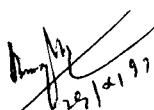


**SOCIO-ECONOMIC STATUS OF  
TRADITIONAL FISHERFOLK IN KERALA - A STUDY  
IN THIRUVANANTHAPURAM DISTRICT**

A handwritten signature in black ink, followed by the date '20/11/97' written below it.

By

**JINRAJ. P. V.**

**THESIS  
SUBMITTED IN PARTIAL FULFILMENT OF THE REQUIREMENT FOR  
THE DEGREE  
MASTER OF SCIENCE IN AGRICULTURE  
(AGRICULTURAL ECONOMICS)  
FACULTY OF AGRICULTURE  
KERALA AGRICULTURAL UNIVERSITY**

**DEPARTMENT OF AGRICULTURAL ECONOMICS  
COLLEGE OF AGRICULTURE  
VELLAYANI  
THIRUVANANTHAPURAM  
1997**

## DECLARATION

I hereby declare that this thesis entitled "**Socio-economic status of Traditional fisherfolk in kerala - A Study in Thiruvananthapuram district**" is a bonafide record of research work done by me during the course of research and that the thesis has not previously formed the basis for the award of any degree, diploma, associateship, fellowship or other similar title, of any other university or society.

Vellayani,  
19 - 7 - 1997.




JINRAJ. P. V.

## CERTIFICATE

Certified that this thesis entitled "**Socio-economic status of Traditional fisherfolk in kerala - A Study in Thiruvananthapuram district**" is a record of research work done independently by Mr. JINRAJ. P. V, under my guidance and supervision and that it has not previously formed the basis for the award of any degree, fellowship or associateship to him.

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19 - 7 - 1997

  
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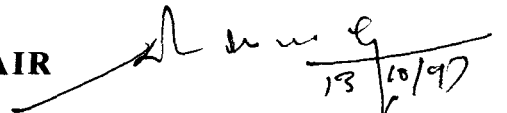
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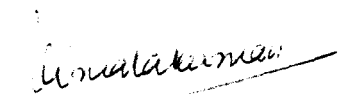
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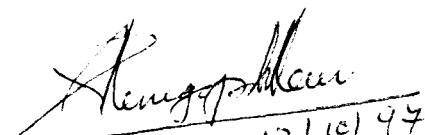
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# **INTRODUCTION**

## 1. INTRODUCTION

Kerala, located in the southern part of the Indian subcontinent has a narrow stretch of land with a long coast line on the western side. With its 590 km-long coast line, it enjoys one of world's most productive seas bordering it and produces an average of about 26% of India's actual marine fish landings. The total marine fish landings in Kerala stand at about 5.68 lakh tonnes ( Government of Kerala, 1995 ).

The state is blessed with abundant and productive riverine, lacustrine and marine water resources. Fish and fisheries play an important role in the economic, social and cultural life of the people of the state. The fisheries sector contributes about two per cent of the state's income, and provides the primary source of livelihood for about three per cent of the state's population who are involved in the harvesting, processing and distribution of fish and fishery products. Fish is an important source of good quality protein and constitute about 70 per cent of the percapita animal protein intake in the state. Fish consumption in Kerala is about four times the national average. Currently the export of marine products from the state yields to the nation a foreign exchange of 12 million rupees every day which is one fourth of the total export earnings of the state.

As per the 1995 estimate, the marine fisherman population stood at 7.69 lakhs (Government of Kerala , 1995). A study conducted by James *et al* . (1991) indicated that the fisherman population of records an annual growth rate of 0.3%. There are 222 fishing villages

in the state. On an average there are 730 active fishermen in these villages. The fishing area per fisherman within the inshore sea of Kerala is only 10 ha as against the national average of 37 ha (State Planning Board, Kerala, 1993 ).

Over the years fishing in the state has undergone tremendous changes particularly in the technology used. From an activity confined to traditional fishermen, it has emerged as a capital intensive industry. Motorised fishing was started in Kerala in the mid-fifties, which considerably reduced the stress and strain of traditional marine fishing. By the early seventies the production of marine fish showed a substantial increase, resulting in the overall development of infrastructure facilities, including roads and transport facilities. A number of auxiliary establishments came up which gave immense employment potential to the fisherfolk community.

But the period after the 70s witnessed a fall in marine fish production accompanied by increased investments. The use of motorised structures like the Out Board Engine became wide spread resulting in greater energy cost but without commensurate returns. The fall in productivity, increased economic cost and reduced income resulted in an exacerbation of the social tensions in the sector. The situation became worse during the seventies and eighties with the widespread emergence of mechanical trawling and deep sea fishing, resulting in a conflict between traditional fishermen and trawler operators. In this context, the Kerala Government imposed a partial ban on trawling during the monsoon season. In spite of such measures, the issue still prevailing and further, the emergence of foreign trawlers after the opening up of the seas as a result of liberalisation has intensified the grievances of the traditional fisherfolk.

### **1.1 Objectives of the study**

1. To understand the present socio-economic status of traditional fisherfolk in Kerala with particular emphasis on the income and expenditure pattern of the community concerned.
2. To analyse the levels of living of the fisherfolk with respect to food intake, shelter, educational status and sanitary conditions.

### **1.2 Need of the study**

The inequitable distribution of income and the consequent widening of the gap between the rich and the poor in the marine fisheries sector has been topic of debate among planners and social scientists. It is argued that the intensive mechanisation programme has even deprived the traditional fishermen of their legitimate claim to fishing in the near shore area. There are also frequent conflicts between the mechanised and traditional fishermen over their fishing rights. Hence in the planning and management of the fisheries sector, greater attention has to be given to the social and economic aspects. Lack of primary data and information has been one of the most serious drawbacks preventing an effective policy making especially in the case of small scale fisheries. It is in this context that the present study was undertaken to analyse the socio- economic status of traditional fisherfolk in two fishing villages.

### **1.3 Scope of the study**

The body of knowledge generated through the study would help the policy makers to streamline various welfare measures to

improve the living conditions of the fisherfolk. It would also help to evaluate the impact of various schemes and projects implemented by the state for their benefit. Above all the insights and inferences that can be drawn from the study could be used for understanding similar marginalised communities like the tribals in the state.

#### **1.4 Limitations of the study**

Due to limited time and resources it was not possible to conduct this study in all parts of the state. As this study forms only a part of the Msc. (Ag) project, the respondents were selected only from two villages of Thiruvananthapuram district. These limitations might have narrowed down the scope of generalisation of the results. Since this study is based on the expressed opinions of the respondents, it may not be free from personal biases, Despite these limitations much care has been taken to make the study as objective as possible.

# **REVIEW OF LITERATURE**



## 2. REVIEW OF LITERATURE

A review of literature is meant to provide a better insight in to the different aspects of the topic being discussed. This includes a better understanding of different terminologies, concepts and ideas frequently discussed in the work. A detailed study of previous works conducted in this field has also been included in this chapter which will be helpful in clearly understanding the essence of the topic and for a better interpretation of the results. It also provides a base for evaluating one's research by comparing it with relative efforts of the others.

The review of past studies has been presented under the following sub-titles.

1. Demographic profile of fishermen community.
2. Fishermen households.
3. Family size.
4. Literacy.
5. Employment status.
6. Ownership of craft and gears.
7. Income.
8. Expenditure pattern.
9. Credit and indebtedness.
10. Housing conditions.
11. Nutritional status.
12. Information source utilisation and social participation.

## 2. 1. Demographic profile of the fishermen community.

Different scientists have studied the demographic profiles of the fisherfolk community and some of the relevant studies are reviewed below.

Kurien (1980) found that there were 1800 fishing villages in India, with about one million traditional fishermen who account for 65 per cent of the total marine fish production.

Taib *et al.* (1982) have conducted a preliminary analysis of the socio-economic status of the coastal population in three areas of the Trenggonu region. The study revealed that poverty in the coastal region was mainly due to the competition between population pressure on the one hand and technological progress and opening up of new lands on the other.

According to Sehara *et al.* (1986) fishing was mostly carried out by tribal communities in Maharashtra where as in Gujarat it was an occupation of the other backward communities (OBC).

A study conducted by Sathiadas and Panikkar (1989) revealed that about 95 per cent of the fisherman households belonged to the Pattinaver community, the others being harijans, Telugu, Naidus and Christian Maneuver communities.

Alagaraja (1987) reported that the fisherfolk population of Lakshadweep was 10700. Among them 3900 were adult males and 3000 were females.

Dharmaraj *et al.* (1987) reported that the total fisherman population along the coast of Tamil Nadu was 3.96 lakhs and 25 per cent of this population are located in Kanyakumari district.

According to James *et al.* (1991) the projection of the fisherman population in Kerala during 1990 was 66,100 the annual growth rate of the population being 0.3 per cent. The number of active fishermen formed 22.74 per cent and fishermen in the productive age group 53.74 per cent.

## 2. 2 Fishermen household

Prabhakaran (1978) defined a fishermen household as one which consists of a group of persons living together, pooling their income together, taking the principal meals from a common kitchen, and whose major source of income was from fishing.

Sathiadas and Venkataraman (1981) defined fishermen households as those where in at least one member of the family was engaged either in fishing or in activities related to fishing.

Sehara *et al.* (1986) defined a fishermen family as a family having at least one member engaged either in fishing or fishery allied activities with the members sharing meals from one kitchen.

Sathiadas and Panikkar (1989) defined a fishermen household as any household wherein atleast one member of the family was engaged either in active fishing or fishery related activities.

## 2. 3 Family size

Sreenath *et al.* (1978) observed that due to the increased size of fisherfolk families, the per capita income decreased, resulting in a decreased spending of money on food, clothing, education and recreation.

Sathiadas and Panikkar (1989) revealed that in Orissa State the size of the fisherfolk family ranged from 5.5 in Haripur to 8.2 in Kushabanti. The average size of family of all beneficiaries worked out to be 6.7. Of this, workers / earning members were only 1.7 per family.

Nalini Nayik (1993) reported that in south Kerala, the family was generally nuclear. The joint family which was predominant in north Kerala showed signs of gradual disintegration. The age at marriage seemed to be consistently low. While Jacob Mani (1995) noticed that the average size of fisherfolk households in Kerala was 6.41.

Unnikrishnan (1994) reported that the majority of the agricultural labourer households in Thiruvananthapuram district were of nuclear type and the family size ranged from one to eight persons with an average of four.

#### 2.4 Literacy

Sister Anne Felce (1980) felt that the fishermen community was educationally marginalised because of their low literacy rate. The reason for the low literacy rate was found to be the involvement of children in fisheries related activities at their school-going age itself.

Taib *et al.* (1982) have reported that since a vast majority of the people were illiterate or semiliterate, they had only limited entrepreneurial skills and little technical knowledge to enable them to participate in the economic activities of the society.

According to Sehara *et al.* (1986), of the fishermen population in Ekdasa in Maharashtra, 60% were illiterate. Persons with

primary, middle, higher secondary education and graduates were 31 per cent, four per cent, four percent and one per cent respectively.

A socio-economic study of two selected villages on the Madras coast conducted by Sathiadas and Panikkar in 1989 revealed that about 67 per cent of the fishermen at Pudumanikuppam and 40 per cent in Thiruvottiyoorkuppam were illiterates. Among the literates at Pudumanikuppam 38 per cent each had primary and secondary education and 24 per cent had higher secondary education and at Thiruvottiyoorkuppam 48 per cent had primary education, 45 per cent had secondary and seven per cent had higher secondary education.

Jessy Thomas (1989) concluded that education did not have much of a direct influence on the skills of those engaged in fishing related activities. But to a certain extent education had an indirect influence on their fishing practices. Owing to their low educational standards, majority of them had to restrict themselves to fishing and related activities irrespective of the level of earnings from them.

Panikkar (1990) found that the percentage literacy of prawn farmers in Orissa ranged from 21 per cent to 71.3 per cent. The average literacy level was comparatively higher than that of Orissa State. However among the children below the age of 14, only 17 percent were school-going.

Jancy Gupta (1991) felt that possession of outboard engine, extension participation, and credit utilization had a substantial indirect effect on educational status. It in turn determined a higher level of aspirations.

Nalini Nayik (1993) revealed that 98 per cent of fisherfolk children of school-going age were admitted to school. But there were

drop-outs even at the lower primary level owing to poor family circumstances. It was also established that a majority of the children who had attended the schools in the coastal areas did not know how to read and write.

## 2.5 Employment status

Vasanthakumar *et al.* (1987) found that about 4.64 lakhs of fishermen depended on fishing for their livelihood in Tamil Nadu. The fishery employed about 90 per cent of fishermen and 20 per cent of fisherwomen.

Veeraputhiran (1988) reported that fishing provided direct employment to about 1.8 million fishermen, 0.9 million being engaged in fishing and fish seed collection and the rest in related activities such as fish-curing and marketing.

According to Krishna (1988) 57 per cent of the fishermen families in Cochin were engaged in marine fishing and the rest were engaged in other activities related to fishing, like transporting and post harvest operations.

Sathiadas and Panikkar (1989) stated that in the fishermen community the ratio between earning members and dependents was approximately 1:3 at the Pudumanikuppam village in Tamil Nadu. It was observed that out of those employed, 59 per cent had active fishing as their occupation. Among those employed in fishery-related activities, fish traders formed the majority. About six per cent were employed in other sectors like service, business etc. The wage earners were under employed as the kattamaram owners did not engage them during the lean seasons.

Panikkar (1990) established that the percentage of workers to total population of prawn farmers in Orissa ranged from 16.4 to 30.4, where as the percentage of working population to the total adults ranged from 31 to 51. The percentage of working population was maximum at Mudiratha, where literacy was at the lowest level. The proportion of workers to non-workers in a family was almost 1:4.

The study conducted by Nalini Nayik (1993) concluded that fishing basically remained a traditional activity with no significant entry of labour from outside. Lack of awareness of other employment opportunities compelled fish workers to remain in the fishery sector.

## 2.6 Ownership of craft and gears

Balasubramanian and Kaul (1985) showed that investments on the outboard engine, which was considered a progressive trend among fishermen, had a negative correlation with the adoption index as the heavy investment was found to retard their desire for innovation. Investments on the out board engine, being very high, were usually met with the help of credit availed from various credit agencies.

Vasanthakumar *et al.* (1987) reported that about 54 per cent of fishermen households in Tamil Nadu owned gears and 42 per cent of the households owned crafts.

Sathiadas and Panikkar (1989) reported that about fifty five per cent of the households at Thiruvottiyoorkuppam and 16 per cent at Pudumanikuppam in Tamil Nadu owned crafts and gears. Among the fishermen families possessing various means of production such as boats, engines and nets, 21 per cent at Pudumanikuppam either a gear alone or only a kattamaram. About 67 per cent of the owners in Pudumanikuppam and 78 per cent in Thiruvottiyoorkuppam possessed

one or two type of nets alone which were not sufficient for effective operation through out the year.

