

# Hurdles in Human Resource Building: A Case Study with Reference to the Fishermen Folk in the Coastal Region of Kannur District



## REPORT OF THE MINOR PROJECT

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## **CERTIFICATE**

*This is to certify that the UGC Sponsored Minor Research Project Report entitled “Hurdles in Human Resource Building: A Case Study with reference to the Fishermen Folk in the Coastal Region of Kannur District” is a bonafide project work carried out by Dr. Devasia. M. D, Associate Professor and Head, Post Graduate Department of Economics, Nirmalagiri College, and no part of it, is produced to the award of any Degree or Fellowship.*

**PRINCIPAL**

**Nirmalagiri**

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**Dr. Devasia. M.D**

## 1. INTRODUCTION

The 'human resource building' as a strategy of economic development received attention owing to rising concern over the benefits of education and health that emanates on social and economic growth. The concept of human capital as a branch in economic theory has developed rapidly since 1960. Many studies have shown that human resource is the principal driving force behind rapid economic development and education and health is a crucial catalyst for that (*Blaug 1967; Becker 1975; Denison 1962; Schultz 1961; Griliches 1964; Foster 1987; Harbison 1973*). "There is in our time no well-educated literate population that is poor and there is no illiterate population other than poor" (*Galbraith 1994*). Education is the only way up and out of poverty. For a large segment of our population even with education life is difficult, but without education there is no hope at all (*Majumdar 1996*).

Schultz (1961) has developed and analyzed the concept of human capital, treating education and training as a form of investment producing future benefits via higher incomes, both for the educated and the society. Impact of education on occupational choice, employment, earnings, saving and consumption behaviour has been studied in various country contexts for different time periods (*Denison 1962; Grillichez and Mason 1972; Blaug 1974; Psacharopoulos 1987; Tilak 2001; Ramesh 1990; Clara 1998*). Minor deviations apart, all these studies agree that education influences income of the private individual and the public, quite significantly.

Health and Employment are two important and good indicators of human life. Good health care facilities are essential for creating healthy citizens and healthy society that can effectively contribute to better human resource development and thereby social and economic development. Amartya Sen (1984) defined poverty as lack of entitlements and capabilities. Entitlements refer to the set of alternative commodity bundles that a person can command in society using the totality of rights and opportunities that he or she faces. On the basis of this entitlement, a person can acquire some capabilities and he/she may fail to acquire some other capabilities. Capability is thus a kind of freedom, the substantive freedom to achieve alternative functioning combinations.

Increase in income translates directly into better health, nutrition and education for children. India's position on health parameters even compared to China and Srilanka, Bangladesh and Nepal continues to be unsatisfactory and poor (Economic Survey 2008-09). World Health Organization (WHO) in 1948 has given the definition of health as follows "Health is a state of complete physical, mental, and social well-being and not merely the absence of diseases or infirmity". Efficiency of workers depends considerably on their health. Workers whose health is not good and who fall sick quite often cannot do their job efficiently and thus there is bound to remain low. Improvement in the health of workers automatically raises the national output. World Development Report 1993 stated, "Improved health contributes to economic growth in four ways; it reduces production losses caused by worker illness, it permits the use of natural resources that had been totally or nearly inaccessible because of disease, it increased the enrollment of children in schools and makes them better and able to learn, and it frees for alternative uses recourses' that would otherwise have to be spent on treating illness. The economic gains are relatively greater for poor people, who are typically most handicapped by ill-health and who stand to gain the most from the development of underutilized natural resources."

Obviously, 'Health' is vital for human well-being. It contributes to the quality of life and enhances peoples' ability to enjoy life and relationships. In a knowledge economy, health is also a major contributor to economic growth. The state of health can affect the growth path of an economy through various channels. Healthier workers are more productive; they have higher learning capacity, efficiency, coping skills, and creativity. More specifically, health is a component of human capital, analogous to skill component.

