than the urban population. Several explanations can be given for this of which one may be due to the hope that rural population have in our democratic system than educated urban community and another may be because of the influence excreted by the political party in the lives of less educated rural people.

Table 40- Exercising franchises on elections

Sl. No	Occupation	Voting in elections							
		local Panchayath		Assembly election		Parliament election		Total	
		Faced	Voted	Faced	Voted	Faced	Voted	Faced	Voted
1	Fish Retailer	282	276(98)	376	374(99)	286	284(99)	944	934(99)
2	Fish Vendor	287	269(94)	395	385(97)	291	280(96)	973	934(96)
3	Dry Fish Maker	246	240(98)	352	338(96)	277	266(96)	875	844(96)
4	Value added fish producer	194	182(94)	270	257(95)	193	182(94)	657	621(95)
5	Total	1009	967(96)	1393	1354(97)	1047	1012(97)	3449	3333(97)

Figures in parenthesis indicate percentage to total

Results revealed that all the fisher women irrespective of their difference in occupational pattern, exhibited higher level of participation in casting their votes in all the elections viz. local panchayath elections, assembly elections and parliament elections with a range of 97 per cent.

H) Legal Empowerment

Legal assistance, awareness and access to legal information system are the two essential requirements in achieving access to social justice for the common people in their day to day life. Education plays a pivotal role in achieving social justice. These days many organizations- both government and non government- are involved in imparting

legal awareness to the common people through people's institutions. Participation in various people's institutions helped them in gaining more knowledge on legal aspects which ultimately contribute towards their legal empowerment.

xxxix) Legal Empowerment Indicators

Legal empowerment of the respondent fisher women is explored in this study based on the following parameters like number of police officers and lawyers in their family, knowledge about the location of police station especially women police station. Number of fisher women convicted any civil/criminal case, number of fisher women faced domestic violence; number of fisher women sought any outside legal assistance and number of fisherwomen having knowledge about womens' right in the event of divorce etc.

Having a police officer and lawyer in a family is a matter of education. It was found that more number of police officers and lawyers were from the families of value added fish producers (18 per cent).

Police stations became very important and popular institution since it has a significant role to play in the day to day lives of people. Increasing number of sectoral and inter-sectoral conflicts created disequilibrium within the society, exerts pressure on police stations to act upon and hence it has a very prominent role even in the lives of common people. The data portrayed that 96 per cent of the total respondent fisher women across the four different occupational groups were aware about the location of nearest police station. In contrast many of the respondents were not much aware about the location of women police station since the number of women police stations are less in comparison with general ones and it is located in town areas where they did not have much access. The highest number of respondents are known about the location of women police stations was from fish retailers (48 per cent) followed by dry fish makers (36 per cent) and fish vendors (34 per cent). Many of the fish retailers had gone to women police stations on various issues related to their life and their business reflected in the higher per cent of the data. However there are many fisherwomen who do not even aware about the functioning of 'women police stations' also participated in this study.

With regard to the criminal /civil cases associated with the fisher women, more number of cases was reported among fish retailer and fish vendor with 12 per cent each. Nature of cases includes both family and business related issues, in which more issues were associated with fishery related business. The number of fisher women sought outside legal assistance has directly linked with the number of civil /criminal cases coupled with them. Hence 14 per cent of both fish retailers and fish vendors got legal assistance from outside. Besides 16 per cent of dry fish makers and 10 per cent of the value added producers received outside help in getting legal assistance.

Table 41. Legal empowerment Indicators of the respondent fisherwomen

Sl. No	Indicators	Occupation				
		FIR	FIV	DFM	VAP	Total
1.	Fisherwomen having police officer in their family	4 (8)	3 (6)	6 (12)	9 (18)	22 (11)
2.	Fisherwomen having Lawyer in their family	2 (4)	3 (6)	5 (10)	9 (18)	19 (10)
3.	Fisherwomen having knowledge about the location of nearest police station	47 (94)	49 (98)	48 (96)	48 (96)	192 (96)
4.	Fisherwomen having knowledge about women police station	24 (48)	17 (34)	18 (36)	31 (32)	90 (45)
5.	Fisherwomen convicted in any civil/criminal case	6 (12)	6 (12)	2 (4)	0 (0)	14 (7)
6.	No. of Respondent Fisherwomen sought any outside legal assistance	7 (14)	7 (14)	8 (16)	5 (10)	27 (14)
7.	No. of Respondent Fisherwomen faced any domestic violence	11 (22)	9 (18)	5 (10)	6 (12)	31 (16)
8.	No. of Respondent Fisherwomen having knowledge about Women's right in the event of divorce	9 (18)	1 (2)	6 (12)	18 (36)	34 (17)

Figures in parenthesis indicate percentage to total number of respondents in each category

Generally the issue of domestic violence is found to be more among traditional fisher women, which could be associated with the increased alcohol consumption among fishermen. However the number of reported cases might be low as many of women folk were not ready to reveal the situation to the public. Results illustrated that a total of 16 per cent of the fisher women faced domestic violence in which 22 per cent of the cases were from fish retailers followed by fish vendors with 18 per cent. Comparatively lower per cent of the fisher women faced domestic violence in their life among value added fish producers and dry fish makers with 12 and 10 per cent respectively.

Knowledge is the outcome of education, experience and awareness. Here the knowledge about women rights in the event of divorce was high among value added fish producers (36 per cent). The higher level of education of value added producers in comparison with other respondents was a contributing factor in their higher level of knowledge. Moreover they have received many legal awareness classes being involved in many

networking institutions like self help groups. Next to the value added fish producers, 18 per cent of the fish retailers were also aware about the women rights in the event of divorce. Since the number of divorce cases was observed among fish retailers was high, they came to know more about women rights in the event of divorce from their own experiences.

xxxx. Awareness/ Knowledge about human rights & women rights

Education is a process of gaining, improving and reinforcing the knowledge for useful application in our day to day life. Hence knowledge level of each individual has a direct linkage with their education.

Awareness/ Knowledge level about human rights and women rights of fisherwomen were analysed across different occupational groups is furnished in Table 42. It was found that 30 to 34 per cent of the fish vendor, fish retailer and dry fish maker were not aware about both women rights and human rights. Only two per cent of the fish retailers have higher level of knowledge about human and women rights. However in the case of fish vendor there was not even a single respondent with higher level of knowledge in this regard due to their poor educational background. When we move towards dry fish makers and value added fish producers the number of respondents with higher level of knowledge on women rights and human rights is increased with 6 and 4 per cent to 12 and 10 per cent respectively with their increased level of education.