James (1991) found that the fishermen of Alappuzha, Eranakulam and Kollam districts were credited with initiative and had adopted motorised fishing on a large scale. The number of out-board engines had increased to about 10 000 during 1991 from about 50 during 1979-80.

The Fisheries Research Cell (1991) found that motorisation had created conditions where in the surviving non-motorised units were forced to concentrate on the shallow waters near the shore which created a further fishing pressure on these waters.

According to the study conducted by the Kerala State Planning Board during 1993, two thirds of the volume of marine fish production was harvested by the 30,000 motorised and non-motorised crafts manned by over 1,20,000 fishermen, largely owner-workers, from the traditional fishing communities.

Sathiadas *et al.* (1994) revealed that even though several source specific gill nets are required for marine fishing through out the year depending upon the seasonal availability of different varieties of fish for realising better economic returns, about 75 per cent of fishermen with kattamaram could not operate their units effectively all year-round due to lack of sufficient nets. Only 26 per cent of kattamaram owners had more than three types of nets.

## 2.7 Income

The National Council of Applied Economic Research (1991) defined the income of a household as the earnings both in cash and kind that has accrued to and been realised by the members of the households during the reference period.



Venkatesware Rao (1982) revealed that there was no relationship between income and family size. But wide variations were observed in the income levels of different farm families.

According to Leela (1988) the average income of a fishermen household in the Narakkal and Kandakadavu Villages ranged from Rs. 5 000/- to Rs. 8 000/- per annum.

Sathiadas and Panikkar (1989) reported that the average annual income of a fishermen household was Rs. 7 600/- at Pudumanikuppam and Rs. 4 500 /- at Thiruvittiyoorkuppam and that the per capita income was Rs. 1 417/- in the former and Rs. 837/- in the latter.

Gopakumar *et al.* (1991) found that the income obtained per trip by the owner of a motorised craft was about four times higher than that realised by the owners of the non-motorised boats and that of crew in the former was three times higher than the income earned by their counterparts in non-mechanised crafts. The better returns of mechanised crafts was mainly because of the higher price fetched by the quality fishes.

Sathiadas *et al.* (1994) revealed that the majority of the fishermen households along the Thanjavoor coast with fishing as their major occupation earned an annual income in the range of Rs. 5 000/- to Rs. 15 000/- and the per capita income was Rs. 1 861/-. The households engaged in fishery-related activities as their main occupation earned less than Rs. 5 000/- per annum; the low annual income from fishery related activities was mainly due to their seasonal nature.

## 2.8 Expenditure Pattern

Sankar (1985) stated that consumption expenditure comprises all expenditure incurred by the households exclusively on domestic account including consumption out of home-grown produce, gifts, loans, wages received in kind etc.

Venkateswara Rao (1982) reported that the expenditure on protein-rich food items like fish, meat and milk was found to be positively associated with the size of holding and gross income of families. But expenditure on food per adult unit did not show much difference among income groups and holding size groups except in the case of higher income group and large holding groups.

Sathiadas and Panikkar (1989) analysed the expenditure pattern of fishermen families in Thiruvottiyoorkuppam and Pudumanikuppam and reported that about 64 to 67 per cent of the household expenditure of the former and about 56 to 57 per cent of the household expenditure of the latter was on food. The annual household expenditure was Rs. 7,617/- and Rs. 6,342/- for families of kattamaram owners; Rs. 5,540/- and Rs. 4,082/- for wage earners and Rs. 5,886/- and Rs. 4,324/- for families engaged in allied activities in Pudumanikuppam and Thiruvottiyoorkuppam respectively. The expenditure incurred for purposes of education and health care was the least among the household expenditure.

Nalini Nayik (1993) concluded that consumption expenditure exceeded income in the case of most workers. Only 12 per cent of the total sample had an income slightly higher than their expenditure. There were wide fluctuations in consumption expenditure every season, which indicated that income had a direct influence on consumption. The

majority of the workers in the fishermen community could not meet the basic standard of calorific requirements.

Karuna (1993) reported that the expenditure of fishermen families on education and health was very low. Male members of the fisherfolk family spent much money for their faulty habits like alcoholism and playing cards. In these families as income increased the percentage of income spent on food items decreased.

Sathiadas *et al.* (1994) showed that the expenditure on food items alone contributed about 58 to 85 per cent of the family budget of fisherfolk households. The low level of spending for education clearly indicated their backwardness. A considerable number of fishermen households took loans for household expenditure particularly to tide over the lean seasons.

## 2.9 Credit and Indebtedness

Thankappan Achari (1986) reported that the process of motorisation which was allowed to continue indiscriminately may boomerang on the traditional fisherman under the pressure of high indebtedness and low shares of catches leading to uneconomic returns.

Sehara *et al.* (1986) studied the indebtedness pattern in Maharashtra and concluded that the heavier the investment in the means of production, the higher was the amount of loan availed. In Maharashtra, families availed credit mainly from fishermen co-operative societies. But in Gujarat private agencies were the main source of credit.

Sathiadas and Panikkar (1989) revealed that the extent of credit availability to the traditional fishermen was comparatively very low. The percentage of families in debt ranged from 24 for craft owners to 76 for wage earners. Among kattamaram owners 24 to 30 per cent were in debt, while 55 to 75 per cent of the wage earners had availed loans. Almost the entire amount of loan advanced to wage earners was contributed by non-institutional agencies like money lenders and middle men.

Nalini Nayik (1993) found that indebtedness was increasing with added investment in the fishery sector, which merely kept the fishermen employed while no substantial surplus was being reaped. As a result, levels of indebtedness and borrowing for household expenditure remained high. The local money lenders played an important role in giving credit. The borrowing was proportionately highest among workers who had purchased motors individually.

Sathiadas *et al.* (1994) felt that the fish traders and money lenders were the most important sources of credit for the fishermen in the Thanjavur coast. The fish traders some times acted as money lenders and loans were advanced to fishermen by these traders mainly during transactions of fish caught by such loanees. The role of institutional agencies in providing credit was negligible. The interest rate charged by the money lenders was comparatively high and the fishermen could not hope to come out of the vicious circle of indebtedness.

Jacob Mani (1995) noted that 42 per cent of the fisherfolk families in Kerala borrowed money for purchasing fishing equipment and 20 per cent for the construction of houses. Nine per cent of the families borrowed for marriage purposes, eight per cent took loans for land purchase and the rest of the families availed loans for other purposes.

The role of money lenders and middle men in the economic life of the fisherfolk indirectly increased their liability and indebtedness. It was also found that even as they were aware of these problems they were unable to avoid the money lenders and were highly indebted.

## 2. 10 Housing conditions

Taib *et al.* (1982) found that most of the fishermen households in the Trengganu region occupied sub-standard houses. While Blase (1982) reported that the fishermen families of Adirampattinam in Tamil Nadu lived in huts with mud or palm leaf walls with thatched roofs.

Sehara *et al.* (1986) observed that the standard of fisherman's dwellings in Gujarat was better than that in Maharashtra.

Sathiadas and Panikkar (1989) revealed that 90 per cent of the fisherman households of Thiruvottiyoorkuppam and 66 per cent of Pudumanikuppam were dwelling in huts and about 15 per cent of fishermen households of Pudumanikuppam owned pucca/ concrete houses while only 10 per cent of Thiruvottiyoorkuppam had pucca/concrete houses.

Sathiadas *et al.* (1994) indicated that the absence of land ownership and inadequate earnings as well as poor loan facilities were the factors responsible for the poor housing facilities along the coastal belt. Thirty four to 45 per cent of the households of the Thanjavur coast of Tamil Nadu resided in huts while 34 to 45 per cent were living in katcha houses and about 13 to 15 per cent lived under tiled roof with brick walls.

Jacob Mani (1995) found that among the marine households in Kerala, 56.18 per cent lived in huts and katcha houses and the rest in semi pucca/ pucca houses and among them 94.34 per cent lived in their own huts or houses and 1.91 per cent in rented houses. It was also noticed that only 25 per cent of the houses had electricity.

## 2. 11 Nutritional status

According to Krishna (1988) nutritional status is an indicator of the socio-economic well being of a community. She has reported that a majority of the fishermen were unable to fulfill the calorie and protein requirements.

Drewes (1982) found that the fisherman families of Tamil Nadu consumed vegetables, meat and milk occasionally and nearly 50 per cent of the families went without food on some days.

Hortmann (1983) studied the dietary habits of fishermen families in Andhra Pradesh and reported that it seemed to be far from satisfactory. As a result most of the villagers especially children suffered from extreme degrees of mal-nutrition, including vitamin deficiency disorders.

Karuna (1993) concluded that the nutritional status of the fisher women was affected by geographic, environmental and disease factors. Clinical examination of the fisher women revealed that 95.33 per cent were suffering from at least one of the nutritional deficiency disorders. All the families were found to be non-vegetarians and fish was the main non-vegetarian food in their diet. Consumption of vegetables, pulses, eggs and green leafy vegetables was found to be much below the Recommended Dietary Allowances (RDA).

According to Nalini Nayik (1993), the major item of food consumed by the fisherfolk was rice. Other food items consumed included vegetables, animal protein and fat.

## **2.12 Information source utilisation and social participation**

A study conducted by Sen and Das (1986) in West Bengal and Tamil Nadu revealed problems concerned with the adoption of new technology. Emphasis was required on appropriate training of beneficiary fish farmers and improved input supply and marketing arrangements.

Raghunath (1987) found that fisheries news had the least coverage in daily news papers and news magazines, when compared to crops and animal husbandry. Other information sources such as radio and television were also found to give least coverage to fisheries.

Nalini Nayik (1993) felt that the influence of the electronic media on the fishermen community was on the increase. Religion and religious festivals continued to play an important cohesive role. Only an insignificant number participated actively in trade union activities.

Jacob Mani (1995) found that the nature of their occupation, which takes the fishermen out to the sea and back home actually reduced time for social interaction. The work pattern served as a factor in isolating the fishermen from non-fishing propels.

## **2.13 Terminologies Used**

Definitions of terminologies used in this study are given below.

Family - members sharing meals from one kitchen.

Fishermen family - family having at least one member engaged in

fishing or related activities.

Main occupation - An occupation contributing 50 per cent or more of the income of an individual.

Subsidiary occupation - An occupation contributing less than 50 per cent of the income of an individual.

Fisheries related activities - Fish trading, processing, transportation, loading, unloading, net repairing, boat repairing and other activities related to fishery.

Wage earners - Fishermen who engage in fishing in other's boats for wages.

#### Type of houses

(a) Hut :-- A dwelling with an enclosure made up of 'thattis', and having a thatched roof.

(b) Katcha house :-- A dwelling with brick or mud walls and having a thatched roof.

(c) Tiled house :-- A dwelling with brick or stone walls and having a tiled roof.

(d) Concrete house :-- A dwelling with brick or stone walls and having concrete roof.



**METHODOLOGY**

### 3. METHODOLOGY

A brief account of the different methods and tools used in the study are described in this chapter. They are discussed under the following heads and sub-heads.

- 3.1. Sampling design
  - 3.1.1. Profile of selected village
  - 3.1.2. Selection of households
- 3.2. Selection of variables and measurement
- 3.3. Collection of data and method of inquiry
- 3.4. Period of study
- 3.5. Statistical analysis

#### 3.1 Sampling design

The study was conducted among the fisherfolk of Thiruvananthapuram district. The latter was purposively selected because, 20 per cent of the marine fishing villages of Kerala are concentrated in this district, i.e., of the 222 marine fishing villages in Kerala, 42 villages are located in Thiruvananthapuram district. Of the total fishermen population of 7,69,163 in the state, 1,61,830 ( 21.03 % ) operated in this district. The average number of households per village is also the highest in Thiruvananthapuram ( Govt. of Kerala, 1995) as indicated in Table 3.1.

**Table 3.1. Districtwise marine fishing villages, coastal line and fishermen population in Kerala**

Sl. No.	District	No. of villages	Coastal line (km)	Population (lakhs)
1	Thiruvananthapuram	42	78	1.62
2	Kollam	27	37	0.91
3	Alappuzha	30	82	1.08
4	Ernakulam	21	46	0.70
5	Thrissur	18	54	0.68
6	Malappuram	23	70	0.78
7	Kozhikode	34	71	0.96
8	Kannur	11	82	0.54
9	Kasargode	16	70	0.42
	<b>Total</b>	<b>222</b>	<b>590</b>	<b>7.69</b>

Source : Economic review (1995) ; Evaluation series II (1993), State Planning Board, Government of Kerala.

Two fishing villages, one from the northern side and the other from the southern side of the district namely Vizhinjam and Anjuthengu were selected for the study in view of their larger population in comparison to the other fishing villages in the district (Appendix II) and the wide variations in fishing activity.

### 3.1.1 Profile of selected village

#### 3.1.1.1 *Vizhinjam*

Vizhinjam is situated 16 km south of the Thiruvananthapuram city. It is one of the important marine fish landing centers of Kerala. The fishermen population of Vizhinjam is only 2,540 out of the total population of 20,000 (12.7%). In Vizhinjam fishing activity takes place round the year. The bay protected by the back waters affords facilities

for launching the boats into the sea even in the peak monsoon season. An important feature of this center is that almost all the fishing crafts used here have been motorised. Vizhinjam fishermen are also the most exploited people by money lenders, motor servicing agencies, kerosene dealers and spare parts dealers.

### 3. 1. 1.2 *Anjuthengu*

Anjuthengu is one of the biggest fishing villages north of Thiruvananthapuram district, and is situated in Chirayinkizhu taluk. It is situated three km. away from the railroad and 10 km. away from an active fish market. Of its total population of 45,000, fisherfolk constitute 88.89 per cent. A large number of women in this area are engaged in fish vending. Kattamaram and country boats are the common fishing crafts used here. The number of motorised traditional fishing crafts fitted with out board engines is on the increase in Anjuthengu. The Thazhampalli Anjuthengu Fishermen Development and Welfare Co-operative Society is operating in this village. The society provides the basic infrastructure and fisheries inputs and conducts auctions of the fish landings.

Fishing in Anjuthengu is hazardous and risky because the sea near the shore is rough, especially during the monsoon seasons. Even with motorised crafts, fishing is difficult in these seasons. Hence the number of sea-worthy days is comparatively low.

### 3. 1.2 **Selection of households**

A sample size of 50 traditional fisherfolk families from each village was selected using a stratified random sampling technique, taking motorised and non-motorised fisherfolk families as two strata. From each village, a list of traditional fisherfolk families using motorised

boats and non-motorised boats were prepared separately based on a preliminary survey. From this, 20 families with non-motorised boats and 30 families with motorised boats from each village were randomly selected.