Kerala has a long history of organised healthcare. Before the advent of European medicine, families of practitioners of indigenous systems like Ayurveda handed their traditions from generation to generation. A health unit incorporating many of the concepts of primary healthcare was also started in rural area. Development of health services was not confined to the provision of preventive care – The general hospital in Trivandrum and Cochin are about 150 years old. Development of health services was complimented by other parallel events. One indicator of the govt's commitment to health services provision is

the proportion of govt. expenditure. From the time of the state's formation, the govt's budget allocation for health was considerable. During 1985-86 to 1995-96, the proportion of govt. expenditure on health was maintained in spite of a large fiscal deficit.

Access to education, health and credit facilities is seen as a way of providing the poor with opportunities for self-reliance through entrepreneurship, cushioning the poor against economic shocks and providing a means of social empowerment. The proposed study will examine the major hurdles in the human resource building so as to improve the socio-economic status of fishermen and the attainment of inclusive growth with these marginalized sections, especially under the specific conditions prevailing in Kerala state.

## **2. THE BACKGROUND**

Indian Economy is basically an agro based rural oriented economy. Among this fishery is one of the prominent sectors. It's one of the most primitive occupations in the human history. Now a day, it emerged as a vibrant sector especially in UDCs. According to FAO the term fishery generally defined as 'People involved species or type of fish, area of water or seabed, method of fishing, class of boats, purpose of the activities or a combination of forgoing features'(FAO, Fisheries Department). Today fisheries and aquaculture occupied an important commercial activity. But very recently this sector witnessed with a changing consumption pattern, emerging market forces and technological developments that reflect a signal of transformation.

Fish Production in India enhanced from 0.752 million tonnes in 1950-51 to 9.58 million tonnes in 2013-14. The world production was 156.20 million tonnes in 2011-12 (Handbook of Fish Statistics 2014). Fisheries sector contributed to the National Income, Exports, Food and nutritional security for a large under privileged community in the country. Notably, the share of Agriculture and allied activities in National Income is on the decline. This makes some questions on diversification of the agricultural sector including fishing. The share of Fisheries sector in GDP is only 0.83% and the share of GDP from Agricultural sector is 4.75% (Handbook of Fish Statistics, 2014). More than 7

million people are supported with this sector for their livelihood. Obviously, the fisheries play a critical role in economy of rural India.

The informal and unofficial evidence reveals the fact that fishing communities are leading a low level literacy and schooling. Some are opined that a 'vicious circle of illiteracy' exists among the fisheries community and that is one of the major reason for its distress. Bane (2006) describes 'they (the fisherman) are poor because they are fisherman'. He argued fisheries as a synonym for poverty.

Fishing is one of the oldest employments of mankind and is a major occupation of the world. India ranks 7<sup>th</sup> place in the fish producing countries of the world. Fishing aquaculture and allied activities are reported to have provided livelihood to over 14 million persons in 2006 – 07 (17<sup>th</sup> livestock census 2003, Economic Survey 2008 – 09). According to CMFRI census 2010, the annual harvestable marine fishery potential within India's EEZ is estimated at 4.5 million tonnes. The present production is 4.2 million tonnes.

It is a major sector with regard to employment, livelihood, food security of more than 6 million of people and is a chief source of overseas trade and foreign exchange earning in India. According to an estimate, the fisheries sector contributed Rs. 22200/- crores to GDP, which is about 1.4 of total GDP (Subha Rao N, 1988; Joshy, 1997). The marine fisheries sector has grown into a major industry with a cumulative capital investment of around Rs. 3350 crores and a gross annual income of Rs. 8,000 crores according to Central Marine Fisheries Research Institute (CMFRI 2009). The Indian marine industry is one of the single major contributors of foreign exchange to the country.

Kerala is one of the leading marine states in India. It has a coast line of 590 km, which constitute 10 per cent of India's total coast line. The potential for fisheries resources in Kerala is 7.5 lakh tones comprising 5.7 lakh tones from inshore and 1.80 lakh from offshore and deep-sea fishing (Tessy and Soumya, 2006). Fishing has naturally been the major occupation of the inhabitants of its coastal area from time immemorial. Out of the 3638 fishing villages in the country, 222 are in Kerala. Similarly, of the 2251 fish landing centres in India,

226 are in the state. Kerala produces 1/5<sup>th</sup> of country's marine production. There were over 2.26 lakh fishermen in the state during the year 2000.