Table 42. Awareness/Knowledge about human rights and women rights

Sl.No	Occupation	Level of awareness/ knowledge	Indicators		
			Women rights	Human rights	Total
1.	Fish Retailer	No	33	34	67
		Little	16	15	31
		More	1	1	2
2.	Fish Vendor	No	33	34	67
		Little	17	16	33
		More	0	0	0
3.	Dry Fish Maker	No	30	31	61
		Little	17	17	34
		More	3	2	5
4.	Value added fish producer	No	20	20	40
		Little	24	25	49
		More	6	5	11
5.	Total	No	116	119	235
		Little	74	73	147
		More	10	8	18



Fig. 22. Bargaining at its best



Fig. 23. Auction yard: waiting for the deal



Fig. 24. Retailers : Waiting for the buyers



Fig. 25. Vendors in search of potential customers



Fig. 26. Retailers waiting for the landing centre prices to follow



Fig. 27. Displaying fish for the competitive sale



Fig. 28. Economic Empowerment: disposal for the best selling price



Fig. 29. Pricing the products based on dialogue



Fig. 30. Array of value added products



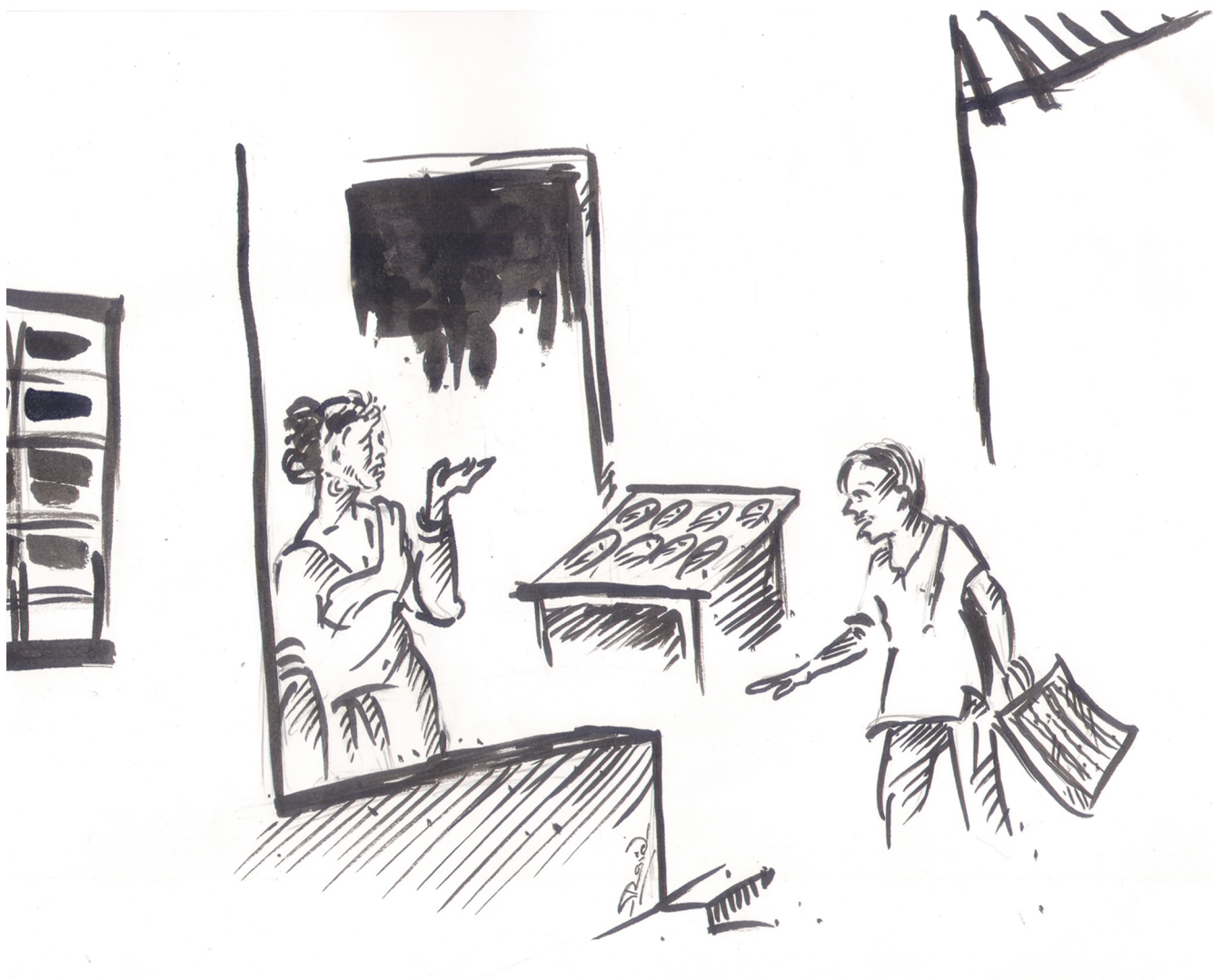
Fig. 31. Quality improvement in value addition



Fig. 32. Standardization and grading operation



Fig. 33. Drying operation in indigenous dryer



SUMMING UP

F.SUMMING UP

Indian fisheries and aquaculture has proved to be an important sector not only for food production and providing nutritional security but also for contributing to the agricultural exports. Kerala has a very dominant position among the maritime states of the country in the export of marine products. It is estimated that there are 5.4 million people fully engaged in fisheries activities, of which, 3.8 million are fishermen and 1.6 million are fisherwomen. Fisherwomen play important role in fisheries sector in terms of their involvement in fish related activities *viz.* fish retailing, fish vending, fish drying, fish processing, net making etc. The contributions of the fisherwomen penetrate every aspect of post harvest handling, preservation, processing, and marketing of seafood products, and provide an integral link between producers and consumers.

The contribution of women in post harvest operations has impacted positively on the social status and economic power of fisherwomen. The involvement of fisherwomen in fishing business has helped to increase her family's meager income, thereby contributing to sustainable livelihood and enhancing the social well-being. Fish processing and marketing is considered as the vehicle for achieving empowerment of the women, in all spheres *viz.*, social, cultural, political and economic. Much of India's national food security rests on the shoulders of its fisherwomen. Affording comprehensive care for these women is correct in principle and a practical necessity if India's fisheries sector is to be satisfactorily sustained and the fisherwomen empowered, both socially and economically.

With this background, a study was conducted with the following objectives *viz.*, to analyse the role of fisherwomen in processing and marketing of fish and fishery products as a source of income generation and livelihood option in Kerala, to compare the levels of employment and income between fisherwomen involved in low value fish processing *vis-à-vis* value added fishery products and between fisherwomen as retailers and vendors, to estimate the social, political and economic empowerment of fisherwomen involved in processing and marketing of fish and fishery products in Kerala and to suggest policy options for empowerment of fisherwomen through fisheries oriented activities in Kerala. The results of the study have been explained briefly in this Chapter.

A. General characteristics

Majority of the respondent fisherwomen (65 per cent) who were involved in the fishing business represents the age group of 36-55. Yet, agewise distribution demonstrated significant differences across the four occupational groups of fisherwomen. Highest

distribution of the respondent fisherwomen among fish vendors and retailers were found to be in middle age group (56 to 60 per cent) which could be due to their strive for economic independence even at the age of late sixties and part of their sustained and perpetual emotional attachment to this profession. Results clearly indicated that production and marketing of value added fish products could attract more number of youngsters than traditional fish marketing occupations.

The results revealed that among the literate population 63 per cent have primary level of education, 33 per cent have secondary level of education and hardly four per cent have collegiate level of education. The person with collegiate education was only among value added fish producers and dry fish makers. It is evident from the results that age group of the value added producers has a direct relationship with their higher rate of education.

The nuclear family culture is mostly adopted by all the fisherwomen (80 per cent) across the four different occupational groups. This general tendency of growing nuclear family culture of Kerala was reflected in family type of all categories of fisherwomen. The tendency was marginally higher among dry fish makers and value added fish producers due to their higher level of education.

It was found that the majority of the respondent fisherwomen (57 per cent) were from Hindu community followed by Christian community (39 per cent). A particular group of Christian community and Hindu community were known for traditional fishing and fishery allied business, were representing more among the total respondents. The Muslim community known for their entrepreneurial skills is engaged mostly in making value added fish products represented least.