### **3. 2. Selection of variables and measurement**

Based on the review of earlier research works, discussions with experts and observations made by the researcher, the following variables were selected and included in the study.

1. General information on households.
2. Land holding
3. Educational status
4. Employment status
5. Fishing equipments used
6. Income of households
7. Expenditure pattern
8. Permanent assets
9. Credit and indebtedness
10. Food intake
11. Health status
12. Housing condition
13. Exposure to mass media
14. Social participation

A brief description of the variables used in the study is given below.

### 3. 2. 1 **General information on households**

This refers to the following sub variables which help to give an in depth view of the basic characteristics of the sample households. The sub-variables used under this category are,

1. Religion : The religion to which the family actually belongs to.
2. Family size : Total number of members in the family.
3. Type of family : Refers to whether the family is joint or nuclear.
4. Sex ratio : The number of female to male members in the sample households.

### 3.2.2 **Land holdings**

The land holdings were classified based on the size of the holdings as no land, less than 1 cent, between one and 5 cents, between 5 cents and 10 cents and more than 10 cents.

### 3. 2. 3. **Educational status**

Educational status refers to the extent of literacy attained by the members of the sample household, at the time of conducting the survey. (Code list is given in Appendix III)

### 3. 2. 4. **Employment status**

In the present study, employment has been considered as work done by an individual under different types of activities such as fishing, fish vending and others. To calculate the number of working

days in an year, the number of working days during the previous year was considered.

### **3. 2. 5 Fishing equipments used**

This refers to the number of fishing implements used by the sample households. The type of implements used include boats, kattamarams, engines and nets.

### **3. 2. 6 Income of households**

The income of the sample households was calculated as the total income of the family in one month. This income was obtained from different sources like fishing, fish vending, rent for fishing equipments and other sources.

### **3. 2. 7 Expenditure pattern**

This refers to the average monthly expenditure incurred by the sample households for different purposes. These have been classified into,

#### **3. 2. 7. 1 Food expenditure**

This includes expenses for food prepared within the household and also on food consumed from outside.

#### **3.2.7. 2 Clothing**

This includes average monthly expenses for clothing incurred by the households. This value was calculated from the annual expenditure of households on clothing.

### 3. 2. 7. 3 **Fuel**

This refers to the cost incurred for the purchase of firewood or kerosene used in a month for cooking purposes in a household.

### 3. 2.7. 4 **Lighting**

This includes the cost incurred against electricity charges or for the purchase of kerosene used for lighting.

### 3. 2. 7. 5 **Medicine**

This includes expenditure on medicines as well as consulting fees paid if any, by the household for one month.

### 3. 2. 7. 6 **Education**

This refers to the expenditure incurred by the sample household for educational purposes.

### 3. 2. 7. 7 **Recreation and magazines**

This includes the expenditure incurred for different recreational purposes such as cinema, attending fairs etc. as well as for the purchase of newspapers and magazines.

### 3. 2. 7. 8 **Intoxicants**

This refers to the expenses incurred for the purchase of arrack, betel leaves, tobacco and cigarette/beedi which are toxic to the human body.



### **3. 2. 8 Permanent assets**

This refers to the value of possessions of permanent nature owned by the respondent which includes values of ornaments, furniture, radio, TV and bicycles.

### **3. 2.9 Credits and indebtedness**

The Mc Graw Hill Dictionary of Modern Economics defines credit as an exchange of goods or services for a promise of future payment. Indebtedness is a state of obligation for something received. In this study the details of credit including its periodicity, source, amount, purpose, interest, details of repayment and outstanding balances are looked into in detail.

### **3. 2. 10 Food intake**

This refers to the type and quantity of different food items such as cereals, pulses, vegetables, fish and meats, oils and fats and milk consumed by the members of the selected households per month.

### **3. 2. 11 Health status**

This refers to the health status of the members of the sample household. It includes the details about different health problems such as asthma and tuberculosis, faced by the members of the selected families.

### **3. 2.12 Housing conditions**

This refers to the type of ownership of houses i.e., whether owned or hired; the type of houses i.e., whether pucca or

katcha, type of roofing i.e., whether thatched, tiled, concrete or asbestos, whether electrified or not and the type of sanitary facilities available in the house.

### **3. 2. 13. Exposure to mass media**

The mass media form sources of information which reach large numbers of people at the same time. In this study information sources included are news papers, radio, and television. Exposure to mass media refers to the number and frequency of contact or use of information sources by the respondents.

### **3. 2. 14 Social participation**

It refers to the extent of involvement of the sample households in social organisations either as members or as office bearers.

## **3. 3 Collection of data and method of inquiry**

The study required both primary and secondary data. The primary data was collected from the selected sample farmers by personal interview method, using a pre-tested questionnaire. The questions were administered to the fishermen orally and their responses were recorded in the schedule. Data regarding the different variables under study were collected. Secondary data was gathered from the MALSİYAFED Office, the CMFRI Office at Vizhinjam, the concerned Panchayat Offices and from various libraries.

## **3.4 Period of study**

Since this study forms only part of the academic programme and the time availability was limited, the period of study was confined to one year.

### 3. 5. Statistical analysis

The data collected from the respondents were tabulated and analysed using suitable statistical tools. Mean, standard deviation, coefficient of variation, correlation coefficient and percentage analysis were used to examine the data and draw inferences.

A stepwise regression analysis was done to find out the determinants of average monthly income of family (x1), average monthly household expenditure (x10), and loan amount outstanding (x14), and independent variables considered for the analysis were family size (x2), number of family members employed (x3), present value of boats used (x4), present value of kattamarams used (x5), present value of nets (x6), number of days employed for fishing (x7), number of days employed for fish vending (x8), number of days employed for private job (x9), expenditure on betel chewing (x11), expenditure on toddy consumption (x12) and maintenance charge of fishing equipments (x13).

## **RESULTS AND DISCUSSION**

## 4. RESULTS AND DISCUSSION

The results derived from the study are presented and discussed under the following heads and sub-heads.

- 4.1 General description of the sample households.
  - 4.1.1 Religion and caste.
  - 4.1.2 Family type and family size.
  - 4.1.3 Age and sex-wise distribution.
  - 4.1.4 Land holdings.
- 4.2 Educational status.
- 4.3 Employment status.
- 4.4 Ownership pattern of fishing equipments.
- 4.5 Income level of fishermen households.
- 4.6 Expenditure pattern of households.
  - 4.6.1 Food expenditure pattern
  - 4.6.2 Total household expenditure pattern
  - 4.6.3 Categorywise income and expenditure pattern
- 4.7 Permanent assets.
- 4.8 Extent of credit availed and indebtedness
  - 4.8.1 Preference of credit agency
  - 4.8.2 Source of credit.
  - 4.8.3 Purpose of credit.
- 4.9 Food intake and nutritional status.
- 4.10 Health status.
- 4.11 Housing condition.
  - 4.11.1 House ownership pattern
  - 4.11.2 Type of house.
  - 4.11.3 Electrification and sanitary facilities.
- 4.12 Exposure to mass media.
- 4.13 Social participation.

#### 4.1 General description of small households

##### 4.1.1 Religion and caste

All the respondents under the study were Christians belonging to the backward caste viz.; Latin Catholic.

##### 4.1.2. Family type and family size

Table 4.1 shows the details of family type and family size of sample fisherfolk in the study area.

Table 4.1. Family type and family size of sample households

Particulars	Vizhinjam		Anjuthengu		Total	
	No. of families	%	No. of families	%	No. of families	%
<u>Type of family</u>						
Joint	9	18	6	12	15	15
Nuclear	41	82	44	88	85	85
<u>Family size</u>						
≤ 5	39	78	43	86	82	82
> 5	11	22	7	14	18	18
Average family size	5.58 (S.E= 0.28)		4.80 (S.E= 0.20)		5.19 (S.E= 0.17)	
Average no. of workers per family	1.74 (S.E= 0.27)		2.10 (S.E= 0.19)		1.92 (S.E= 0.13)	

The majority of the households surveyed, both in Vizhinjam and Anjuthengu village, were of nuclear type. Of the 100 households surveyed 85 per cent were of nuclear type and only 15 per cent were joint families. A similar family pattern has been reported by Nalini Nayik (1993).

In 82 per cent of households the family size was five or below, while 18 per cent of households had more than five members.

The average family size in Vizhinjam village was 5.58 and that in Anjuthengu village was 4.8. The average family size of the fisherfolk community worked out to be 5.19 which is less than the state average of 5.27.

The average number of workers or earning members was only 1.92 per family. In Vizhinjam it was 1.74 per family while in Anjuthengu it was 2.10 per family. The result is in conformity with the results of Sathiadas and Panikkar (1990) which show that the average earning members per family in Orissa fishermen community was 1.7.

The results of a correlation analysis of family size with selected variables are presented in Table 4.2.

**Table 4.2. Correlation between family size and selected characteristics**

Variables	r value
Number of family members employed	0.46**
Number of days employed for fishing	0.61**
Number of days employed for fish vending	-0.10
Average monthly income	0.60**
Average monthly expenditure	0.68**
Expenditure on toddy / arrack	0.43**
Loan amount outstanding	0.19

\*\* Significant at 0.01 level

\* Significant at 0.05 level

A strong positive correlation was observed between family size and the variables viz., number of family members employed, number of days employed for fishing, average monthly household expenditure, expenditure on toddy / arrack and average monthly family income. The rest of the selected variables exhibited a non-significant correlation with the family size.

### 4.1.3 Age and sexwise distribution

The majority of the fisherfolk were in the age group of 21-34 years (25.2%), followed by the age group of 35-60 years (24.8 %). The number of aged fisherfolk (above sixty years) were comparatively less especially in the case of females. Of the total family members about four per cent were in the age of 60 years and above. The female to male ratio was found to be 784 females for 1000 males, which is much less than the state average of 1040 females for 1000 males (Census report, 1991).

Table 4.3 Age and sex wise distribution of sample fisherfolk

	Male		Female		Total		Female to male ratio
	Number	%	Number	%	Number	%	
0 - 4	31	10.7	20	8.8	51	9.8	645
5 - 12	46	15.8	38	16.6	84	16.2	826
13 - 20	51	17.5	52	22.8	103	19.9	1019
21 - 34	79	27.1	52	22.8	131	25.2	658
35 - 60	68	23.4	61	26.8	129	24.8	897
>60	16	5.5	5	2.2	21	4.1	312
Total	291	100.0	228	100.0	519	100.0	784

The results of the study showed a negative trend in the female to male ratio among 0-4 and 5-12 age groups. The population of above 60 years of age (4.1%) was found to be very less compared to the other age groups, which indicates the low life expectancy of the fishermen community. Female population of the age group of above 60 years was found to be very low (4.1 % which indicates the low life expectancy of female when compared to the male population. It is also inferred that the life expectancy of fisherfolk were far behind the state average of 69 years for men and



Fig 4.1. Age and sex-wise distribution of fisherfolk

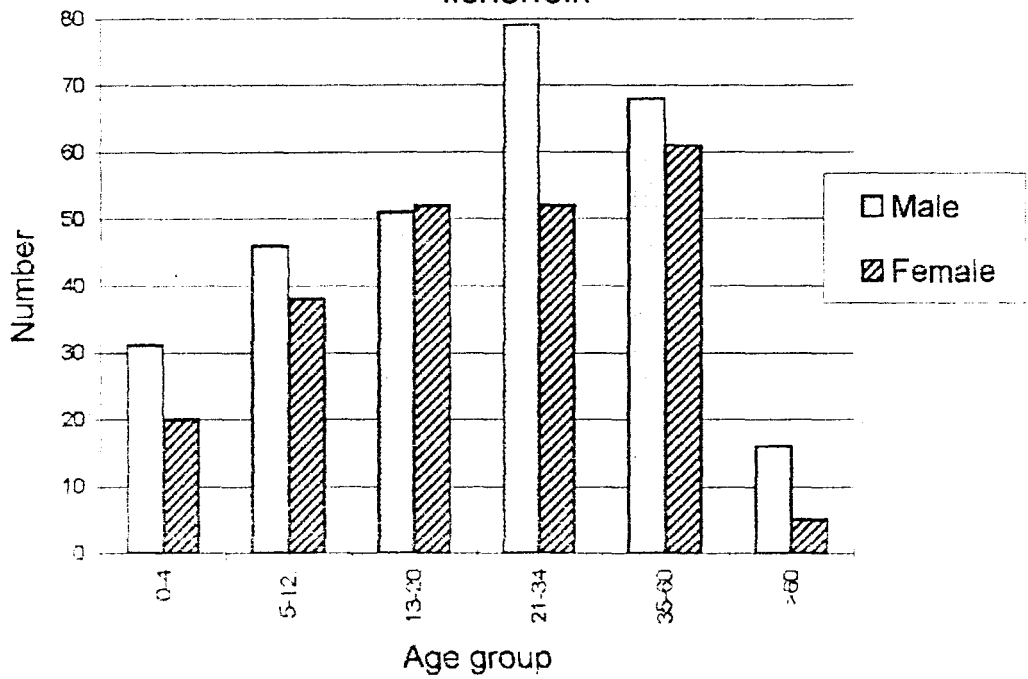
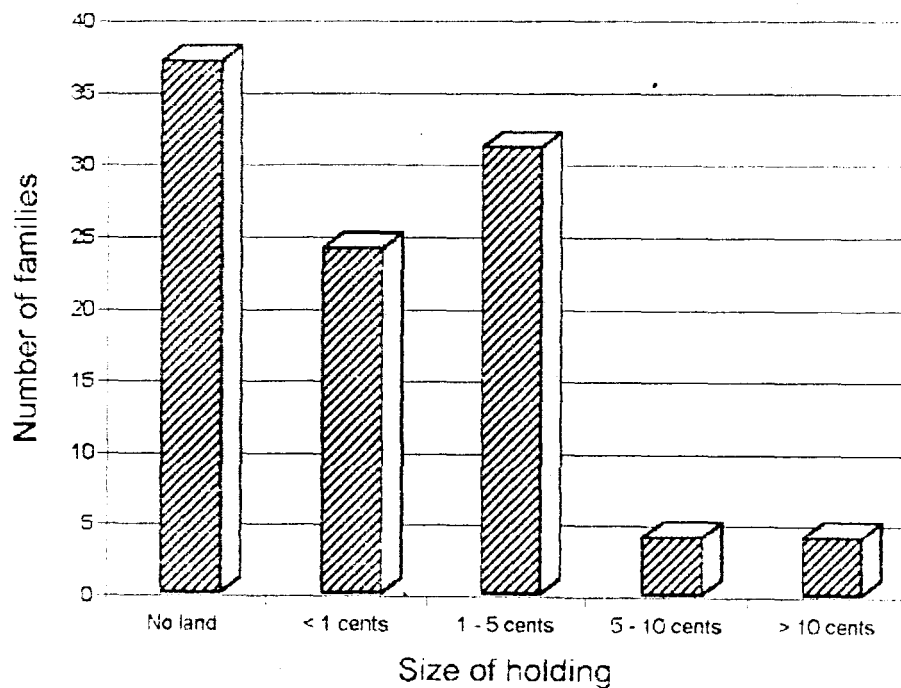


Fig 4.2. Ownership and extend of land holding



82 years for women (Table 4.3; Fig. 4.1). The lower life expectancy and female-male ratio are indicators of the poor socio-economic conditions of the fisherfolk families.