The importance of fisheries sector to the state is widely acknowledged. Its significance lies in three main areas, viz; 1) Source of animal protein for human consumption, 2) Provider of employment 3) Source of foreign exchange.

### **3. KERALA & THE FISHERIES SECTOR**

Kerala's labyrinthine coast of Arabian Sea, network of rivers, lagoons, mountain streams, lakes and backwater canals offer unlimited opportunities for fishing. What makes it all the more interesting is observing the various types of fishing techniques employed by locals – hand picking *kallumakai* (green mussels) from the river bed or farming them on coir, prying clams from rocky crags, crab fishing at night, fishermen casting fishing nets, boats returning with the day's catch or tribals catching small fish in bunds with bamboo traps; there's a lot going on in Kerala.

Kerala, the 'God's own country' is known for her ravishing beauty and hospitality nature. Lakes, rivers, ponds and lagoons supplement this argument along with the food habits especially fish as major menu. Out of 6000 km sea coast of India, Kerala has a coastal line of 589.5 km, which is about 10% of India's cost. The state is endowed with rich inland water bodies consisting of 44 rivers (having an area of 0.85 lacs ha), 30 major reservoirs (0.30 lakhs ha), fresh ponds and tanks (0.25 lacs ha), 45 backwater bodies and extensive brackish water area (2.43 lakh ha). But the inland fish production accounts for only about 11.06% of the total production. It has been found that the potential development of inland fisheries has not been tapped to the desired extend.

#### **3.1 Marine Fish/ Fisheries of Kerala**

The coast of Kerala constitutes approximately 10 per cent of India's total coastline which provide opportunities in traditional fishing in inshore waters from ages. The coastline of Kerala, considered as the Exclusive Economic Zone (EEZ) which extends up to 200 nautical miles far beyond the continental shelf

offers lucrative fishery. The Southwest coastal (SWC) has certain unique features that influence the fishery fluctuations of the important commercial species to a great extent. The area is subjected to two monsoons viz. the southwest monsoon (Edvapathi) and the north-east monsoon (Thulavarsham). The southwest monsoon coincides with the period of upwelling and phytoplankton bloom, which results in a large number of fish and crustaceans in the area. The maximum utilization of this continental shelf is only in 50m depth i.e., around 22 km from the coastline.

Kerala coast have major fisheries of the elasmobranches, cat fish, shrimps, cuttle fish, sardines, anchovilla, saurida & saurus, perches, sciaenids, mackerels, ribbon fish, seer fish, tunis, prawn, anchovies, soles, sharks, rays, etc. Kerala ranks first in marine fish production of India forming nearly 25% (average 5.75 lakh tonnes) of the total annual production. Currently the annual export of marine products from the state yields to the nation a foreign exchange of Rs. 1,100 crores.

### 3.2 Fishermen Population in Northern Coast of Kerala

The State has a fish worker population of about 7.7 lakhs. The density of population in the coastal area is 1307 persons per km<sup>2</sup>, whereas the state average is 859.

<b>Sl No</b>	<b>District</b>	<b>Coastal Length (Km)</b>	<b>Fishermen Population (*000)</b>	<b>Fishermen population per km<sup>2</sup></b>
<b>1</b>	Trivandrum	78	163.5	2096
<b>2</b>	Kollam	37	89.47	2418
<b>3</b>	Alappuzha	82	107.20	1307
<b>4</b>	Ernakulam	46	70.96	1543
<b>5</b>	Thrissur	54	70.95	1314
<b>6</b>	Malappuram	70	77.90	1113
<b>7</b>	Kozhikode	71	94.86	1336
<b>8</b>	Kannur	82	53.99	658

<b>9</b>	Kasargode	70	44.42	606
	<b>Total</b>	<b>590</b>	<b>771.25</b>	<b>1307</b>

**Source:** CMFRI (2009), Marine Fisheries Policy Brief -1, Kerala, Special publication No.100

Marine fishery has a prominent place in the economy of Kerala. It is the only source of livelihood of more than 8 lakh marine fishermen and out of this, more than two lakhs of active fisher folk are engaged in fishing along the coastline, who inhabit in 222 marine villages. The fisheries sector provides occupation to about 3.86 lakh people directly and much more indirectly, making it a significant employment providing sector of the State. Nearly 50% of the coastal length (i.e., 293 km) is in Northern Kerala stretching from Malappuram to Kasargod holding 3.5 lakh fishermen population (35.16%).