Major representation of the respondent fisherwomen was from backward community (BC). Major chunk of the BC population constitute Latin Catholics, a sub division of Christian religion which is known for traditional fishing (62.4 per cent). There is not even a single respondent belonged to most backward caste and scheduled tribe. Mostly scheduled tribe population habituated in the high land areas of Kerala state and they do not have any direct linkage with fish and fishery allied activities.

B. Family profile

The male female ratio was found to be 1:1.11 for the total respondent households, exhibits similarity with that of Kerala's sex ratio. The child to adult ratio was found to be 1:4.80 for the total sample.

The family type and family size of the respondent fisherwomen exhibited quite similar pattern of distribution in which greater part (78 per cent) of the total respondents were from small family having a size between 2-4, i.e most of them were from nuclear family.

The average size of family among respondent fisherwomen worked out to be 4.195 ranging from 4.10 among dry fish makers to 4.32 among fish vendors.

The literacy rate among the family members of respondent fisherwomen across the four occupational groups was found to be high with 89.20. The highest literacy rate was reported among value added fish producers' family with 95 per cent followed by dry fish makers (90 per cent). Major part of the illiterates was from fish retailers' (37 per cent) and fish vendors' family (26 per cent).

The results on occupational status of the family members of respondent fisherwomen revealed that total earner dependent ratio was comparatively high with 1.35 across the four occupational groups. Dependent people were less in compared to earners in each category of fisherwomen. It revealed that most of the people in each family were working and economic empowerment is being attained by each fisherwoman.

C. Composition of fish species marketed by fisherwomen

A total of 38 fish species are handled by total respondents across the four different occupational groups of fisherwomen. Most popular fish species handled among all the occupational groups of fisherwomen were sardine, mackerel, prawn, anchovies, and tuna etc. Generally fish retailers and fish vendors marketed low value fishes than other two groups in accordance with their scale of business and demand of the target population. Generally fish retailers are of two types based on the quantum of marketing. In many cases fish vendors become fish retailers in late 50s, in order to overcome the burden of carrying and marketing heavy baskets of fish on a door to door basis and consequently they used to market small quantities of fish by sitting in the market places and they had high specificity in species selection.

Value added fish producers had high specificity of species like Prawn, Mussels, Squid, Tuna etc and they used to scrutinize the fish species in order to assure the compatibility of their products with the consumer demands.

D. Income generating activities of fisherwomen

Marketing of fresh fish, dry fish, value added fish products like pickle, fish curry, and fish cutlet, fish powder, and fish roast, packed dry fish and prawn masala etc. contributed to the major income generating activities of respondent fisherwomen.

In comparison with the respondents from other occupational groups fish vendors were handled lesser quantity of fish products (8 per cent). They achieved their maximum quantity of business from distant markets which is around 39 per cent, than other marketing locations. The major quantum of fish products from retailers were disposed at onsite markets (53 per cent) followed by 33 per cent at distant market. Age of the fisherwomen is the major determining factor behind onsite marketing since it is more convenient for them to market in very nearest locations.

Results indicated that majority of the dry fishes were disposed at distant markets, which was mainly of two ways. One by direct marketing of dry fish in distant markets (46 Per cent), and second through traders from distant market, who come down to purchase from the site of production itself (45 per cent). Average quantum of marketing among fisherwomen was lower in nearby markets across the occupational groups. However average revenue per unit is higher at nearby market except in the case of fish vendors. Value added fish producer gained highest average revenue per unit in all the marketing locations than other fisherwomen.

Results indicated that fish retailer have lesser transportation expenses per unit compared with other occupational groups. Fish vendors used to go for more travel since they have to reach distant locations for selling their product. There exists a practice of hiring vehicles collectively to transport their fish baskets to a common point, from where they disperse to their individual locations for marketing. The storage cost (unit cost) for dry fish makers (₹1.26) and value added fish producers (₹1.33) were high due to the additional inputs they used to apply in order to improve the shelf life of their products.

E. Economic empowerment

The data revealed that dry fish makers' income sharing pattern was high when compared to other groups. Income sharing pattern exists mostly with dry fish makers and value added fish producers since the involvement of their husband or other family members in the business was found to be very high.

Lesser freedom associated with spending money among dry fish makers and value added fish producers was due to the limited level of income available from the business which has a direct link with the tied credit from funding agencies and hand loans from family members. Major responsibility of household management in the areas of food, cloth, education, medical & health care, and buying social gifts was mostly on the women's shoulders in the respective families of respondents.

It was observed that most of value added producer started their business quiet recently and they had generated their initial capital as loan from various financial institutions. Repayment of their loan was the main focus of the team members during the initial period and hence they were not able to share much of their profit among them, justifies their least average share on family expenditure. The practice of giving gifts on social functions was high among value added fish producer.

All the fisherwomen had low participation in sharing expenditure on assets like land, house, jewels, livestock, and home appliances in comparison with other household expenditure. Within these assets land and house require huge investment in which share of the fisherwomen across the four different occupational groups was very low. It was observed that not even a single fisherwoman sharing their income for purchasing land. During the time of study majority of the respondent women inhabited in their own land or in their family land. Nobody among respondents' family invested on land during last year.

The share of investment on purchasing jewels was comparatively high among all the respondent fisherwomen irrespective of their occupational groups. Generally the usage of ornaments and jewelries are common among women in Kerala and it is considered to be a good investment which was also reflected in the case of fisherwomen. In many cases it was observed that fisherwomen are the one who managed the livestock in their family in order to get an additional income. Monetary participation was high among all categories of fisherwomen for purchasing home appliances like television, refrigerator, mixer grinder, furniture, fan, telephone etc.

Most popular schemes of savings in which fisherwomen have stake includes self help groups (SHGs), *Kshemanidhi*, post office, Kuri and LIC etc. Number of fisherwomen having savings in commercial and co operative bank was very low (0.75 per cent each) among the total respondents.

Among the four occupational groups value added fish producers have comparatively high average savings in cooperative bank, post office, SHGs, *Kshemanidhi*, Kuri and LIC. Since they had better level of education and more exposure in the financial dealings of SHGs, their level of awareness about the benefits of savings also was found to be high which is reflected in their higher degree of participation in saving schemes.

Larger share of the fisherwomen (59 per cent) participated in SHGs and they were invested an amount of ₹10 on weekly basis which extended up to ₹25 as recurring deposit. Value added fish producers had highest number of participants enrolled in SHGs (29 per cent) across the different occupational groups. SHGs played a great role among fisherwomen in triggering saving habits among them.

Next to SHG, *Kshamanidhi* (12 per cent) also played an important role in triggering saving habit among fisherwomen. Participation of fish vendors (31 per cent) and dry fish makers (28 per cent) in *Kshamanidhi* was also high in comparison with other groups. Each member has to pay an annual membership fee of ₹230 without any fail till the age of 60. After that they are eligible to receive monthly pension of ₹250 from *Matsyafed*. There is another scheme for a particular group of members of *Kshamanidhi* in which each one has to invest ₹75 on a monthly basis. In that they will get a relief fund of ₹1500 during the trawl ban period every year.