#### 4.1.4 Land holdings

The distribution of households based on the size of the land holding is given in Table 4.4 and Fig. 4.2.

**Table 4.4 Details of land holdings of the selected fisherfolk families**

Category	Vizhinjam		Anjuthengu		Total Families (%)
	Families	%	Families	%	
No land	16	32	21	42	37
<1cent	14	28	10	20	24
1 -5 cents	12	24	19	38	31
5 -10 cents	4	8	0	0	4
> 10 cents	4	8	0	0	4
Total	50	100	50	100	100
Average land area owned	4.15 (1.41)		0.98 (0.14)		2.56 (1.02)

(Figures in the parenthesis indicate SE).

Thirty seven per cent of the households under study possessed no land. They lived in huts all along the sandy beaches of the coast. In Vizhinjam village the landless households constituted 32 per cent and in Anjuthengu village it was 42 per cent.

About twenty four per cent of the sample households had their own land of less than one cent. The fisherfolk in this category were more in Vizhinjam (28 %) than in Anjuthengu (20%). Only sixteen per cent of the families in Vizhinjam village owned more than five cents of land, while in Anjuthengu village no family belonged to this group. The average land area owned by the sample households was only 2.56 cents. In Vizhinjam village it was 4.15 cents where as in Anjuthengu village it came to nearly one cent.

The data on land holding showed that 37 per cent of the families did not possess their own land and that they lived on the sandy coastal beaches which were most susceptible to frequent natural calamities like cyclonic storms and flood during the monsoon period. Among the land owners 55 per cent had only less than 5 cents of land. This may be one of the reasons for their poor living conditions.

#### 4.2 Educational status

The literacy rate of the fisherfolk was found to be 63 per cent which is less than the state average of 89.81 per cent (Census 1991). About 37 per cent of the fisherfolk population were illiterate. Of the literates above 15 years of age, 37 per cent had only primary level education, while 31 per cent had middle school education. Twenty eight per cent had high school level education and only four per cent had reached the college level (Table 4. 5).

Since formal education starts at the age of 5, the 0-4 age group were excluded while computing the literacy level. Among the total children between 10-15 years of age, only 21.3 per cent had schooling up to primary level. This reveals that the majority of children entering schools drop out before middle school.

Fisherfolk do not give much importance to their children's education. In the sample fisherfolk families males were found to have a lower literacy rate (59.6 %) when compared to females (67.8 %). This may be due to the fact that because of the overall poverty of marine fishermen families, many male children of school going age might be involved in fishing or fishing related activities and are hence unable to attend schools. A low literacy level

Table 4.5. Educational level of sample fisherfolk

Age Group	Illiterate		Primary		Secondary		High school		Higher studies		Total	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
5-9	9	3	14	21	-	-	-	-	-	-	23	24
10-12	5	2	7	1	11	11	-	-	-	-	23	14
13-15	1	2	4	4	7	7	8	5	-	-	20	18
15-20	5	3	8	12	10	9	6	10	2	-	31	34
≥21	85	57	28	25	23	19	23	16	4	1	163	118
Total	105	67	61	63	51	46	37	31	6	1	260	228

of the fishermen community was reported by Sathiadas and Panikkar (1989), Jancy Gupta (1991) and Nalini Nayik (1993).

#### 4.3. Employment status

The employment status of the sample fisherfolk is given in Table 4.6. Out of the total of 346 fishermen population above 15 years of age, 191 (55.2 %) had a regular occupation. Among these, 85 per cent were engaged in active fishing. About 14 per cent of employed women were engaged in fish vending.

Table 4.6 Employment status of sample households

Occupation	Vizhinjam		Anjuthengu		Total	
	Main	Sub	Main	Sub	Main	Sub
Fishing	83 (96)	0	79 (76)	1 (50)	162 (85)	1 (33.3)
Fish vending	3 (3)	0	24 (23)	0	27 (14)	0
Money lending	0	1	0	1 (50)	0	2 (66.6)
Other jobs	1 (1)	0	1 (1)	0	2 (1)	0
Total	87 (100)	1	104 (100)	2 (100)	197 (100)	3 (100.0)

(Figures in parenthesis indicate per centage)

When the workforces in Vizhinjam and Anjuthengu villages were compared, it was found that 96 per cent of the workforce in Vizhinjam was engaged in active fishing, while it was only 76 per cent in Anjuthengu. Anjuthengu village had more women engaged in fish marketing. In Vizhinjam it was only three per cent of the total workforce while in Anjuthengu it was 23 per cent.

The above results clearly indicate that the fisherfolk community was very much dependent on their traditional job, fishing. The members of sample households engaged in jobs other than fishing and fisheries-related activities were very meagre (1%). Fisherfolk involved in fisheries related activities like fish processing and

marketing were very small in number and hence the entire fish catch was marketed through middlemen. Thus the fisherfolk are subjected to exploitation by these middlemen in fish marketing.

Since the majority of the workforce was engaged in fishing, disguised unemployment was seen as a serious problem of the community. Hence diversification of jobs from fishing to fisheries related activities like processing and marketing can be suggested as a measure to improve the living standards and economic conditions of the fisherfolk community.

To find out the relationship of employment status to selected variables, the correlation coefficient was calculated and the results are furnished in Table 4.7.

**Table 4.7. Correlation coefficient of employment status with selected characteristics**

Variable	r value	
	No. of days employed for fishing	No. of days employed for fish vending
Family size	0.61**	-0.10
Number of family members employed	0.79**	0.34**
Number of days employed for fishing	1.00**	-0.23*
No. of days employed for fish vending	-0.23*	1.00**
Monthly expenditure	0.71**	0.01
Expenditure on toddy/ arrack	0.61**	-0.01
Loan amount out standing	0.23*	-0.12

\*\* Significant at 0.01 level

\* Significant at 0.05 level

From the table it is evident that the number of days employed for fishing had a strong positive correlation with the variables viz., family size, number of family members employed, number of days employed for fishing, average monthly family expenditure, and expenditure on arrack / toddy. It was also found that a significant positive correlation existed between the number of days employed for fishing and the loan amount outstanding while a negative and significant correlation existed between the number of days employed for fishing and the number of days employed for fish vending.

A strong positive correlation was noticed in the relationship between fish vending and the number of family members employed. The rest of the variables had no significant correlation with the number of days employed for fish vending.

#### **4.4. Ownership pattern of fishing equipments**

Most of the fishermen at Vizhinjam and Anjuthengu villages did not have their own fishing implements. About twenty two per cent of the respondents were owners of the motorised boats, one among them had his own kattamaram. The outboard motor fitted on the traditional crafts was the Yamaha kerosene outboard motor. In these motorised boats nets were used for fishing and all the boat owners had ownership of the same. About seventeen per cent of the fisherfolk families owned kattamarams. Three kattamaram owners did not possess nets and they often used hooks and lines for fishing. The rest of the sample fisherfolk families were wage earners who were engaged in fishing in other's boats or kattamarams. The details of fishing equipments are furnished in Table 4. 8.

The average initial investment on boats and engines was Rs. 1,16,364/- and on nets was Rs. 19,890/-. The initial investment on kattamarams was very low (Rs. 5,624/-) compared to that for a boat and engine. These findings are comparable with the observations of Vasanthakumar *et al.* (1985) and Sathiadas and Panikkar (1989).

**Table 4. 8 Details of fishing equipment used.**

Item	No. of families owning	Average monthly maintenance charge per unit (Rs.)	Average value per unit (Rs.)
Boat	22	510.00	116364.00
Kattamaram	17	78.00	5624.00
Nets	32	110.15	19890.60

A comparative idea of the operational and maintenance costs of both boat and kattamaram and the problems associated with these is necessary for an understanding of certain socio economic aspects of the fishermen community. The fuel requirement for the out board motor per trip is 20 to 25 litres of kerosene and 1.5 to 2 litres of petrol. The fuel expenditure is met from the gross income of the motorised boat per trip and the net income is divided among the owners and the wage earners. The number of wage earners in a motorised boat ranges from four to six. The profit is divided among the owner and the wage earners of the unit in such a way that the owner gets two shares and the wage earners get one share each. If the owner of the boat is one among the workers, he gets three shares. On the other hand the number of wage earners in a kattamaram unit is two to three. The income is divided into three or four equal shares and the owner gets one share and the wage earners of the unit get two shares, if the owner is also one among the worker as was the usual practice in the study areas.



Since the fishing equipment like boats and kattamaram need a very high initial expense and maintenance cost, it is practically impossible for every family to have a boat or a kattamaram. Due to the very high investment cost and maintenance cost of fishing equipments many of the boat and kattamaram owners were found to be deeply indebted. The average maintenance charge of boats and engines was Rs. 510/-, while for kattamarams and nets it was Rs. 78/- and Rs. 110.15/- respectively. For effective operation, a motorised boat needs three to five men and in a kattamaram two to three fishermen can be engaged for fishing. At the same time as the majority of fishermen were wage earners who worked in private boats or kattamarams, a major share of the daily earnings went to the hands of the boat/kattamaram owners. Some times the boat owners also acts as money lenders and once a loan was availed by a fisherman, he was expected to work in the money lender's boat. Hence we feel that it is necessary to revitalise the activities of village fishermen co-operative societies in order to free the fisherfolk from the clutches of private boat owners thus enabling them to get better returns from their job.

#### **4.5. Income level of fishermen households**

The analysis of the income levels of the fishermen families brought out some interesting results. The average monthly income of fishermen households derived from different sources is given in Table 4. 9 and Fig. 4.3.

The income level of the fisherfolk families varied widely depending upon the number of family members engaged in fishing and related activities and the ownership of fishing equipments. Taking both the villages together, the average monthly income was observed to be Rs. 1918.94. The average monthly income of a household in

Vizhinjam village worked out to Rs. 2160.20 as against Rs. 1677.68 in Anjuthengu village. In Vizhinjam, the average monthly family income of the fisherfolk was Rs. 482.52 more than that in Anjuthengu village. The per capita income of the fisherfolk was calculated to be Rs. 4437 which is far below the state per capita income of Rs. 8007.00 at current prices (Govt. of Kerala, 1996).

**Table 4.9. Average monthly income of fisherfolk families from different sources**

Source	Vizhinjam		Anjuthengu		Total	
	Rs.	%	Rs.	%	Rs.	%
Active fishing	1511.50	69.97	977.00	58.24	1244.25	64.84
Rent for fishing equipments	533.00	24.67	391.00	23.30	462.00	24.08
Fish vending	26.80	1.24	239.00	14.25	132.90	6.92
Others	88.90	4.12	70.68	4.21	79.79	4.16
<b>Total</b>	<b>2160.20</b>	<b>100.00</b>	<b>1677.68</b>	<b>100.00</b>	<b>1918.94</b>	<b>100.00</b>

The sample families in both the villages were very much dependent on fishing and fisheries related activities for their livelihood. In both Vizhinjam and Anjuthengu villages, it was found that the major source of income was active fishing followed by rents obtained from fishing equipments to owners. Taking the averages for both the villages, it was found that 64.84 per cent of the income obtained by the fisherfolk households came from active fishing. Rents collected for fishing equipments contributed 24.08 per cent to the total income, while fish vending contributed 6.92 per cent and other sources such as money lending, plumbing and tailoring constituted 4.16 per cent of the total income.

The months of July, August and September yield the highest fish catch. It gradually declines from October onwards and reaches its lowest level in January and the lean season is from January to April.

Fig 4.3. Percentage contribution of sources of monthly income

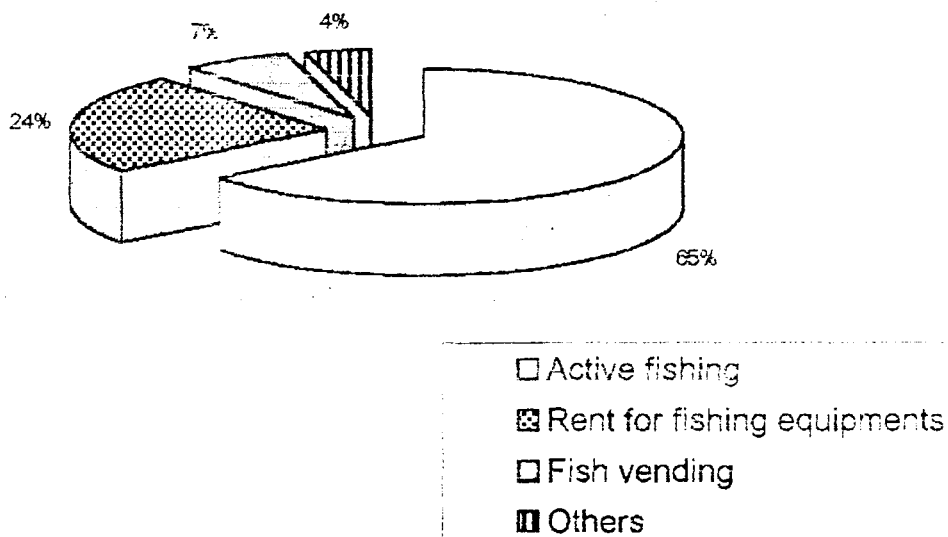
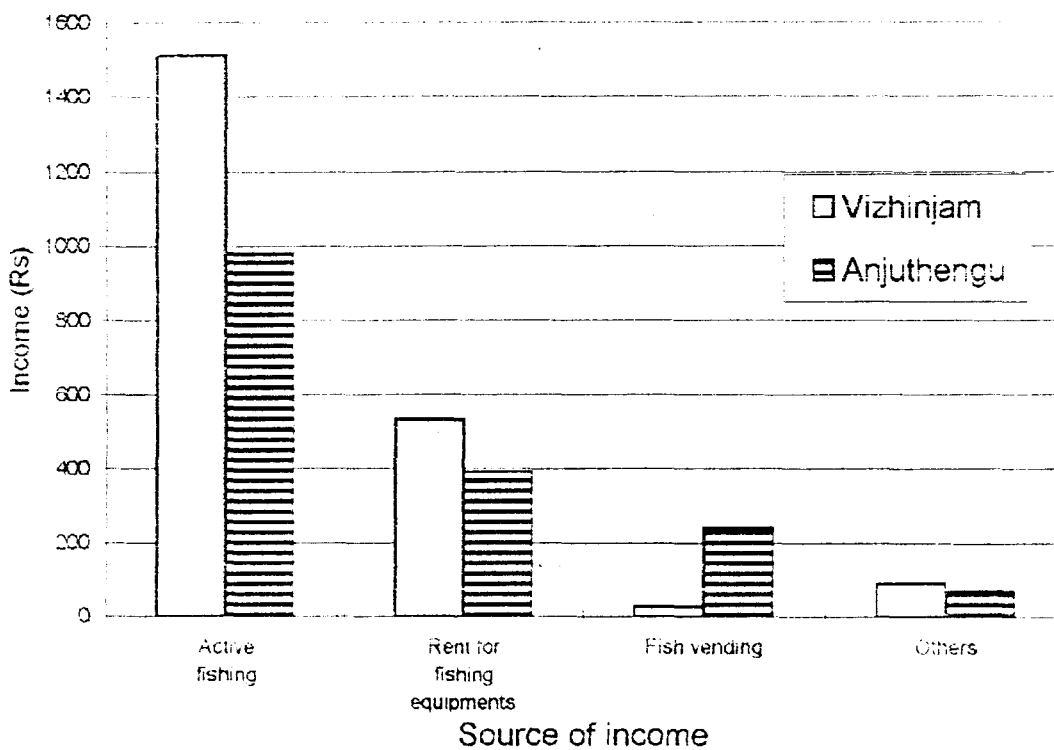


Fig 4.4. Average monthly income from different sources in Vizhinjam and Anjuthengu



In Vizhinjam village about 69.97 per cent of the income was obtained from active fishing where as in Anjuthengu it was about 58.24 per cent. Due to the lower income level of the Anjuthengu fisherfolk families, more females in this area were engaged in fish vending. The per centage share of income from fish vending in Anjuthengu was 14.25 per cent as against 1.24 per cent in Vizhinjam. Income received from sources other than fishing and related activities was negligible in both the areas (Fig. 4.4). The higher dependence of the fisherfolk on fishing and related activities may be one of the reasons for their poor economic conditions.