#### **4. THE PROBLEM OF STUDY**

In spite of the importance to the economy, the fishing sector has been facing severe problems like wide spread poverty, misery and poor working and living conditions of fisher folk. The fishing community in Kerala forms one of the most backward classes both socially and economically. Though literacy and education are the hall mark of the Kerala's social development, fishing communities lag in this respect. Their social status is very low. Many of the marine villages lack secure shelter, safe food, drinking water and sanitation facilities, which are the vital factors related to health. Most of the marine fishing villages are densely populated with the average size in a family exceeding the State average.

People, especially Keralites are so habituated to fish consumption and that no day of them passes without an item of fish or fish product. Consequently, the fish demand continues to keep its high position in all seasons of the year both in and outside the State. Hence, the price too remains steady at a high rate, as economic theory suggests. It is alleged that, this high price trend and demand in no way reflect in the income of the fishermen folk and so they live as poor or poorer.

It is argued that, fishing is not only seasonal but the output always subject to violent fluctuations too. Fishing is still an unorganized sector and hence it suffers from unscientific catching, processing and marketing. Indebtedness among them is a common feature. The fishermen are forced to depend upon numerous merchants and middlemen. There are wide channels of intermediaries between the fisherman and ultimate consumers. This has resulted in the lower income of fisherman and higher price to fish and fish products to the ultimate consumer.

Of course, Fishermen constitute the backbone of Kerala's fishing industry. The growth and development of this industry depends upon the social and economic well-being of the fishermen. The fishing community has largely been left out of the general development experiences of Kerala and remains marginalized over the years. Proper exploitation of rich fishery resources and abridging the living standards of the fishermen to that with the mainstream public is an important task in ensuring the maximum benefit to the society.

In short, certain issues coming up in this context are: Is there any alternative to stop the social and economic exploitation of fishermen community? Does the State government have any role in the rehabilitation of fishermen folk? What would be the future viable strategy in this regard? How to link fish harvesting and socio-economic status of fishermen? Thus, the present micro level study is an attempt to look into these important issues for suggesting solutions in uplifting the downtrodden sections of the community to garner the best.

## **5. THE OBJECTIVES OF THE STUDY**

Specific Objectives of the study are:

1. To examine the Economic, Educational and Health Status of fishermen and to highlight the problems of health and disease the fishermen face
2. To examine how the actions taken by the authorities are effective in helping the fishermen in eradicating social and economic disorder.
3. To make policy suggestions for improving the health, educational and economic conditions of fishermen.

## **6. THE METHODOLOGY OF THE STUDY**

The present study will be both analytical and descriptive based on primary as well as secondary data. The important sources of secondary data are Central Inland Fisheries Research Institute (CIFA), Central Marine Fisheries Research Institute, Directorate of Fisheries Trivandrum, Centre Marine Fisheries Institute (CMRFI, Cochin), Economic Review of State Planning Board, Govt. of Kerala; Statistics for Planning, Department of Economics and Statistics, Govt. of Kerala; World Development Report; Books, Journals, Magazines, Newspapers, etc.

To integrate the micro and macro aspect of the issues, the present study will resort to primary data and that may be collected through an extensive field work or sample surveys using structured interview schedules. This micro level study is conducted in coastal of Kannur District in Kerala. There are 5 fishermen villages (Kannur City, Thayyil & Azhikkode in Kannur Municipality, Chalil Gopalapetta & Kurichiyil in Thalassery) and 4400 households are living in these villages (Kerala Fisheries at a glance 2010, Directorate of Fisheries, Govt. of Kerala, Trivandrum).

### **6.1 Sample Design**

Primary data/ information were collected from the Fishermen Households and Government officials and experts, for which structured interview schedules/ questionnaires were used for each respondent. The sample respondents are selected using simple random method from the respective fishermen locality. The information related to the total number of households and average family size (6 persons) is obtained from the 'Matsyafed' offices in these localities.