Financial borrowings were high among fisherwomen irrespective of the occupational groups. Self help groups and money lenders were the most popular sources which have high number of borrowers. 26 per cent of the total fisherwomen were borrowed money from SHGs. It was found that 21 per cent of the total borrowed amount by fisherwomen was from money lenders. Of the total amount borrowed from different financial institutions, commercial bank played an important role by contributing 29 per cent of the total amount of loan. The results clearly indicated that fisherwomen depend more on non institutional financial sources for borrowing money especially for small amounts, whereas they depend more on institutional sources for bigger amounts. Most of the respondents irrespective of their occupational groups, borrowed money primarily for their fish related business followed by personal consumption expenditure. Since the availability of loan for fishery related business purpose is comparatively easy, the number of borrowers was also high. Additionally *Matsyafed* is providing interest free loan to its members in order to help them to escape from the vicious circle of indebtedness.

It was found that 23 per cent of the fisherwomen borrowed money for their personal consumption. Across different occupational groups, borrowing by value added producer from different institutions was high due to their heavy financial requirement for storing, processing and marketing their products.

Highest per cent of fisherwomen having loan for house construction was from fish vendors (37 per cent) followed by dry fish makers (27 per cent). Expense on marriage of their girls was the next important purpose of borrowing among fisherwomen. It was found that 10 per cent of the total respondents has taken loan from different financial institutions for their daughters' marriage in which highest borrowers were from fish vendors (46 per cent) followed by fish retailers and dry fish makers (26 per cent each). It was observed that there was not even a single fisherwoman among retailers and vendors borrowed money for education purposes.

The highest level of gender discrimination faced by all the respondents across the four different occupational groups have seen in handling, transporting and storing of bulk

quantities of fish resources. Fish vendors and retailers were facing high discrimination in most of the economic activities compared to other groups as they have direct stake in all the economic activities compared to other groups.

Since the scale of business is small for fish vendors compared to retailer and dry fish maker they face more discrimination in economic activities especially in purchasing and selling of their products.

F. Social empowerment

Participation of fisherwomen in social events indicates their relationship and exposure to external social environment. In all social events *viz.* marriage functions, religious functions, village meetings, training programs and cultural programs participation of value added producers were high which is pointing to the fact that they were having more exposure to external social environment which could be possible due to their age profile, their exposure they got through their education, availability of free time after their work and compulsion being a member of nuclear family.

All the fisherwomen irrespective of the four different occupational groups were represented their family or community in marriage functions. It was observed that fish retailers were spending more time in their business compared to the fisherwomen from other occupational groups so that they could not participate in many of the social events of their family or community.

However, participation of fisherwomen in religious functions exhibited a similar pattern of distribution across the four occupational groups with an average number of 3 to 4 in a year. Participation in village meeting was high among value added fish producers and dry fish makers with an average number of 3.31 and 3 per year respectively. Age and educational profile of the value added fish producers and dry fish makers contributed to the higher level of participation in village meetings.

Value added fish producers and dry fish makers attended more training programs in comparison with other two groups. Training programmes helped them to acquire additional skills and knowledge for their business. The results clearly indicated that value added fish producers had more exposure to external social environment in comparison with other occupational groups.

Mobility of fish vendors (94 per cent) and fish retailers (93 per cent) were high which is in contrast to their exposure to social environment. Since they have started their business at a younger age and still continuing it even at the age of late 60s, they have

developed their own ways of purchasing, and marketing their products through their own experiences in the due course of time.

Great level of mutual co-operation could be seen among fisherwomen across the four different occupational categories. It was found that 87 per cent of the total respondents assisted each other either in cash, or in kind or by physical support. Even though the disposable income available to them was very low, highest per cent of the total population (44 per cent) helped others financially in their critical situations revealed their whole-heartedness. This pattern of distribution had a linkage with their level of income which is also reflected in the results.

Self help groups and co-operatives were the major networking institutions found among the fisherwomen irrespective of their four different occupational groups. Generally self help groups facilitated several positive changes among womenfolk in the areas of social, economic and political situations. A total of 71 per cent respondents were members of various SHGs across the four different occupational groups illustrate the influence of SHGs in the lives of fisherwomen.

Another 26 per cent of the total respondents were involved in co operatives across the different occupational groups in which more number of participants (43 per cent) were from fish vendors followed by fish retailers (26 per cent).

Greater share of the total respondents had membership in various networking institutions (73 per cent) in which highest number constituted by dry fish makers (29 per cent) followed by fish vendors (27 per cent) and fish retailers (25 per cent). 80 per cent of the fish retailers also remained as 'members' and the rest of the fisherwomen bearing major responsibilities in their networking organizations. On the contrary more number of value added fisherwomen (54 per cent) occupied various positions in their networking institutions which indicated their level of empowerment in taking up additional responsibilities.

The most important benefit attained by the respondent fisherwomen across the four occupational groups was financial benefit. It was found that 64 per cent of the total respondents were received financial help from their self help groups or *Matsya Thozhilai Kshemanidhi*. Self help groups helped the members to have their own savings, and enabled them to circulate their common pool resources (savings) among all the members as loan at times of their personal financial difficulty. Value added fish producers (43 per cent) gained most in terms of technical skills and knowledge followed by dry fish makers (34 per cent). Other major benefits obtained by the fisherwomen through networking institutions were social support, confidence, more knowledge and awareness on various subjects or issues, more contacts, sensitivity towards social issues and courage to take more initiatives. All these benefits were

mainly obtained by the respondents of value added fish producers due to their active participation in various networking institutions.

Decision making capacity of the fisherwomen in their day to day life has a direct linkage with their level of empowerment. Decision making capacity of the respondent fisherwomen among fish retailers and vendors was found to be high in various activities related to their day today life which include decisions about their religious activities, purchasing assets to home, choice of guest and entertainment at social functions, decisions on their daughters' marriage etc. All the respondent fisherwomen irrespective of different occupational groups have least role in decisions related to husband's job and his habits.

Fish vendors and fish retailers had more access to market related information such as market arrival information, prices of fish and fishery products, quantities of fish and fishery products etc than dry fish makers and value added fish producers as they were directly engaged in the purchasing of fish from market. Value added fish makers were having comparatively more access to the information resources such as knowledge about various government programs and subsidies, knowledge about capacity building programs, knowledge about credit and financial institutions, due to their higher involvement in networking institutions and their higher level of education than other respondents.

It was found that level of knowledge among value added fish producers in all the parameters related to health and nutritional aspects were high than that of other respondents due to their higher educational level compared with other respondents. Unlike past scenario consulting doctor during pregnancy has increased in Kerala not only among general community but also among fisherfolk which is mainly due to the improved awareness level resulted by higher education and influence of mass media. Age and educational profile of the respondents functioned as an important factor behind the high rate of health consultation among value added fish producers during pregnancy. It was found that 60 per cent of the value added fish producers were followed doctor's advice completely in the case of food and medicine intake during pregnancy followed by fish vendors (48 per cent) and dry fish makers (29 per cent).

G. Political empowerment

It was found that all the respondents irrespective of their occupational groups have voter identity card and registration. Majority of the total respondents (96 per cent) among the four occupational groups exercised their franchised as per their own choice. All the respondent fisherwomen were familiar about the voting age of women; however the number of fisherwomen contested in any election was very low with only two per

cent of the total respondents. Results showed that awareness and participation of fisherwomen in lower level political process was high across all the respondents.