Table 4.10. **Correlation between average monthly income and selected variables**

Variable	r value
Family size	0.60**
Number of family members employed	0.55**
Present value of boats	0.69**
present value of kattamarams	0.24*
Present value of nets	0.58**
Maintenance charge of fishing equipments	0.68**
No. of days employed for fishing	0.69**
No. of days employed for fish vending	-0.16
Average monthly expenditure	0.83**
Loan amount outstanding	0.43**

\* Significant at 0.05 level

\*\* Significant at 0.01 level

The results of a correlation analysis of the average monthly household income with selected variables are presented in Table 4.10. A strong positive correlation was noticed in the relationship of the average monthly income and the variables viz., family size, number of family members employed, present value of boats, present value of nets, maintenance charge of fishing equipments, number of days employed for fishing, average monthly household expenditure and loan amount outstanding. It was also

found that the relationship of the average monthly income and the present value of kattamaram was positive and significant.

### Regression analysis

The results of the regression analysis showed that present value of boat ( $x_4$ ), number of days employed for fishing ( $x_7$ ), present value of kattamaram ( $x_5$ ) and number of days employed for fish vending ( $x_8$ ) exhibited significant positive influence on the average monthly income of fisherfolk families. Family size ( $x_2$ ), present value of nets ( $x_6$ ) and number of family members employed ( $x_3$ ) did not show any significant contribution. About 87 per cent of the variability in the monthly income of fisherfolk family was explained by these determinants

The regression is given below.

$$\begin{aligned}
 x_1 = & - 117.9862 + 0.0488 x_4^{**} + 7.3926 x_7^{**} + 0.2141 x_5^{**} + \\
 & \quad (0.0053) \quad (1.5553) \quad (0.0354) \\
 & 5.0455 x_8^* + 76.6373 x_2 + 0.01797 x_6 - 431.4821 x_3. \\
 & \quad (2.0596) \quad (68.8030) \quad (0.01067) \quad (365.8301)
 \end{aligned}$$

(the figures in parenthesis refer to the standard deviation of the coefficient. \*, \*\* refer coefficient of significance at 5 per cent and 1 per cent levels respectively)

$$R^2 = 87.33 \%$$

Where,  $x_1$  = Average monthly income,  
 $x_2$  = Family size,  
 $x_3$  = number of family members employed  
 $x_4$  = Present value of boats

$x_5$  = Present value of kattamarams

$x_6$  = Present value of nets

$x_7$  = Number of days employed for fishing

$x_8$  = Number of days employed for fish vending

#### 4. 6. Expenditure pattern of fisherfolk

##### 4.6.1. Food expenditure pattern

The details of the average monthly food expenditure on selected food items are presented in Table 4. 11. Taking both villages together, it is evident that the maximum amount was spent on meals taken from outside (27.93 %). This is due to the fact that the fishermen, on returning from the sea, consume large amounts of food items from places outside their homes like hotels and tea shops. The expenditure on purchase of rice followed closely behind (26.75 %) and 13.35 per cent of the expenditure on food was spent on fish.

The amount spent on edible oils, coconut, milk, and meat were found to be 7.7 per cent, 6.33 per cent, 4.59 per cent, and 4.19 per cent respectively. Tapioca was one of the common food items of the sample households and the per centage expenditure for it was calculated as 3.62. The expenditure on pulses, vegetables, wheat, eggs and spices was found to be very negligible. The same trend was noticed when the expenditure pattern of each village was individually analysed.

The result shows that a huge amount of money was spent on food taken from out side. The pattern of food expenditure also indicates the unbalanced food consumption behaviour of the fisherfolk families. Similar results were obtained in the studies

Table 4.11. Monthly expenditure of sample households on selected food items

Item	Monthly expenditure on selected food items (Rs)		
	Vizhinjam	Anjuthengu	Total
Meals from outside the home	297.20 (28.27)	258.30 (27.54)	277.75 (27.93)
Rice	293.13 (27.88)	239.05 (25.48)	266.09 (26.75)
Fish	143.55 (13.66)	122.10 (13.02)	132.82 (13.35)
Edible oils	75.71 (7.20)	77.46 (8.26)	76.58 (7.70)
Coconut	60.16 (5.72)	65.70 (7.00)	62.93 (6.33)
Milk	48.60 (4.62)	42.70 (4.55)	45.65 (4.59)
Meat	41.80 (3.98)	41.55 (4.43)	41.67 (4.19)
Tapioca	35.77 (3.40)	36.30 (3.87)	36.04 (3.62)
Spices and condiments	17.37 (1.65)	17.50 (1.87)	17.40 (1.75)
Vegetables	14.37 (1.37)	16.27 (1.73)	15.32 (1.54)
Others	23.64 (2.25)	21.08 (2.25)	22.36 (2.25)
Total	1051.30 (100)	938.01 (100)	994.65 (100)

(Figures in parenthesis denote percentage)

conducted by Shah (1960), Karuna (1993) and Sathiadas *et al.* (1994).

#### 4.6.2. Total expenditure pattern

The results obtained from the analysis of the average monthly expenditure pattern of selected items are presented in Table 4.12 and Fig. 4.5. Taking both the villages together, out of the total expenditure, the maximum amount was seen to be spent on food (62.52 %). Interestingly, this is followed by the expenditure on arrack (12.14 %). The amount spent on fuel and intoxicants like betel and cigarette constituted 8.58 per cent and 7.58 per cent respectively.

Table 4.12. Monthly expenditure of fisherfolk on selected items

Item	Monthly household expenditure (Rs)		
	Vizhinjam	Anjuthengu	Total
Food expenditure	1051.30 (62.49)	938.01 (62.56)	994.65 (62.52)
Arrack	223.00 (13.26)	163.10 (10.88)	193.05 (12.14)
Fuel & lighting	136.44 (8.11)	136.42 (9.10)	136.43 (8.58)
Betel chewing	116.95 (6.95)	124.25 (8.29)	120.60 (7.58)
Clothing	71.18 (4.23)	63.60 (4.24)	67.39 (4.24)
Medicinal purposes	32.40 (1.93)	34.85 (2.32)	33.63 (2.11)
Recreation	31.88 (1.89)	29.33 (1.96)	30.60 (1.92)
Education	19.15 (1.14)	9.75 (0.65)	14.45 (0.91)
<b>Total</b>	<b>1682.30 (100.00)</b>	<b>1499.31 (100.00)</b>	<b>1590.80 (100.00)</b>

(Figures in parenthesis indicate per centage)

The expenditure on clothing was calculated as 4.24 per cent, and expenditure on medicines and recreational expenses constituted 2.11 per cent and 1.92 per cent respectively. It must be



Fig 4.5. Average monthly expenditure of fisherfolk households

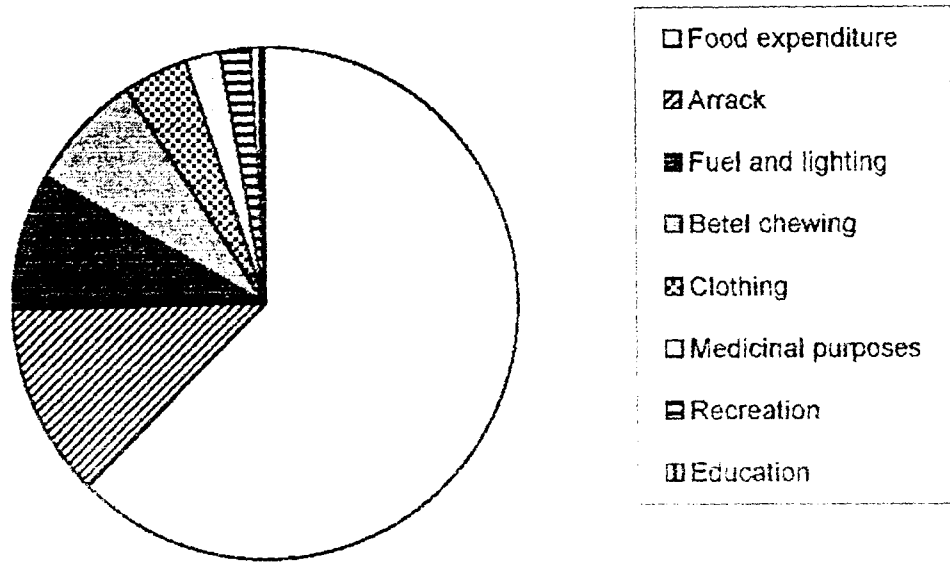
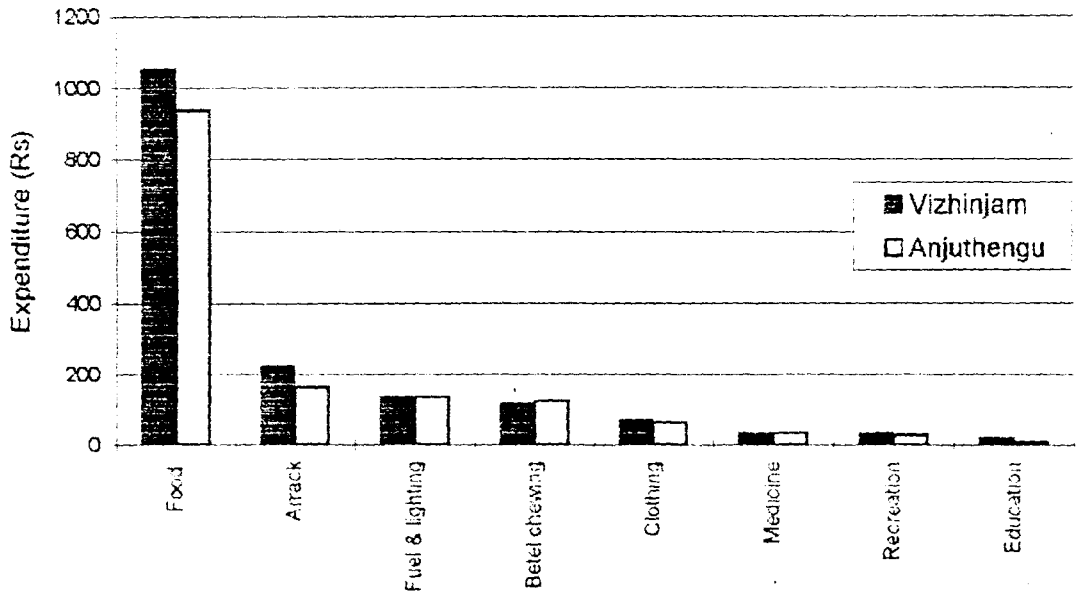


Fig 4.6. Average monthly household expenditure (Vizhinjam and Anjuthengu)



noted that the expenditure on education was very meagre (0.91 %) The same order and pattern of expenditure was noticed when the villages were taken individually (fig. 4.6).

There were wide fluctuations in the consumption expenditure every season, which was directly influenced by the income level of the families. Male members in the families were spending much money on alcohol and betel and these faulty habits were found among almost all the adult members. The low level of expenditure on education clearly indicates their backwardness in education. The results are comparable with the observations of Sathiadas and Panikkar (1989), Nalini Nayik (1993) and Karuna (1993).

Table 4.13. **Correlation between monthly expenditure and selected variables**

Variable	r value
Family size	0.68**
Number of family members employed	0.66**
Number of days employed for fishing	0.71**
Number of days employed for fish vending	0.01
Average monthly income	0.83**
Expenditure on toddy / arrack	0.71**
Maintenance charge of fishing equipments	0.61**

\*\* Significant at 0.01 level

To find out the relationship between the average monthly family expenditure and selected variables, correlation analysis was carried out and the result is presented in Table 4.13. The results showed that the monthly household expenditure had a strong positive correlation with the average monthly income, family size, number of family members employed, number of days employed for fishing.

expenditure on toddy / arrack and maintenance charge of fishing equipments.

### **Regression analysis**

The results of the regression analysis indicated that average monthly income (x1) and family size (x2) are significant determinants of monthly expenditure of fisherfolk families. These two determinants together contributed 74.48 per cent of the variability in monthly expenditure.

The regression is as follows.

$$x_{10} = 519.4908 + 0.4397 x_1^{**} + 253.3843 x_2^{**}.$$

(0.042169)      (57.37575)

(the figures in parenthesis refer to the standard deviation of the coefficient; \*\* refers to coefficients significant at 1 per cent level)

$$R^2 = 74.48 \%$$

Where,

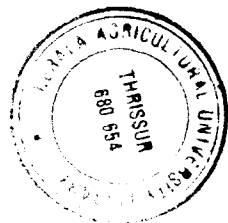
- $x_{10}$  = Average monthly expenditure,
- $x_1$  = Average monthly income,
- $x_2$  = Family size.