Surveys are conducted at two stages. In the first stage, a pilot survey of 100 sample households from Group A are collected during May 2015 and analysed. Then the second stage data collection is conducted during August & December 2015. For data analysis, suitable qualitative and quantitative methods are used. In addition, the information is presented in charts, graphs and tables.

<b>Table 1.2: Sample Design</b>					
<b>Survey Region</b>			<b>No. of Respondents</b>		
<b>Municipality</b>	<b>Locality</b>	<b>Total Households</b>	<b>Pilot Survey</b>	<b>Second stage Survey</b>	<b>Total</b>
Kannur	Kannur City	468	20	40	60
	Thayyil	747	20	50	70
	Azhikkode	731	20	50	70
Thalassery	ChalilGopalapetta	1561	20	60	80
	Kurichiyil	886	20	50	70
<b>Total</b>		<b>4393</b>	<b>100</b>	<b>250</b>	<b>350</b> <b>(8%)</b>

## **7. BRIEF PROFILE OF THE STUDY AREAS**

### *a. Thayyil Fishing village*

This fisheries village is spread over two wards of Kannur Municipality. The coastal wards of this village are 29 and 30. The village has a total of 719 houses and 747 households.

### *b. Azhikode Kadapuram Fishing village*

This fisheries village is spread over nine wards of Azhikode Gram Panchayat. The coastal wards of this village are 1, 9, 10, 11, 14, 15, 19, 21 and 22. The village has a total of 699 houses and 731 households.

### *c. Kannur city Fishing village*

Kannur city fisheries village is spread over three wards of Kannur Municipality. The coastal wards of this village are 31, 33 and 39. The village has a total of 428 houses and 468 households.

### *d. Chalil Gopalapetta Fishing Village*

Chalil Gopalapetta fisheries village is spread over seven wards of Thalassery Municipality. The coastal wards of this village are 36, 39, 40, 41, 42, 44 and 45. The village has a total of 1535 houses and 1561 households.

### *e. Kurichiyil Fishing village*

This fisheries village is spread over three wards of Thalassery Municipality. The coastal wards of this village are 30, 32 and 35. The village has a total of 764 houses and 886 households.

## **8. SUMMARY & CONCLUSION**

Marine fishery is an important sector of the Indian economy supporting the livelihood of the millions of fisher-folk and those who are engaged in the related activities. The marine fisheries sector in India has witnessed a phenomenal growth during the last five decades both quantitatively and qualitatively. The marine fish production during 2009-10 was 3.07 million tones. The gross revenue from the catches at the point of first sales (landing centre) was estimated at Rs. 19,753 crores, and at the point of last sales (retail market), it was estimated as Rs. 28,511 crores (ICAR,2011). Export of Marine Products during April - March 2010-11 have achieved the US\$ 2.84 billion registering a growth of 18.96 % in quantity, 27.64 % in rupee value (MPEDA, 2011).

Today fish has become an important part of diet for millions of people throughout the world especially in the coastal regions. It is estimated that human population is presently increasing at approximately 2 per cent a year. Hence, the demand for fish and fish product are always on an increasing rate. The increase in marine fish production is the result of improvements in the harvesting methods, increase in the fishing effort and extension of fishing into relatively deeper regions. Fleet size and operations underwent quantitative and qualitative changes. Traditional boats are being increasingly motorized and the mechanized sector operating with trawlers and gill netters are resorting to multi-day fishing and thus, contributing to increased fishing pressure. The increased effort over time and space, is the consequence of ever-increasing demand for marine food both from external and internal markets. This phenomenal growth also brought in its wake imbalances in the exploitation across the regions and among the resources. Besides, with production levels for most of the commercially important resources showing signs of attaining saturation levels, inter-sector conflicts increased due to competition to exploit the common resource. It is also felt that intensive fishing by the mechanized sector and indiscriminate fishing of juveniles and tots has attained serious proportions. This has led to promulgation

of fishing regulatory measures by most of the maritime states through closure of fishing during certain seasons.