It was found that 6 per cent of respondent fisherwomen had a significant role in the political institutions by holding various important positions which ranged between 4 to 14 per cent of the fisherwomen across the four different occupational groups. Among the total respondent fisherwomen 20 per cent of them were involved in political parties and 12 per cent involved in trade unions showed their strong affiliations towards political parties. There was no significant difference among the respondents across the four occupational groups in their participation in political institutions

Value added fish producers knew more about their elected representatives at various levels which could be due to their increased level of education and their outside exposure being members of social networking institutions.

Awareness about the name of their MPs and MLAs were comparatively low across all categories of the people. It was found that a total of 54 per cent of the total respondents were expressed their awareness on the name of MPs and 40 per cent were articulated their awareness about MLAs name.

Awareness about the name of Chief Minister (74 per cent) and Prime minister(65per cent) also high among the respondents across the different occupational groups. Influence of mass media played a greater role in the increased awareness level of fisherwomen regarding this. Since most of the respondents were associated with the schemes of fisheries department in one way or other, 64 per cent of the total respondents were aware about the name of fisheries minister in which highest level of awareness expressed by value added fish producers (88 per cent) followed by dry fish makers (65 per cent).

It was found that 33 per cent of the total respondents participated in political campaigns, inclusive of 38 per cent of the value added fish producer, 36 per cent of the dry fish makers, 30 per cent of the fish vendors and 28 per cent of the fish retailers. It is noticed that the level of participation of women folk in political discussions had a direct link with their level of education which is reflected among respondent fisherwomen. Highest participation in political discussion within their community and family was found among value added fish producers (26 per cent)

Discontent of the general public in the present political system was not at all prevented them from casting their votes in the election process at least among the respondent fisherwomen. Furthermore voting trend in Kerala illustrated that more people from the rural areas expressed their voting rights than the urban population. The results revealed that all the fisherwomen irrespective of their difference in occupational

pattern, exhibited higher level of participation in casting their votes in all the elections viz. local panchayath elections, assembly elections and parliament elections with a range of 97 per cent.

H. Legal empowerment

It was found that more number of police officers and lawyers were from the families of value added fish producers (18 per cent). The results portrayed that 96 per cent of the total respondent fisherwomen across the four different occupational groups were aware about the location of nearest police station. In contrast many of the respondents were not much aware about the location of women police station since the number of women police stations are less in comparison with general ones and it is located in town areas where they did not have much access.

With regard to the criminal /civil cases associated with the fisherwomen, more number of cases was reported among fish retailer and fish vendor with 12 per cent each. Nature of cases includes family and business related issues, still more issues were associated with fishery related business. Generally the issue of domestic violence is found to be more among traditional fisherwomen, which could be associated with the increased alcohol consumption among fishermen. However the number of reported cases might be low as many of women folk were not ready to reveal the situation to the public. Comparatively lower per cent of the fisherwomen faced domestic violence in their life among value added fish producers and dry fish makers with 12 and 10 per cent respectively. Here the knowledge about women rights in the event of divorce was high among value added fish producers (36 per cent). It was found that 30 to 34 per cent of the fish vendor, fish retailer and dry fish maker were not aware about both women rights and human rights.



THE WAY FORWARD

G.THE WAY FORWARD

The research study on 'empowering women through fish processing and marketing' focused on the level of empowerment namely social empowerment, economic empowerment, political empowerment and legal empowerment. The study has clearly indicated the following which requires policy interventions and institutional support.

Fish retailing and vending continues to be the major source of livelihood for the traditional fisherwomen community and practiced by medium and old age categories. Dry fish making and value added fish producing appears to be novel and done mostly as an entrepreneurial venture by fisherwomen of young and medium age group.

Considering the social standards it was found that education and literacy was less among fish retailers and fish vendors, whereas it is heartening to find collegiate and secondary educated fisherwomen involved in dry fish making and value added fish producing.

The earner dependent ratio which provides an understanding on the dynamics of income generation in households indicated that fish retailers and vendors constituted larger earner dependent ratio. The larger earner dependent ratios clearly spelt the growing importance of continuing business for fisherwomen.

The type of fish species traded by respondent fisherwomen varied based on availability, price of the fish, demand among the buyers, cash in hand, size of fish, quality, and quantum offered for sale, type of purchase etc. It was found that retailers and vendors handled more number of species due to their area of coverage and specificity of operations.

There was not much difference on the quantum of fish marketed across different occupational groups indicated that the form, place utilities are well integrated. The unit marketing cost incurred by the different occupational groups indicated that higher cost was incurred for dry fish makers and value added fish producers on account of transportation and storage cost.

Economic empowerment measured on the basis of income sharing, freedom on expenditure, sharing of expenditure, saving and borrowing pattern and discrimination on gender differentials. The results revealed that the retailers and vendors does not share their income much and also had increased freedom on expenditure. The household expenditure studies indicated an increased share of fisherwomen expenditure on providing necessities of life. The expenditure on assets among respondent fisherwomen indicated that mostly the expenditure was incurred on jewels and home appliances. The saving pattern inferred that self help groups constituted the major destination for savings.

Borrowing was mostly done through money lenders when compared to institutional and non institutional financing, which indicated the continuing importance of money lenders in fish business. The borrowing was mostly done for fishery related business and personal consumption purposes.

All the fisherwomen irrespective of their occupations faced gender discrimination in handling, transporting and storing of bulk quantities of fish resources and in their economic activities.

Social empowerment indicators were measured through participation in social events, mobility, networking, assistance, decision making capacity, access to information sources and health care facilities etc. It was found that across occupational groups the fisher women were socially empowered with mobility, support, sizable networking, involvement in the helm of affairs and decision making capacity. The fisherwomen across all groups were possessing adequate level of knowledge about health and nutritional aspects.

The political empowerment analysed in terms of participation in election process, membership in political organization, exercising franchise, awareness on the political system indicated substantially high level of empowerment in terms of awareness, registration, voting, possession of voters identity card and voting as per own choice. Even though politically oriented and inclined, membership in political institution was less.

The different occupational groups were legally empowered with family members involved in making law and order, and clear cut awareness on women and human rights.

Based on the inferences drawn from the study the following macro and micro level initiatives are to be taken to support women in fishing.

The following initiatives to be taken to support women in fishing communities

- Existing and successful women's groups should be enhanced by the creation of marketing-based trade associations structured on mutual cooperation and codependency. The sharing and distribution of essential market information, for example, production figures and cycles, price structures, consumer preferences etc., must be encouraged to the benefit of all concerned in the buying chain. Such associations can effectively provide self-financed market support services for their members to the greater benefit of the community as a whole. These benefits may be in the form of credit availability, stable food supplies and price structures, consumer education, market facilities, etc. In addition, successful trade associations can expand into other complimentary commodity areas or development activities, and serve as valuable and effective liaison with outside contacts or as a producer lobby tool. The success of women's participation in

trade associations should be furthered by free access to formal management and marketing skills, encouraged by available training.