#### **4.6.3 Categorywise income and expenditure pattern**

The average monthly income and expenditure pattern of boat owners, kattamaram owners and wage earners are shown in Table 4.14 and figure 4.7.

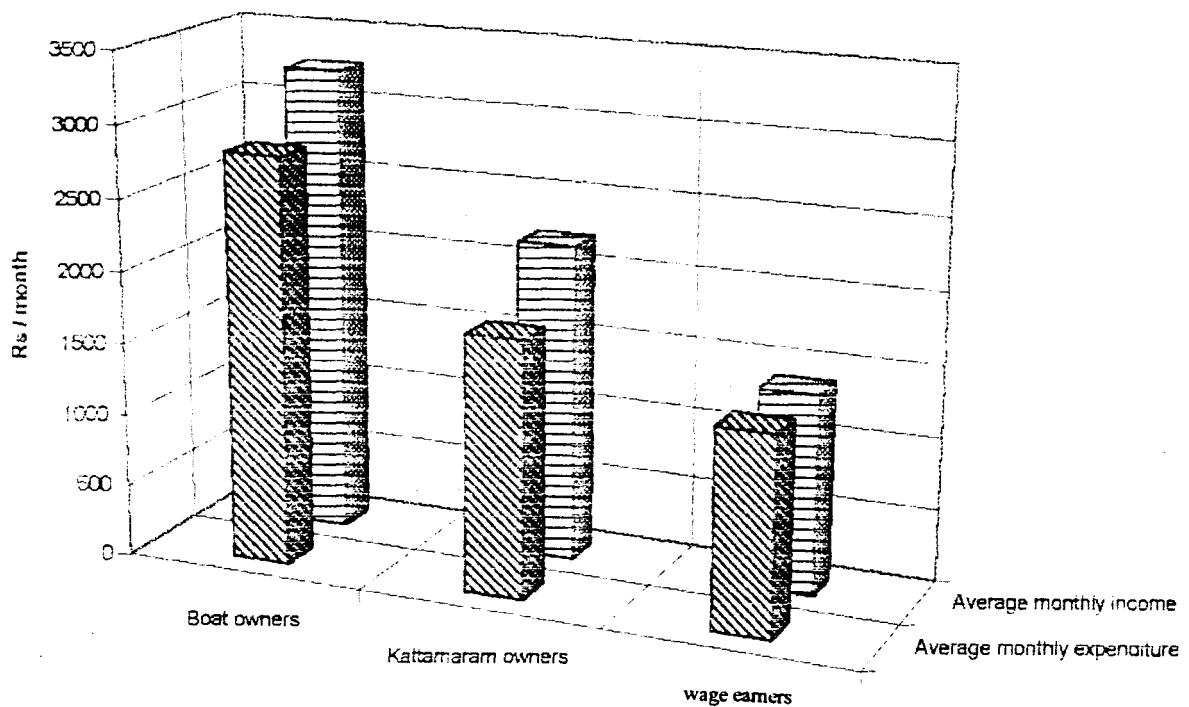
**Table 4.14.** Average monthly income and expenditure of fisherfolk families : Categorywise (Rs)

Categories	Average income(a)	Average household expenditure (b)	(a) - (b) (c)	Maintenance charge (d)	Total expenditure [(b) + (d)] (e)	(a) - (e)
Boat owners	3249.72	2204.23	+1045.49	620.16	2824.39	+425.33
Kattamaram owners	2194.63	1623.36	+571.27	146.85	1770.21	+424.42
Wage earners	1375.59	1364.73	+10.86	-	1364.73	+10.86
Weighted average	1918.94	1590.80	+328.14	159.93	1750.73	+168.21



171234 51

Fig 4.7. Comparison of average monthly income and expenditure pattern of boat owners kattamaram owners and wage earners



The average monthly income of boat owners was found to be Rs. 3249.72 whereas in the case of kattamaram owners and wage earners it was Rs. 2194.63 and Rs. 1375.59 respectively. It was also noted that the average monthly expenditure of boat owners, kattamaram owners and wage earners were Rs. 2824.39, Rs. 1770.21 and Rs. 1364.73 respectively. The difference between income and expenditure worked out to be Rs. 425.33 for boat owners and Rs. 424.42 for kattamaram owners. The income and expenditure were found to be nearly the same in the case of the wage earners. Since the balance amount of boat owners and kattamaram owners was spent for the repayment of credits, there was no savings for all the categories.

#### 4. 7. Permanent assets

The details of permanent assets were calculated as the sum of the values of gold ornaments and consumer durables. It is obvious from Table 4. 15 that the values of permanent assets of the households in both the villages were very low even though it was not negligible. The average value of permanent assets for both the villages together was estimated as Rs. 4845.35.

Table 4.15. Value of permanent assets of sample households

Item	Vizhinjam		Anjuthengu		Total	
	Rs.	%	Rs.	%	Rs.	%
Gold ornaments	4416.00	81.8	3030.00	70.5	3723.00	76.8
Cots	216.00	4.0	284.00	6.6	250.00	5.2
Radio	118.00	2.2	359.60	8.4	238.80	4.9
Tables	164.00	3.0	239.80	5.6	201.90	4.2
Chairs	99.20	1.8	113.60	2.6	106.40	2.2
TV	310.00	5.8	0.00	0.0	155.00	3.2
Others	72.50	1.4	268.10	6.3	170.25	3.5
Total	5395.70	100.0	4295.00	100.0	4845.35	100.0

The value of permanent assets per fisherfolk household in Vizhinjam village was worked out as Rs. 5395.70 and as Rs. 4295.00 in Anjuthengu village. Of the total value of permanent assets, the share of gold ornaments was 81.80 per cent in Vizhinjam and 70.50 per cent in Anjuthengu. It was found that gold ornaments formed a major part of the permanent assets of the households.

The value of permanent assets shows the poor facilities in the houses of fisherfolk families. The majority of the households did not have furniture like chairs, tables and cots. This indicates the low living conditions of the sample households.

#### **4.8. Extent of credit availed and indebtedness**

The availability of credit is a major indication of the tempo of economic activities of any area. The total number of loans availed by the sample fisherfolk families in Vizhinjam and Anjuthengu were 48 and 65 respectively. In Vizhinjam village, about 78 per cent of the sample families had availed loans whereas in Anjuthengu village it was 88 per cent. The average amount of debts incurred by the fishermen families of Vizhinjam was Rs. 16,020.00 and that of the Anjuthengu fishermen families was Rs. 23,110.00. The average amount repaid was Rs. 6,937.00 in Vizhinjam and Rs. 6,019.00 in Anjuthengu. A majority of the repaid amount was given as interests of the loans. The outstanding debt per household in Vizhinjam village and Anjuthengu village were worked out as Rs. 15,252.00 and 19,650.00 respectively. It is evident that due to the very high interest rates levied by money lenders - as high as 60 per cent - the fishermen could not come out of the vicious circle of indebtedness.

Table 4.16. Details of preference of credit agencies and reason for preference

Agency	No. of respondents preferred			Reason for preference						
	Vizhinjam	Anjuthengu	Total	ease to obtaining loans	lower interest rate	less formality	Ease to repay	Subsidy	Ignorance	Total
Commercial banks	23 (46)	17 (34)	40	-	38 (95.0)	-	2 (5.0)	-	-	40 (100)
Co-operatives	4 (8)	18 (36)	22	1 (4.5)	10 (45.5)	1 (4.5)	2 (9.1)	8 (36.4)	-	22 (100)
Money lenders	17 (34)	7 (14)	24	14 (58.3)	-	9 (37.5)	1 (4.2)	-	-	24 (100)
No preference	6 (12)	8 (16)	14	-	-	-	-	-	14	14
Total	50 (100)	50 (100)	100	15	48	10	5	8	14	100

(Figures in parenthesis indicates Percentage)



#### 4.8.1. Preference of credit agencies

The preference of credit agencies by the fisherfolk families in the study area is shown in Table 4.16. The majority of the respondents (40 %) preferred commercial banks as their credit agency. Respondents preferring money lenders and co-operatives were 24 per cent and 22 per cent respectively. In Vizhinjam village, preference of credit agencies viz., commercial banks, money lenders and co-operatives by fisherfolk families was 46 per cent, 34 per cent, and 8 per cent respectively as against 34 per cent, 14 per cent and 36 per cent respectively in Anjuthengu village.

It is seen that 62 per cent of the sample households preferred institutional agencies like commercial banks or co-operatives as their credit agency because of the lower interest rate levied by them when compared with private money lenders. The interest rate charged by commercial banks and co-operative banks ranged from 15.5 to 20.5 per cent of the loan amount while that of private money lenders it ranged from 36 to 60 per cent. Respondents in Anjuthengu village were well aware of the exploitation of fisherfolk by the professional money lenders. Due to the strong co-operative activities in this area the majority of the families preferred the same as their credit agency.

From the Table 4.16 it is noticed that among the respondents preferring commercial banks and co-operatives as their credit agencies, 95 per cent and 45.5 per cent respectively had preferred it due to the low interest rates charged by these institutions and 36.4 per cent of the respondents preferring co-operatives preferred it because of the subsidy for loans extended by the co-operatives. Out of 24 respondents preferring money lenders as their credit agency, 58.3 per cent had preferred it because of the ease with

which loans could be obtained and 37.5 per cent had preferred it due to the lack of formalities involved.

#### 4.8.2. Source of credit

Money lenders were the most important sources of credit for fishermen in both the villages. Of the total loans availed, about 57.5 per cent was extended by money lenders. The loans provided by institutional agencies viz., commercial banks and co-operatives was found to be 17.7 per cent and 16.8 per cent of the total loans availed in the study areas. In Anjuthengu village the credit extended by the co-operative sector was 24.6 per cent while the credit given by the money lenders was about 73 per cent in Vizhinjam as against 46.2 per cent in Anjuthengu (Table. 4.17 ; Fig. 4.8).

Even though the fisherfolk families preferred institutional agencies as credit agencies, they ultimately depended on money lenders for getting loans for various purposes. When compared with the Vizhinjam village more fisherfolk families in Anjuthengu village were utilising co-operative societies to avail credit. The interest rate charged by co-operative banks ranged from 15.5 to 20.5 per cent of the loan amount. So efforts have to be made to free the fisherfolk families from exploitation by the private money lenders. A revitalisation of the village fishermen co-operative societies is a feasible solution in this regard.

#### 4.8.3. Purpose of credit

The data on of credits availed for various purposes is given in Table 4. 17 and Fig. 4.9. The majority of loans availed by the fisherfolk families were used for productive purposes such as purchase of fishing equipment (54 %) and fish vending (5.3 %).

Table 4. 17. Details of credit availed by the sample households

Particulars	Number of credits availed					
	Vizhinjam		Anjuthengu		Total	
<u>Source</u>						
Money-lenders	35	(72.9)	30	(46.2)	65	(57.5)
Co-operatives	4	(8.3)	16	(24.6)	20	(17.7)
Commercial banks	8	(16.7)	11	(16.9)	19	(16.8)
Friends & relatives	1	(2.1)	8	(12.3)	9	(8.0)
<b>Total</b>	<b>48</b>	<b>(100.0)</b>	<b>65</b>	<b>(100.0)</b>	<b>113</b>	<b>(100.0)</b>
<u>Purpose of credit</u>						
Purchase of fishing equipments	30	(62.5)	31	(47.7)	61	(54.0)
Marriage purposes	7	(14.6)	15	(23.0)	22	(19.5)
Home consumption	3	(6.3)	12	(18.5)	15	(13.3)
Fish vending	2	(4.2)	4	(6.2)	6	(5.3)
Others	6	(12.4)	3	(4.6)	9	(7.9)
<b>Total</b>	<b>48</b>	<b>(100.0)</b>	<b>65</b>	<b>(100.0)</b>	<b>113</b>	<b>(100.0)</b>
Average amount of credit (Rs)	16,020.00		23,110.00		19,565.00	
Amount repaid	9,537.20		6,019.00		6,477.65	
Amount outstanding (Rs)	15,252.00		19,650.00		17,451.00	

(Figures in parenthesis denotes percentage)

Fig 4. 8 Classification of credits : Sourcewise

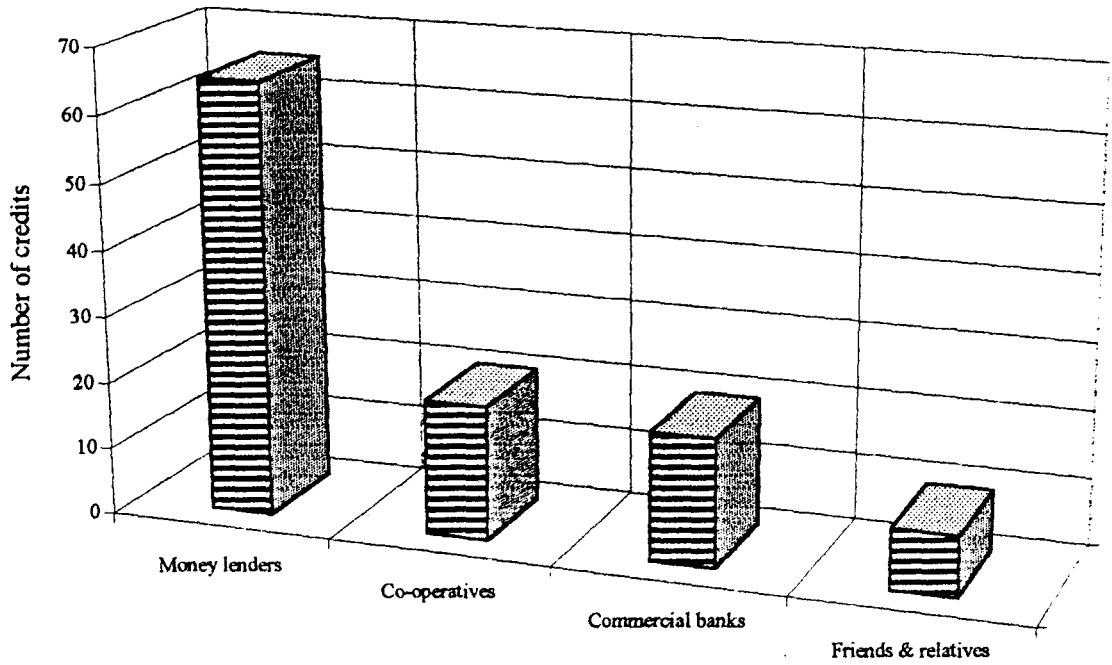
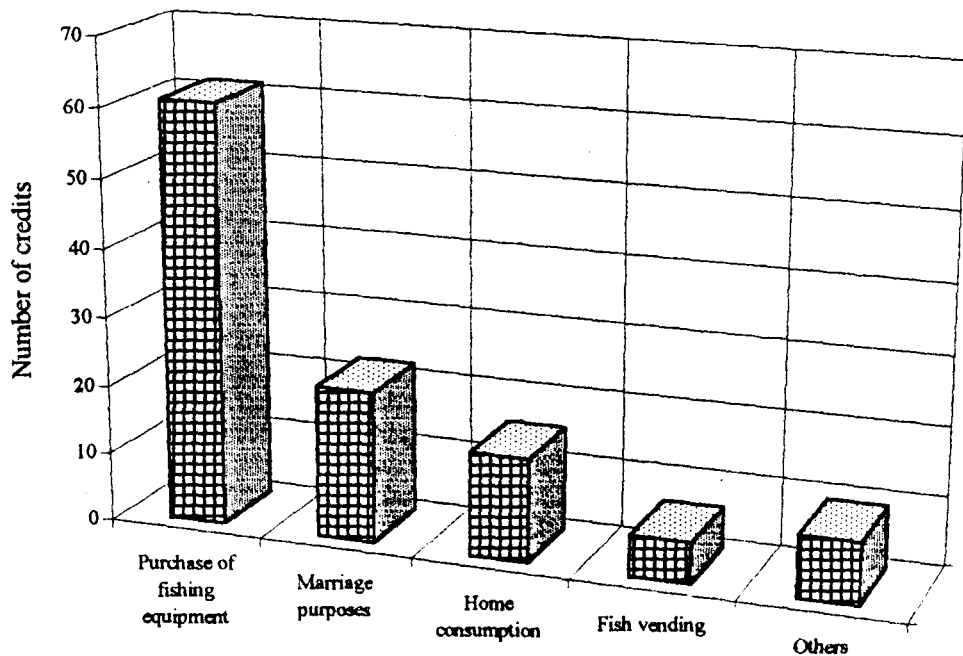


Fig 4. 9 Classification of credits : Purposewise



About 19.5 per cent of loans were used for marriage purposes, 13.3 per cent for household consumption and 7.9 per cent for other purposes such as educating children, expenditure related to death and maintenance charges of fishing equipments.