Kerala has 404 fishing villages and 222 landing centers. There are about 10.85 lakh marine fisher folk in the State of which, 2.2 lakh are active fishermen in the year 2004. The decline in numbers is due to many factors that affect the livelihood of the farmers. Exports of fishes from India have been showing a steadily increasing trend since 1980. The growth in motorisation and mechanisation of the crafts has contributed significantly to an increase in fish catches leading to increased volume of export of these items from our country. The high demand from foreign buyers, especially for prawns has resulted in an increase in exports, both in terms of volume and value. Despite, the glittering aspect of the fishing sector on the one side, the life of the contributors of the sector – the fishermen, are seriously pathetic. This study hence was conducted keeping in view the socio economic conditions of the marine fisheries farmers. The fishing community in Kerala forms one of the most backward classes both socially and economically. Though literacy and education are the hall mark of the Kerala's social development, fishing communities lag in this respect. Their social status is very low. Many of the marine villages lack secure shelter, safe food, drinking water and sanitation facilities, which are the vital factors related to health. Most of the marine fishing villages are densely populated with the average size in a family exceeding the State average. This micro level study is conducted in coastal of Kannur District in Kerala. There are 5 fishermen villages (Kannur City, Thayyil & Azhikkode in Kannur Municipality, Chalil Gopalapetta & Kurichiyil in Thalassery) and 4400 households are living in these villages (Kerala Fisheries at a glance 2010, Directorate of Fisheries, Govt. of Kerala, Trivandrum). In the preparation of this Project Report, researcher has perused a number of research works, studies and books that are already published relating to the study undertaken and that are detailed in chapter 2 of the present report. The researcher gained significant insights into the several aspects, dimensions, prospects and the labour conditions and problems of the fishing workers at various places and stages, so as to link it with the fisher-folk of the study area

### **The major observations of the study are**

- Still there are persons live homeless or living in pucca house covered by the sheets.
- As the living is in crowd, like slums, the surrounding is unhygienic and is always possible to get contaminated.
- Thanks to the blessing of sea and salty water, most respondents claim, that they are healthy and the intensity of chronic illness is absent among the inhabitants
- At present only very few follow the fishing profession as a hereditary one
- Many of them seek jobs outside fishing.
- Those engaged in other profession may often do the fishing activity in off-time especially in early morning and late evening, since whatever they earn outside the hereditary profession is insufficient to meet the daily living of the family.
- But now the children are discouraged to enter the field and the elders are being motivated to shift the profession and often migrating to Gulf countries.
- In their opinion, in the last 5 – 6 years the situation of fishing had worsened terribly. Day by day the problems are intensified and most of them are losing their confidence right now. Hardly 3 – 5 month's work they get in an year. The rest of time they remained unemployed.
- They firmly believe and argue that the recent entry of 'China Boat' is the main threat to their profession now. Only big players in the field can procure such boats and go for fishing day and night continuously for months. Besides, the 'Nets' used in these boats are such that even the most little fish can't escape. Consequently, disappearance and dislocation of fish resources is the terrific issue today.
- Deposition of waste from the city to the sea is another problem. Deposits of plastic waste along with human encroachments hinder the fish breeding and survival.
- The unhealthy competition among the fishing units for the limited fish resources has resulted in over capitalization of the sector and made

fishing a non-economic activity for poor fishermen. Introduction of larger fishing vessels with high powered engines and larger fishing gears have enhanced the initial installation cost considerably. The per capita investment on fishing implements per active fisher folk in motorized sector escalated from Rs.26,000/- in 2005 to Rs.98,000/- in 2011. But, net annual labour earnings per active fisher man for the same sector came down from Rs.50,491/-in 2005 to only Rs.16,520/- in 2013.