- In the post harvest sector full recognition should be given to the traditional and existing roles of women like the handling and marketing of fish. Increased attention should be paid to choose local commercial and social factors which can either limit or enhance their expansion into aquaculture, for example, storage facilities, transportation systems, trading procedures, distribution networks, etc. The need for transportation systems and distribution networks, particularly the former, must be recognized as constraints in all fields of development for women.
- Education of women and their children- For the long-term investment in education and training, special consideration should be given to promote the idea of the non-traditional professions for girls.
- With reference to health care build-up holistic approach to women's health. Not just focusing on IMR and MMR but at all life stages, Nutrition: Nutrition of women must not just be linked to health of child, infants, but her own health and nutrition , drinking water and sanitation, housing, shelter and insurance, environment, science and technology, women and difficult circumstances, violence against women, rights of the girl child
- Financial institutions are to set aside funds as soft loans / grants for training and capability building of SHGs. There is a need to rationalize interest rates on micro credit by linking it with prime lending rate. Immediate attention is to be given for the expansion and extension of facilities and guidelines for SHGs for micro enterprise
- Develop gender sensitive database ensuring that censuses, surveys and other statistical operations by government bodies provide relevant data on the fishing communities with special emphasis on gender. (Like information on numbers of fishing households and population, economic activities of fishing household members, income, intra household disparities geographical and sectoral mobility, migration patterns, modalities of fishing and related operations, access to resources, status of resources, sustainability, social institutions, occupational and general health, concerns of the female and children labour force, databank based on activity and occupation profile, their contribution to socio-economic development as producers and workers in formal and informal sectors, as home based workers. Definition of fisherwomen: Reinterpretation and redefinition of conventional concept of work wherever necessary in the census records, national accounts to reflect women's contribution as producers and workers
- Social organizations, organization of groups, organizational skills in enterprise development and management, training, micro-enterprise development and

access to institutional credit, technology, capital requirement, education and other support; (Some examples are fish trading and processing, mussel and oyster culture, use of sea shells for manufacture of handicraft items, fishing with stationary fishing gear, etc. Non-fishery enterprises and activities may include retail stores, tailoring, salt making, goat rearing and similar activities, literate/graduate fisherwomen may be trained in the use of information technology and quality control and they can become service providers to the fishing community).

- Provision of financial support to enable women to undertake income-generating activities. Credit should be readily provided to women, especially those who have demonstrated the financial viability of their enterprises and a market for the increased production. Where necessary, assistance should be provided to undertake such analyses, as it is imperative that the enterprise is viable. Investments in capability building and training activities for those involved in microfinance provision and their clients
- For women's groups, identified priority areas include leadership development, financial and business management skills, entrepreneurship and vocational training in pre- and post-harvest activities that relate to alternative employment opportunities. For NGOs working with fishing communities, improved managerial capacity to scale up their work and strengthen marketing and other linkages are recommended.

Policy Implications

No nation can ignore fifty percent of its population and bring in social change and economic prosperity. To ensure rapid economic development, removal of gender imbalances should be established as a priority. This would mobilize the remaining fifty percent of the country's human resources and would result in the smooth movement of the economic wheel. Regular sharing of experiences between different agencies would help in breaking several barriers in addressing this complicated social issue. National policies should be resolute in tackling this issue and local bodies should ensure the implementation of these policies at the community level.

It is imperative that these approaches targeted towards women is conducted, so that appropriate interventions and policies changes are implemented, to ensure that women are not left out of mainstream development, and are accorded the basic rights, which all humans are entitled.

Entrepreneurship development programs and imparting changing attitudes, developing skill , training, new technical knowhow in areas where by supporting women-managed rural production and marketing ventures in aquaculture, horticulture, floriculture and post-harvest process

Develop programs for rural women to build leadership skills for managing agriculture and rural community-based development activities. Provide technology training and input support to women to take advantage of emerging high-value agri-business sector including bio-technology and forest products

- Quantifying the ergonomics of the women involved in agriculture and allied activities by generating the data and documenting the gender literature.
- Fixing target for bank branches for financing women, increasing lending and deposits, motivating, orienting, and sorting out problems for women borrowers in availing credit are to be initiated
- More governmental support mechanisms are required in income-generating projects for women especially in small-scale fisheries sector.
- Policies need to be framed for leasing out water bodies to fisherwomen, for viable and profitable ventures in line with what developed in countries like Bangladesh.
- Opportunities for women in fisheries could be enlarged in the field of integrated aquaculture, agribusiness consortia fishery estates, marine products development management of fishery infrastructure marketing and export as well as in research and technology development.
- There is a need to determine the economic contribution of women in order to enhance visibility there is a need for the sensitization of development organisations & staff towards – fisherwomen’s economic & financial needs.
- Improve the socioeconomic condition of the fisher folk especially the fisherwomen in terms of the pertinent areas of maternal health and nutrition care
- SHG formation, setting up of Mahila Rural Co-operative Banks, Women cell and collaboration and networking with NGOs etc are to be worked out

The suggested approaches may be successful for sustainable development, resource conservation and fisheries management.

Approach:

It has to be stressed here that women’s’ empowerment process must evolve a new understanding of power, and experiment ways of democratising and sharing power,

building new mechanisms for collective responsibility, decision making and accountability.

No one approach exists. Nonetheless, empowerment approach should intervene at the level of women's 'condition' or practical needs while also transforming their 'position' or strategic interests. Where, 'condition' is defined by the materials state in which women live (eg. wages, nutrition, health care and training) and 'position' is defined as the social and economic status of women as compared to that of men.

The three major identifiable methodological approaches to address issues of empowerment are:

- Consciousness raising and organizing
- Integrated development
- Economic empowerment

These are not mutually exclusive categories and are among the different interventions leading to empowerment.

Objective of the approach:

The approach discussed has the objective of bringing about the advancement, development and empowerment of women in fisheries in all spheres – political, economic, social, cultural and civil which ensures equal participation in decision making, equal access to women to health care, education, training and capacity development, employment, equal remuneration, occupational health and safety, etc.

- Strengthening legal systems aimed at elimination of all forms of discrimination against women, Changing societal attitudes and community practices by active participation and involvement of both men and women, Mainstreaming a gender perspective in the development process, Elimination of discrimination.
- Building and strengthening partnerships with public, private and community and civil society, particularly women's organizations
- Political empowerment: Legal Systems
- Encouraging changes in laws relating to ownership of boat, water resources etc.
- Decision Making - Equality in power sharing in fisheries bodies and active participation in decision making
- Mainstreaming a Gender Perspective in the Development Process- Ensuring mainstreaming of women's perspectives in all developmental processes

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ANNEXURE

**EMPOWERING WOMEN THROUGH FISH PROCESSING AND MARKETING IN TAMIL
NADU AND KERALA
Survey Questionnaire**

State District Block/Taluk Village

I. General Particulars of the Fisherwomen

1. Name of the Respondent :
2. Age :
3. Education : Illiterate / Primary/ Secondary/College
4. Marital status : Unmarried / Married / Widow
5. Family type : Nuclear / Joint
6. Religion : Hindu / Muslim / Christian
7. Caste : OC / BC / MBC / SC / ST
8. Occupation of Fishermen : Dry fish maker / Value added fish producer / Vendor / Retailer

II. Family Particulars of the Fisherwomen

S. No	Name of the Family Members	Age (Years)	Relationship to the Fisherwomen	Educational Status	Occupational Status
1.					
2.					
3.					
4.					
5.					
6.					
7.					