In Vizhinjam village loans availed for various purposes viz., purchase of fishing equipment, marriage, household consumption, and fish vending were 62.5 per cent, 14.6 per cent, 6.3 per cent, 4.2 per cent respectively where as in Anjuthengu it was 47.7 per cent, 23 per cent, 18.5 per cent and 6.2 per cent respectively. The co-operatives and commercial banks could play a better role in providing loans to the fisherfolk for productive purposes. The linkage of production with marketing through co-operatives would be immensely helpful in avoiding default of repayments and in eliminating middlemen from fish trading.

Due to the uncertainty in income levels and the heavier investment costs of fishing equipment, the majority of fishermen families in the study areas availed loans for various purposes. This fact can be well established from the fact that 59 per cent of the total loans availed was for the purchase of fishing equipment and for marketing. A major part of the earnings went as interests of loans, and no substantial savings had been created from their employment. As a result, borrowing for consumption expenditure remained high. About 32.8 per cent of the total loan amount availed were for home consumption and for marriage purposes. Government schemes were channalised through co-operatives and the subsidy extended for the production purpose loans was found to be 33.33 per cent. But this was not enough to meet the huge requirement of money for the capital investment in the sector.

To study the association between the loan amount outstanding and selected variables, the correlation coefficients worked out and the results are given in Table 4.18.

**Table 4.18. Correlation between loan amount outstanding and selected variables**

Variable	r value
Total monthly income	0.43**
Family size	0.19
Number of family members employed	0.19
Maintenance charge of fishing equipments	0.52**
Present value of boats	0.57**
Present value of nets	0.52**
Number of days employed for fishing	0.23*
No. of days employed for fish vending	-0.12
Total expenditure	0.42**
Expenditure on toddy	0.34**
Expenditure on betel chewing	0.42**

\* Significant at 0.05 level

\*\* Significant at 0.01 level

It is found that the loan amount outstanding had highly significant positive correlation with the variables viz., average monthly family income, maintenance charge for fishing equipments, present value of boats, present value of nets, total household expenditure, expenditure on toddy and expenditure on betel chewing. It was also noticed that a positive and significant relationship existed between the loan amount outstanding and the number of days employed for fishing.

### **Regression analysis**

The results of the regression analysis revealed that loan amount outstanding ( $x_{14}$ ) was significantly influenced by maintenance charge of fishing equipments ( $x_{13}$ ) and expenditure on betel chewing

( $x_{11}$ ), expenditure on toddy / arrack ( $x_{12}$ ), number of days' employed for fishing ( $x_{11}$ ), family size ( $x_2$ ) and number of days employed for fish vending ( $x_8$ ) were also noticed as determinants of loan amount outstanding. All these determinants together contributed only 29.12 per cent of the variability of the loan amount outstanding.

The equation is as follows

$$\begin{aligned}
 x_{14} = & 2687.62 + 32.8114 x_{13}^{**} + 48.890 x_{11}^* - 8.2911 x_{12} + \\
 & (6.3365) \quad (22.83819) \quad (7.90089) \\
 & 15.7861 x_7 - 1435.752 x_2 + 4.5340 x_8 \\
 & (16.55079) \quad (1670.922) \quad (23.83086)
 \end{aligned}$$

(the figures in parenthesis refer to the standard deviation of the coefficient. \*, \*\* refer to coefficients significant at 5 per cent and 1 per cent levels respectively)

$$R^2 = 29.12 \%$$

Where,

- $x_2$  = Family size
- $x_7$  = Number of days employed for fishing
- $x_8$  = Number of days employed for fish vending
- $x_{11}$  = Expenditure on betel chewing
- $x_{12}$  = Expenditure on toddy / arrack
- $x_{13}$  = Maintenance charge of fishing equipments

#### 4.9. Food intake

The results of the analysis of the food intake of the sample households are presented in Table 4.19 and Fig. 4.10. It can be seen from the table that the food intake of the households was highly unbalanced. The average monthly household consumption of cereals was 29.31 kg. followed by fish, egg and animal products

Table 4. 19. Average intake of selected food items of sample households (kg/month)

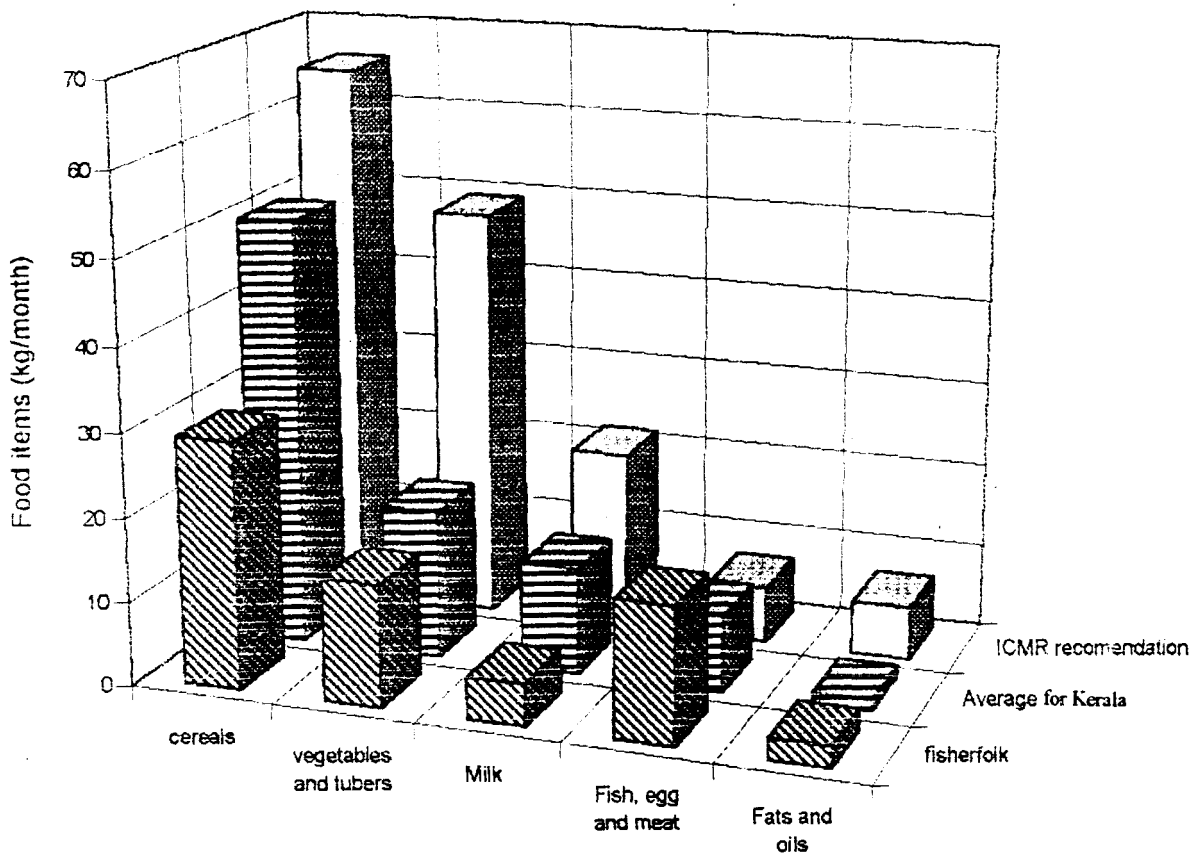
Food item	Average quantity consumed	Average consumption of Kerala *	Recommended quantity**
Cereals	29.31	50.77	65.42
Pulses	0.09	1.87	8.72
Vegetables and tubers	14.47	17.61	48.98
Fish, egg and meat	16.10	9.01	6.66
Milk	5.02	12.59	21.16
Fats and oils	2.52	1.30	6.27

\* Calculated on the basis of findings of National Nutritional Monitoring Bureau (NNMB) survey, 1991

\*\* Calculated on the basis of RDA ,Indian Council of Medical Research (ICMR), 1991



Fig 4.10. Comparison of average monthly family food intake of fisherfolk with Kerala average and ICMR recommendations



(16.10 kg). It was also observed that the consumption of milk was 5.02 kg. and that of fats and oils was 2.52 kg. The intake of pulses was found to be very meagre (0.092 kg).

When the food intake of the sample households was compared with the recommendations of the Indian Council of Medical Research (ICMR) expert group, it was observed that the cereal consumption of the fishermen families was only 45 per cent of the recommended quantity of 65.42 kg. per family per month. A part of the requirement of carbohydrates was met from tapioca which was a major constituent of their vegetable basket. But the intake of leafy vegetables and vegetables other than tubers was very less and far below the requirement of 48.98 kg. of vegetables per family per month as indicated in the table. The consumption of milk, and fat and oils was also inadequate as compared to the requirement of 21.16 kg. and 6.27 kg. respectively.

The food intake of the sample households was also far less than the average family food consumption of Kerala. Based on a survey conducted by National Nutritional Monitoring Bureau (NNMB) in 1993, the average monthly family food consumption of Kerala State was 50.77 kg. cereals, 1.87 kg. pulses, 17.6 kg. vegetables and tubers, 9.0 kg. fish, egg, and meat, 12.5 kg. milk, and 1.30 kg. fats and oils. From the results it is evident that the average family intake of cereals, pulses, vegetables and tubers, and milk were far below the state average, while, the average home consumption of fish, egg, and meat, and fats and oils by fisherfolk families were higher than the state average (Table 4.19).

In Kerala however, the results obtained indicate that the consumption of roots and tubers as well as meat are much above the Recommended Dietary Allowances (RDA). Krishna (1988) and

Karuna (1993) have reported similar results in their studies conducted among the fisherfolk families of Kerala. Drewes (1992) found that the fisherfolk families of Tamil Nadu are in the habit of consuming vegetables, meat and milk only occasionally.

Almost all the adult members of the fishermen family were in the habit of taking food from outside their homes and it may be one of the reasons for the low cereal consumption in the households. The females and children of the family were very much dependent on the food prepared in the home itself and they were seriously affected by the unbalanced food consumption pattern. In the long run this may precipitate into certain deficiency diseases and health problems, especially among women and children.

#### 4.10. Health status

The health status of the sample households was also analysed and the results are given in Table 4.20. It was seen that out of the 100 sample households selected for the study there were 53 households where no member had any major disease or health problems.

Table 4.20 Details of health status of sample households

Locality	Diseases							Total
	Asthma	TB	Asthma & TB	Asthma & Others	TB & Others	Other diseases	No diseases	
Vizhinjam	4	5	1	2	1	12	25	50
Anjuthengu	8	4	0	1	3	6	28	50
Total	12	9	1	3	4	18	53	100

There were 12 families in which at least one member suffered from asthma or tuberculosis. Both tuberculosis and asthma were noticed in one family in Vizhinjam. It may be inferred from the above data that the fisherfolk of the areas under focus did not enjoy a good health status. Tuberculosis is associated with infection and poor sanitation and it could be preceptitated by a poor diet. Asthma could be of allergic origin or it could be a side-effect of worm infestation or due to environmental problem.

In this context, it is of special interest to note that these families lived in congested areas which had a very poor environment as well as poor sanitary facilities. Lack of latrines and the absence of potable water might have led to the poor health status observed among this target population.

#### 4.11. Housing conditions

##### 4.11.1. House ownership pattern

It was noticed that out of the 100 sample households, 88 were residing in their own houses. Twelve households did not possess a house, out of which 11 families lived in houses belonging to their friends and relatives and one family in Vizhinjam lived in a rented house (Table 4.21).

Table 4. 21 Ownership status of houses of sample households

Ownership of house	Vizhinjam	Anjuthengu	Total
Owned	44 (88)	44 (88)	88
Rented	1 (2)	0	1
Friends and relatives	5 (10)	6 (12)	11
Total	50 (100)	50 (100)	100

(figures in parenthesis indicates per centage)

Fourtyfour houesholds each in Vizhinjam and Anjuthengu villages had their own houses and 5 and 6 families in Vizhinjam and Anjuthengu village respectively were living in houses belonging to friends and relatives.

According to the census 1991, out of the total of 55.13 lakh families in the state, only 1% did not have their own house. But it is revealed that in the study area, about 12 per cent of the families did not possess a house of their own.

#### 4.11.2 Type of house

It was noticed from the study that 54 per cent of the families in the study areas were living in huts, while 24 per cent live in pucca houses and two per cent in concrete houses. In Anjuthengu village it was seen that 70 per cent of the families were living in huts while in Vizhinjam village only 38 per cent of the families lived in huts. The details of the types of houses are shown in the Table 4.22 and Fig. 4. 11.

Classifying the households into the different categories of boat owners, kattamaram owners and wage earners, it was seen that 65 per cent of the wage earners were living in huts, 19 per cent in pucca houses, 14.3 per cent in tiled houses and 0.02 per cent in asbestos houses. Among the kattamaram owners 60 per cent lived in huts and 20 % each in pucca and tiled houses (Fig. 4. 12).