- The exploitation of fisher folk by the middlemen during auctioning is attributed as another major reason for their meager income. The fisherman could realize only 60% of the market value as the beach price, immediately on arrival of boat. The significant difference in the prices of fish at the beach and market indicates the depth of the involvement of intermediaries and middle-men.
- Better prices can be ensured by reducing the intermediaries. The fisheries co-operatives can play a major role in this regard. But, the fisheries cooperatives affiliated with Matsyafed manage only 10-12% of the fish catch for primary sale with the participation of 44,906 fishermen (2012-13) of 252 fisheries co-operatives. It can be observed that the fishing groups which have not taken loan from fisheries co-operatives is not participating in the auction conducted by them. It may be due to the collection of 5% auction commission of which 1% each is contributed to the auctioneer, fisheries co-operative society and Matsyafed and the remaining 2% as savings of the fisherman. The 1% contribution to Matsyafed may be discontinued by compensating it with special grant by the State Government for meeting their administrative cost. Besides, production bonus can be given to attract more fishermen in the auction system practiced through the fisheries cooperatives. To ensure more price realization to the fisher man, regulated fish auctioning and marketing can also be enforced by legislation.
- In a deprived or often marginalized community with meager income, the role played by women member in securing the livelihood of their family members is quite significant. It is also noticed that among a part of the fisher folk families, the fishermen will generally squander the money they earn on the same day itself forcing the women to run the family.

- Due to uncertainty and seasonal nature of occupation, poor income level and lack of money saving habits, fishermen are often obliged to borrow money for various purposes. Loan facilities are not availed to the illiterate fishermen from financial institutions due to lack of awareness, incapability of providing collateral security and inherent non-repayment characteristics. Hence, they depend on informal money lenders to meet day-to-day expenses at exorbitant rate of interest of 5-10% of daily catch. It leads them to lifelong indebtedness. Still, there is a practice of bonded labour system for obtaining debt from the owner of the fishing vessel by pledging their labour. If the fisherman owns a fishing unit by taking informal credit and fails to repay the amount, they are forced to mortgage the fishing implements to the creditor, the middlemen or sell off. Both middle man and educated fisherman enjoy loan facilities from banks and Cooperatives societies. Most of the fisherman incurred debt for the purchase of fishing implements and for housing.
- There are 780 fisheries cooperatives functioning in the State but lion share of the active fishermen are outside the institutional mechanism of fisheries co-operatives. Erosion of income as exorbitant interest worsens their life further.
- The fisher folk, by nature, don't save money and spent it on the same day itself by mismanagement and over expenditure. In the days of no catch, fisherman demands cash for alcohol from their wife. This may further lead to miserable situations at home and their children especially the school going, are often the victims of this domestic violence.
- Education is the foundation stone of human development and it shapes the individual to fit to be a member of the ever-changing modern society and is one of the main tools for socio-economic development. But, the education of fisher folk and their siblings are far below the state average
- Poor housing conditions, non- availability of safe drinking water, lack of total sanitation coverage, improper waste disposal, unscientific drainage systems etc. adversely affect the health of the fisher folk. Persons having the age of 60 and above just constitute only 6.19% indicating the lesser longevity of the fisher folk.

- Occurrence of food poisoning and other contagious diseases are more frequent in coastal areas. It is due to disposal of human excreta as carelessly as possible; defecation takes place in the open fields or surface waters including sea. Again, the coastal environment gets polluted with the waste carried away from the upstream as well as that thrown into the sea shore. Nowadays, it is quite common to see that most of the beaches and coastal waters are heavily polluted with solid waste including plastic materials. In the coastal area, there is no effective functioning mechanism for management of the solid waste.
- Most of the drinking water projects commissioned for coastal areas is even not functioning well. In some places, capacity of pumping station and overhead tank is seen as not compatible with respect to quantity of water demanded by the project area. In some cases, old pipe lines aren't in a position to withstand higher water pressure. Lack of servicing the motor pumps is also a major reason for the failure of the project. Jalanidhi project failed in the coastal area, since the operation and maintenance has to be met by the user community. In a few fishing village, rain water harvesting project has been introduced, but due to mismanagement and people's skeptic perception on its quality, it is not in working condition.
- Manpower building in any community depends on its achievements in socio-economic indicators, viz; per capita income, educational attainment, employment, standard of living, life expectancy and satisfactory ratings in the so called indexes HDI, HPI, PQLI, etc. From the foregoing observations and discussions, the present study made an attempt to compute the HDI with respect to the fisher folk in the region. The HDI value thus obtained (0.735) is comparable to Kerala state (0.790 with rank 1, in 2011) and all India total (0.609 with 130 rank in 2015). Obviously, this high rate of HDI is due to their higher life expectancy and absence of chronic and contagious diseases, due to their closeness with salty water near sea shore.
- Fishermen the hardest working people in the primary production sector of our economy, are the worst prone to many natural and other calamities. Their work place, the sea, provides the most dangerous

conditions to work in. Being the poorest among the poor they cannot afford to have social security measures on their own. Obviously, they live in very poor conditions and works in dangerous work situation.