Code numbers:

Relationship to the Fisherwomen : Husband - 1; Son - 2; Daughter - 3; Brother - 4; Sister - 5; Parent - 6
Educational Status : Illiterate - 1; Primary - 2; Secondary - 3; Higher secondary - 4; Collegiate - 5
Occupational Status : Earners -1, Dependent-2

III. Income & Employment Details

S.No.	Occupation of the earner	Status of Employment	No. of Days/ Month	Mode of Earning	Monthly Pension / Old Age Benefits (Rs/month)

Code numbers:

Occupation of the earner : Government job -1; Private job -2; Own business -3; Daily wage labourer -4; Others -5

Status of employment : Permanent - 1, Temporary - 2

Mode of earning : Daily wage - 1, Monthly salary - 2

IV. Fish Species Handled by Fisherwomen

S.No	Types of Product	Name of the species
1.	Fresh fish	
2.	Dry fish	
3.	Processed products	
i.	Pickles	
ii.	Fish curry	
iii.	Fish ball	
iv.	Fish cutlet	
v.	Others (Specify)	

V. Details about the Income Generating Activities of the Fisherwomen

(Per week)

S. No.	Types of Product	Quantum of Marketing of Fish and Fishery Products						Transportation Cost (Rs.)	Storage Cost (Rs.)
		On the Site		Nearby Market		Distant Market			
		Qty (kg)	Value (Rs.)	Qty (kg)	Value (Rs.)	Qty (kg)	Value (Rs.)		
1.	Fresh fish								
2.	Dry fish								
3.	Processed products								
i.	Pickles								
ii.	Fish curry								
iii.	Fish ball								
iv.	Fish cutlet								
v.	Others (Specify)								

VI. Economic Empowerment Indicators of the Fisherwomen

1. Are you sharing the income with your husband? No / Partial / Full
2. Is there any freedom to spend your money for your parents? Yes / No
3. Details about their household assets and expenditure pattern (Rs. / year)

S.No.	Particulars	Amount Spent / Value	Share of Expenditure Incurred by Fisherwomen
I.	Household Consumption Expenditure		
1.	Expenditure on food items		
2.	Cloth		
3.	Education		
4.	Expenditure on Medicare and health		
5.	Buying gifts for social functions		
6.	Beverages / Liquor		
II.	Assets		
1.	Land		
i.	Own		
ii.	Leased in		
2.	House		
i.	Pakka		
ii.	Semi Pakka		
iii.	Kacha		
iv.	Huts		
3.	Jewells		
4.	Livestock		
i.	Cow		
ii.	Buffalo		
iii.	Goat / Sheep		
iv.	Bullock		
v.	Poultry		
vi.	Others (Specify)		
5.	Home appliances		
i.	Table/ Chair/ Bench / Stool		
ii.	Cot		
iii.	Almirah		
iv.	Radio / T.V. / Cable / DTH		
v.	Refrigerator		
vi.	Fan - Table/ ceiling		
vii.	Wet Grinder /Mixer grinder		
viii.	Kerosene stove /Gas Stove		
ix.	Cycle/ Bike		

x.	Telephone/Mobile		
xi.	Other (specify)		

4. Details about the Savings by Fisherwomen

S.No	Type of Institutions	Amount / Month (Rs.)	Type of Saving	From when (Month &Year)
1.	Commercial banks			
2.	Co-operative Banks			
3.	Post office			
4.	Others			

Code numbers:

Type of saving : Savings account -1; Recurring deposit -2; Fixed deposit -3; Gold -4; Informal savings -5
Others-6

5. Details about the Borrowing by Fisherwomen

S.No.	Type of Institutions	Purpose of Borrowing	Amount Borrowed (Rs.)	Rate of Interest (Rs.)	Amount Paid (Rs.)
1.	Commercial banks				
2.	Co-operative banks				
3.	Money lenders				
4.	Informal credit within villagers				
5.	Self Help Group (SHG)				
6.	Others				

Code numbers:

Purpose of borrowing : Personal consumption purpose -1; Fishery related business -2; Crop/Livestock loan-3; Education -4; Health -5; Emergency -6; Others-7

6. Time Spent for Household Activities by Fisherwomen

S.No	Type of Activities	Time Allocation (hrs / day)
1.	Cooking	
2.	Cleaning	
3.	Washing	
4.	Collection of fuel wood	
5.	Fetching of water	
6.	Child care	
7.	Elders' care	
8.	Entertainment	
9.	Leisure	
10.	Others (Specify)	

7. Details of Gender Differential / Discrimination in the Economic Activities of Fisherwomen

S. No.	Aspects	Level of Gender Differential / Discrimination		
		No	Little	More
1.	Purchasing prices of fish and fish products from the auction site / market			
2.	Selling price of fish and fishery products at markets			
3.	Timing of auction and its convenience			
4.	Equal participation in auctions			
5.	Bargaining power during auction			
6.	Difficulty in transportation of the products			
7.	Difficulty in storage of the products			
8.	Difficulty in handling the bulk quantities of fish and fishery products			
9.	Difficulty in having tie-up with sales agent / middlemen			
10.	Difficulty in getting credit			

VII. Social Empowerment Indicators of the Fisherwomen

1. Level of Participation/Organization in Social Occasions/Events by Fisherwomen (per year)

S. No.	Type of events	Total number of events attended by your family	No. of events attended by you
1.	Marriage / Birthday / Other family functions		
2.	Religious functions		
3.	Participation in village meetings		
4.	Participation in training and other programmes		

5.	Participation of the cultural programmes		
----	--	--	--

2. Do you move within and outside your residential locality freely? Yes / No

3. Have you helped others in critical situations? Emergency/Familyhealth/ Finance/ Legal/ Others (Specify)

4. Is there any networking among your fisherwomen community? Yes / No,
If Yes, whether Formal / Informal

S. No.	Type of the Organization	Name of the Organization	Month & Year of Joining	Position	Types of Benefits Obtained
1	Self Help Groups				
2	Mahila Mandal				
3	Co-operatives				
4	Others (Specify)				

Code numbers:

Position : SHG Animator -1, SHG representative-2, SHG Member-3, President-4, Vice-president-5, Ward member-6; Others-7.

Type of benefits obtained : Financial help-1; Technical knowledge-2; Physical / Mental / Health benefits-3; Social status-4; Others-5

5. Do you have any freedom to take decisions in home affairs? Yes / No
If yes, then

Details about Decision Making Ability of Fisherwomen

S. No.	Aspects	Level of Freedom		
		No	Little	More
1.	Family planning (Number of children / Abortions / Birth intervals)			
2.	Marriage decisions (especially for girls)			
3.	Children's education			
4.	Family health issues			
5.	Buying gifts for social functions			

6.	Religious events			
7.	Choice of guest and entertainment at social functions			
8.	Giving loan to others			
9.	Spending money to their relatives			
10.	Purchasing the assets to home			
11.	Decisions on the husband's job/Business			
12.	Suggestions on the husband's habits			
i.	Drinking alcohol			
ii.	Smoking cigarette			
iii.	Playing cards			
iv.	Others (Specify)			
13.	Others (Specify)			

6. Details about Access to Information Resources

S. No.	Types of Information	Level of Access		
		Low	Medium	High
1	Knowledge about Govt. programmes / subsidies			
2	Market arrival information			
3	Prices of fish and fishery products			
4	Quantities of fish and fishery products			
5	Access to the terminal markets			
6	Access to market associations			
7	Knowledge about the capacity building programmes			
8	Knowledge about credit and financial institutions			
9	Access to KVK / Village resource centres			
10	Gender differential in access to the above resources			

7. Level of Knowledge / Awareness about Health and Nutritional Aspects of Fisherwomen

S. No.	Aspects	Level of Knowledge		
		No	Partial	Full
1.	Early marriage of girls			
2.	Health care during pregnancy period			
3.	Minimum birth weight of the child			
4.	Infant / Maternal mortality			
5.	Vaccination for infants / children			
6.	Sexually transmitted diseases like HIV, etc.			
7.	Water-borne diseases			