- The study could understand that (see chapter 4) there are a lot of welfare schemes and programmes launched by Govt. and fisheries development departments from time to time to the upliftment of the fisher folk, the so called marginalised section in the society. But still, the socio-economic condition of these poor groups is backward. The present study from the interaction with the members of the community and analysis could understand that, the main issue is not because of the lack of welfare programmes, but the problem lies in its implementation. The benefits are not reaching to the needy or to the actual downtrodden sections in the community.
- In short, the manpower status of the so called fisher-folk is far behind the State average.

## **RECOMMENDATIONS**

- Welfare programmes, that are active now for the up-liftment of the fisher should be effectively implemented. It should be ensured that the benefits reach to the real needy or to the actual downtrodden sections in the community. Thus, there must be fresh look at each of the current and active schemes and the way they are being implemented, so as to revamp the socio economic conditions of the fisher and to garner the best out the potential group, deliberately.
- Better price can be ensured by establishing chilled storage facility at all fish landing centres and by reducing the intermediaries in the marketing chain. Fish auctioning and marketing may be regulated
- Sea-wall repairing, cleaning of beaches, planting mangroves/trees for shore protection, reclamation of ponds and formation of bunds can be included under NREGS to provide supplementary income to fisher folk

- The excess workforce in the fishery sector can be diversified for alternate livelihood activities (auxiliary works related fish and fisheries, etc.) after providing skill training with capital assistance.
- Microenterprise activities in allied fisheries activities should be encouraged
- Proper scaffolding should be given to the fisherwomen who are presently idle and equipping them to undertake alternate livelihood opportunities.
- The cooperatives have to be strengthened by bringing all the active fishermen under its umbrella and it should be capable of meeting the credit needs of fisherman.
- Initiate awareness programmes to change the attitude of fishermen about the pattern of saving and expenditure
- Programmes should be addressed at the grass root level to liberate the fishermen from the habit of alcoholism/un-authorized drugs.
- Effective strategies should be taken to ensure 100% enrolment for education at the age of 5 plus and arrest dropouts at least up to the higher secondary level and the community should be made aware about chances of socio-economic development through education
- Study centers for the students of fisher folk should be established so that proper and effective study habits are developed and educational interest maintained with the help of extension staff
- Ensure adequate manpower and infrastructure to Government health centers
- Each fishing village should at least have a health sub center
- Health insurance scheme should be facilitated to the fishermen with tie up with super specialty hospitals
- Conduct of health awareness program and medical camps along with continuous follow-up
- Financial assistance to fisherman may be given to construct new houses
- Total sanitation program may be implemented for coastal area with a consolidated effort to construct public comfort stations and household latrines

- Comprehensive drinking water projects shall be implemented including the establishment of desalination plant to resolve drinking water problem
- Ensure insurance for fishing implements.
- The scheme implementation shall be focused on fishing village rather than revenue village or Panchayath.
- The mode of fishermen registration shall be reviewed and should formulate a more transparent procedure to prevent erosion of Government assistance.
- Family card can be prepared for all fisherman family after conducting a comprehensive survey.
- Training in CIFNET (CMFRI related to fish harvesting, fishing technology and fish marketing, etc. has to be enhanced and be given to new generation of fisher folk with priority.
- The fisher folk, by nature, don't save money and spent it on the same day itself by mismanagement and over expenditure. Erosion of income can be prevented by promoting money saving habit. Saving-cum-Relief scheme is being implemented to enhance saving habits of fisherman which would make them confident in repaying the loans and also serve as a reserve in the lean season.

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