8. Do you visit health clinics / doctors during pregnancy atleast 3 times? Yes / No

9. Do you take food and medicines as advised by doctors? No / Partial / Full

VIII. Political Empowerment Indicators of the Fisherwomen

1. Do you know the age of voting for women? Yes / No

2. Are you a registered voter? Yes / No

3. Do you have voter identity card? Yes / No

4. Have you voted in any elections? Yes / No

5. In which year have you first voted? -----

If yes, then

6. Details of voting in various elections, out of total number of elections held

(Number of elections)

Faced by You			Voted by You		
Local / Panchayat Election	Assembly Election	Parliament election	Local/ Panchayat Election	Assembly Election	Parliament Election

7. Have you ever contested for any position in village panchayat elections? Yes / No

If yes, then Number of times -----

8. Are you a member in any political party? Yes / No

9. Are you a member in any union / association? Yes / No

10. Have you participated in any political campaigning? Yes / No

11. Do you hold any political post? Yes / No

12. Do you know the name of your village Panchayat President? Yes / No

13. Do you know the name of your MLA? Yes / No

14. Do you know the name of your MP? Yes / No

15. Do you know the name of your Chief Minister? Yes / No

16. Do you know the name of our Prime Minister? Yes / No

17. Do you know the name of your Fishery Minister of the State Govt.? Yes / No

18. Do you vote as per your choice or your husband's wish?

My Choice / My husband's wish

19. Have you ever demanded for any facilities or development for your locality

from the Panchayat president / MLA / MP? Yes / No

20. Have you ever discussed about the political affairs within your fisherwomen

community / neighbors / family members? Yes / No

21. Whom do you feel is more powerful in our democratic system?

Yourself / Your political representative

IX. Legal Empowerment Indicators of the Fisherwomen

- | | |
|--|----------------|
| 1. Do you have any police officer in your family? | Yes / No |
| 2. Do you have any lawyer in your family? | Yes / No |
| 3. How much do you know about the women's rights in our society? | No/Little/More |
| 4. How much do you know about the human rights in our society? | No/Little/More |
| 5. Do you know where is your nearest police station located? | Yes / No |
| 6. Do you have the knowledge about women police station? | Yes / No |
| 7. Have you ever been convicted in any civil / criminal case? | Yes / No |
| 8. Have you ever sought legal assistance from outside to tackle any case in your family? | Yes / No |
| 9. Have you ever faced domestic violence in your family? | Yes / No |
| 10. Do you know the women's rights in the event of divorce? | Yes / No |

COMMERCIALLY TRADED FISH SPECIES IN KERALA



Popular English Name: Tuna
Vernacular Name: Chooru
Scientific Name: *Euthynnus affinis*



Popular English Name: LittleTuna
Vernacular Name: Kudutha
Scientific Name: *Auxis thazard*



Popular English Name: Trevallies/Carangid
Vernacular Name: Vatta
Scientific Name: *Decaptuers russelli* /
Caranx melampygus



Popular English Name: Indian mackerel
Vernacular Name: Ayila
Scientific Name: *Rastrelliger kanagurta*



Popular English Name: Anchovies
Vernacular Name: Kozhuva, Natholi
Scientific Name: *Stolephorus* sp.



Popular English Name: Oil sardine
Vernacular Name: Mathi, Chala
Scientific Name: *Sardinella longiceps*



Popular English Name: Soles
Vernacular Name: Manthal, Nangu
Scientific Name: *Cynoglossus macrostomus*



Popular English Name: Sharks
Vernacular Name: Sravu
Scientific Name: *Rhizoprionodon acutus*



Popular English Name: Threadfin beam
Vernacular Name: Kilimeen
Scientific Name: *Nemipterus japonicus*



Popular English Name: Seer Fish
Vernacular Name: Neimeen/Arkiah
Scientific Name: *Scomberomorus commerson*



Popular English Name: Pomfrets
Vernacular Name: Avoli
Scientific Name: *Parastromateus niger*



Popular English Name: Lizard Fish
Vernacular Name: Arana meen, Uluvachi
Scientific Name: *Saurida tumbil*



Popular English Name: Marine Cat fish
Vernacular Name: Koori
Scientific Name: *Tachysurus dussumieri*



Popular English Name: Croaker fish
Vernacular Name: Kuttan, Pallikora,
Scientific Name: *Johnieops dussumieri*



Popular English Name: Mullet
Vernacular Name: Kanambu, Thirutha
Scientific Name: *Mugil cephalus*



Popular English Name: White fish
Vernacular Name: Parava
Scientific Name: *Lactarius lactarius*



Popular English Name: Halfbeak / Full beak
Vernacular Name: Kolan
Scientific Name: *Hemiramphus sp.*



Popular English Name: Pearl spot
Vernacular Name: Karimeen
Scientific Name: *Etroplus sp.*



Popular English Name: Squid
Vernacular Name: Koonthal
Scientific Name: *Loligo duvauceli*



Popular English Name: Ray Fish
Vernacular Name: Therandy
Scientific Name: *Rhinoptera javanica*



Popular English Name: Prawn
Vernacular Name: Chemmen
Scientific Name: *Penaeus indicus*



Popular English Name: Pony fish
Vernacular Name: Mullan, Kurichil
Scientific Name: *Leiognathus dussumieri*



Popular English Name: Tilapia
Vernacular: Piloppy
Scientific Name: *Tilapia. Sp.*



Popular English Name: Mud Crab
Vernacular Name: Njandu
Scientific Name: *Scylla serrata*



Popular English Name: Cuttle Fish
Vernacular: Kallan Kanava
Scientific Name: *Sepia aculeata*



Popular English Name: Green Mussel
Vernacular Name: Kallumme kaya
Scientific Name: *Perna viridis*



Popular English Name: Edible Oyster
Vernacular: Muringa
Scientific Name: *Crassostrea madrasensis*



Popular English Name: Clam
Vernacular Name: Kakka
Scientific Name: *Meretrix meretrix*



Popular English Name: Ambassis
Vernacular: Chooda, Nandan
Scientific Name: *Ambassis vachelli*



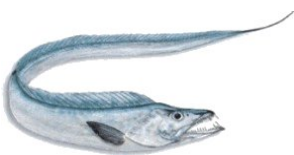
Popular English Name: Whip fin mojarra
Vernacular Name: Prayal
Scientific Name: *Gerres filamentosus*



Popular English Name: Pellona
Vernacular: Thody, Thada
Scientific Name: *Pellona ditchela*



Popular English Name: Malabar Thryssa
Vernacular Name: Manangu
Scientific Name: *Thryssa malabarica*



Popular English Name: Ribbon fish
Vernacular: Vala
Scientific Name: *Trichiurus lepturus*



Popular English Name: Spotted Butter Fish
Vernacular Name: Natchara
Scientific Name: *Scatophagus argus*



Popular English Name: Giant sea catfish
Vernacular Name: Etta
Scientific Name: *Arius thalassinus*



Popular English Name: White Sardine
Vernacular Name: Veloory
Scientific Name: *Escualosa thoracata*



Popular English Name: Emperor
Vernacular: Eri
Scientific Name: *Lethrinus* sp.



Popular English Name: Indian Flat head
Vernacular Name: Vettan
Scientific Name: *Platycephalus indicus*



Popular English Name: Fresh water cat fish
Vernacular Name: Bral
Scientific Name: *Channa striata*