From the table it is noticed that more than half of the respondents and their families were living in huts with coconut leaf walls and thatched roofs, the majority of them being wage earners. The huts had very little dwelling space and were ill ventilated and

Table 4. 22 Type of houses of selected families

		Hut	pucca	Tiled	Concrete	Asbestos
Locality	Vizhinjam	19	19	11	0	1
	Anjuthengu	35	5	8	2	0
	Total	54	24	19	2	1
Category	Boat owners	4	9	7	2	0
	Kattamaram owners	9	3	3	0	0
	wage earners	41	12	9	0	1
	Total	54	24	19	2	1

Table 4.23. Electrification and sanitary facilities of the fisherfolk houses in the study area

	Number of houses		
	Vizhinjam	Anjuthengu	Total
<u>Electrification</u>			
Electrified	20 (40)	11 (22)	31
Not electrified	30 (60)	39 (78)	69
Total	50 (100)	50 (100)	100
<u>Sanitary facilities</u>			
Have latrine	9 (18)	15 (30)	24
No latrine	41 (82)	35 (70)	76
Total	50 (100)	50 (100)	100

(Figures in parenthesis indicate percentage)

Fig 4.11 Types of houses of fisherfolk families

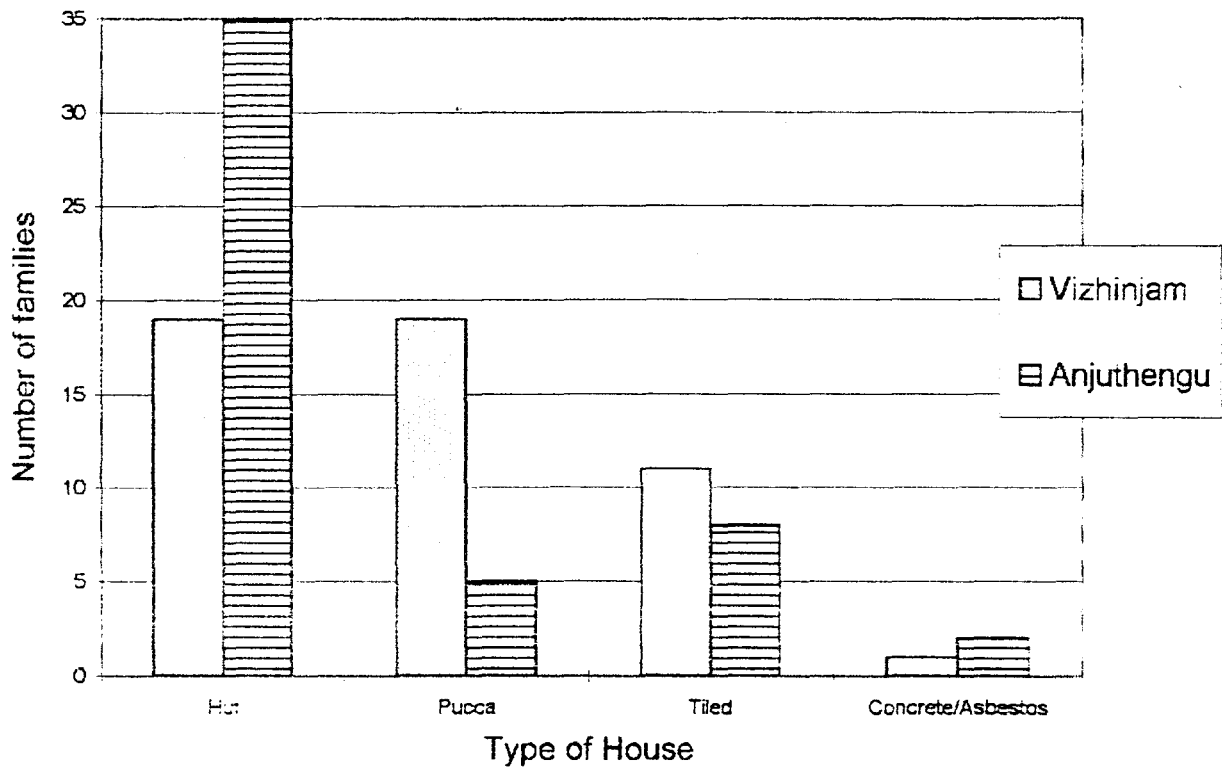
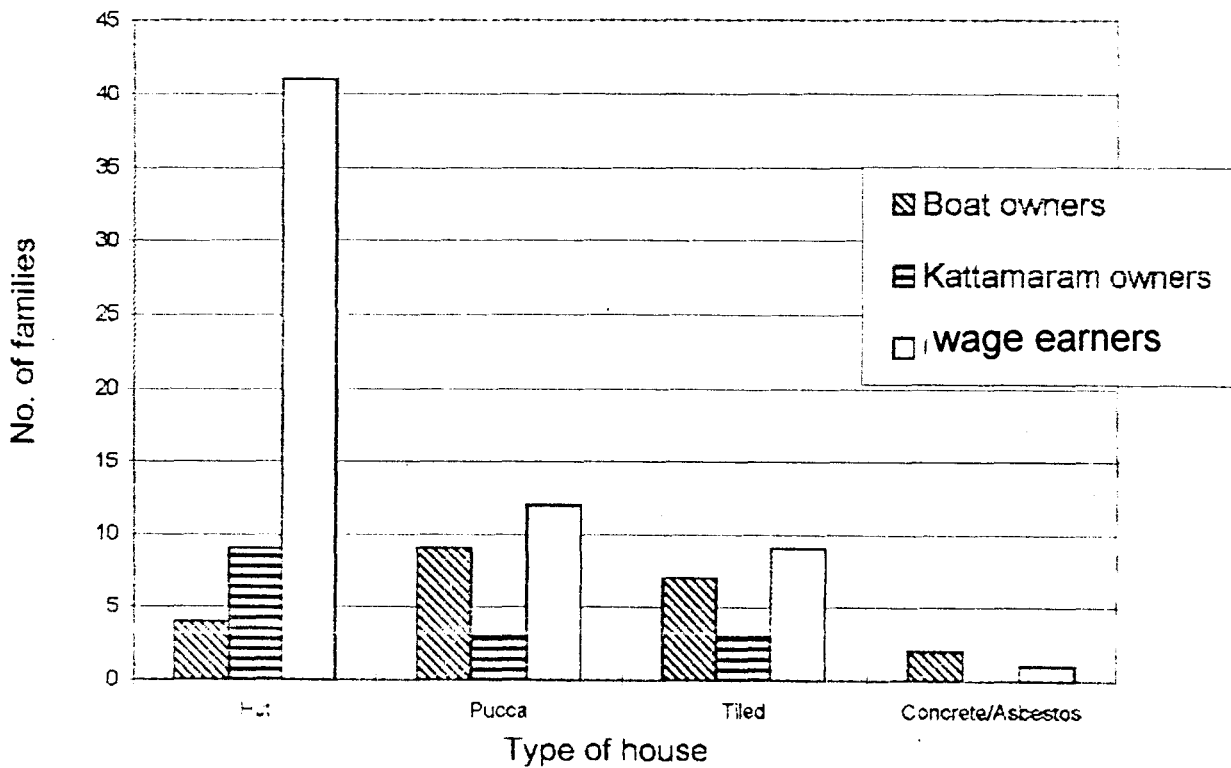


Fig 4.12. Types of houses of fisherfolk families



were seen all along the sandy coastal areas. Only 22 per cent of the families were living in tiled or concrete buildings. Thus it is inferred that the general housing conditions of the fishermen families were very low, especially in the case of the wage earners.

#### 4.11.3 Electrification and sanitary facilities

The details of electrification and sanitary facilities are presented in Table 4.23. It was seen that 31 per cent of the families resided in electrified houses and 69 per cent in non-electrified houses. The electrified and non-electrified houses were 40 per cent, 60 per cent and 22 per cent and 78 per cent for Vizhinjam and Anjuthengu respectively. Thus the results indicate that the majority of the fisherfolk houses were not electrified.

From the study it was also noticed that 76 per cent of the families did not have latrines. The sanitary facilities of the houses in these areas were poor owing to the high density of population and the proximity to the sea shore. The houses were found to be clustered together and were very congested which prevented the families from maintaining healthy sanitary conditions in their surroundings. Facilities for drainage and disposal of household wastes were also seen to be very poor. This is an indicator of the poor living conditions among the sample families.

#### 4.12 Exposure to mass media

From Table 4.24 it is evident that taking both the villages together, only 15 per cent of the total sample households read news papers regularly. Only 9 per cent watched television and 17 per cent listened to radio regularly. The pattern remained the same when the villages were taken individually.



**Table 4. 24. Exposure of fisherfolk families to mass media**

Information source	Number of respondents		
	Vizhinjam		Total
<b>News paper</b>			
Regular	10     (20)	5     (10)	15
Some times	0	8     (16)	8
Never	40     (80)	37     (74)	77
<b>Television</b>			
Regular	4     (8)	5     (10)	9
Some times	15     (30)	11     (22)	26
Never	31     (62)	34     (68)	65
<b>Radio</b>			
Regular	5     (10)	12     (24)	17
Some times	2     (4)	6     (12)	8
Never	43     (86)	32     (64)	75

(Figures in parenthesis indicate percentage)

Despite the high literacy level of the fisherfolk which was found to be 63 per cent, the majority of the respondents did not give much importance to the utilisation of the mass media like news papers, television, and radio. Due to this the social awareness of the fishermen in these areas was found to be poor; neither were they exposed to the various developments in the society. . Thus the knowledge level of the fisherfolk remain very poor and they remain marginalised and continue to be confined to their traditional job, fishing.

#### 4.13 Social participation

The involvement of fishermen in different social activities was studied and the details are given in the Table 4. 25. The major influence among the respondent families was the Church, as they were Christians. Nalini Nayik (1993) has reported that fishermen spent time for religious festivals and for cinema but not for meetings on their own trade.

It was noticed that 72 per cent of the respondents were members of either co-operatives or the Malsyafed or both and 28 per cent were not members of any organisation. Thirtyfive per cent of the respondents were beneficiaries of Malsyafed and 31 per cent were members of co-operatives. Six per cent of the respondents were beneficiaries of both Malsyafed and co-operatives. It is interesting to note that taking both villages together, 28 per cent of the respondents were not members of any of the organisation.

**Table 4. 25 Participation of respondents in various fisheries' organisation**

Name of forum	No. of respondents as members of forum				
	Vizhinjam		Anjuthengu		Total
Malsyafed	29	(58)	6	(12)	35
Co-operatives	2	(4)	29	(58)	31
Co-operative & Malsyafed	0		6	(12)	6
Not a member	19	(38)	9	(18)	28
Total	50	(100)	50	(100)	100

(Figures in parenthesis indicates per centage)

It was also seen that while 58 per cent of the respondents in Anjuthengu village were members of co-operatives, only 4 per cent were so in Vizhinjam village. This was due to the stronger co-operative activities taking place in the Anjuthengu village. The Thazhampally Anjango Fishermen Development and Welfare Co-operative Society is the co-operative society working in the area which provides the basic infrastructure facilities, input and welfare schemes to the fisherfolk families. Participants in the co-operative in Anjuthengu, are free to make use of the marketing services, and are not required become members. While membership in the co-operatives bring many benefits, it does not necessarily provide a strong sense of identity. This may therefore limit the effectiveness of the co-operative as an agent for changes.

Thus it is inferred from the study that the socio-economic characteristics such as family size, land ownership, educational status, and ownership of fishing equipment have a direct

influence on the living standards of fisherfolk families. Low income levels and a high expenditure on toddy / arrack also contribute much to the low living standards of the fishing community. It has resulted in the high indebtedness of the fisherfolk families. Many of the families had no houses of their own and this is an important area to be looked into for improving their living condition. Congested dwelling places and an unhygienic environment resulted in various health problems. Electrification and sanitary facilities were lacking in many of the houses. social participation and utilisation of mass media like radio, television and news papers were also very limited. Thus the overall socio-economic conditions and standard of living of the fisherfolk community in the study area is very low and far below the state average.

**SUMMARY**

## 5. SUMMARY

Kerala with its long stretch of coastline extending over 590 km. is endowed with rich marine resources. The marine wealth of Kerala is not only rich in its resource base but also in species diversity. The fisheries sector support about 3.36 per cent of population in the State and contributes about 30.60 per cent of the total fish production of the country. But the fisherfolk, who depend completely on fishing and related activities for their livelihood, remain a marginalised community in the State.

Marine fishing in the State is largely concentrated in the inshore areas and hence pressure on the marine sector quite often exceeds its carrying capacity. Over the years fishing in the State has undergone tremendous changes with respect to the technology used and it has emerged as a capital intensive industry. Due to the tougher competition, energy costs and exploitation by middle men in the marketing of fish the fisherfolk do not get reasonable returns for their hard work. Even though Government and Non-Governmental Agencies (NGOs) have attempted to uplift them and bring them to the main stream society, their living conditions have not much improved.

The present study has aimed at understanding the socio-economic status of the fisherfolk community in the State with special reference to the Thiruvananthapuram district, and had the following objectives.

1. To understand the present socio-economic status of traditional fisherfolk in Kerala with particular emphasis on the income and expenditure pattern of the community concerned.

2. To analyse the levels of living of the fisherfolk with respect to food intake, shelter, educational status and sanitary conditions.

The study concentrated on the fisherfolk of Thiruvananthapuram district because 21.5 per cent of the fishermen population of the State reside in this district which also has the highest density of fishermen population in the state. Also, of the 222 marine fishing villages in the state, 42 are in Thiruvananthapuram. The study focused on two of the largest fishing villages in the district Viz., Vizhinjam and Anjuthengu.

A sample size of 50 traditional fisherfolk families from each village was selected using stratified random sampling technique, taking motorised and non-motorised fisherfolk families in two strata. The study was based on primary and secondary data. A well structured and pre-tested questionnaire was used to collect the primary data from the sample households. The data collected were analysed using suitable statistical methods such as percentage analysis, means, correlation and regression analysis.

The variables used in the study included general information on households, educational levels, employment status, income and expenditure patterns, extent of credit availed and indebtedness, food intake, health status, housing conditions, social participation and other relevant characteristics which are useful in measuring the socio-economic status of a household.

Some of the important findings are

1. The average family size of the fisherfolk was worked out as 5.19. It was 5.58 in Vizhinjam village and 4.8 in Anjuthengu village.
2. About 25 per cent of fisherfolk were in the age group of 21-35 years

and only 4.1 per cent were in the age group of above 60 years. The female to male ratio was found to be 784 females for 1000 males.

3. Landless fisherfolk families constituted 37 per cent of the fishermen population and among those who owned land, 55 per cent had less than 5 cents of land.
4. The literacy rate of the fisherfolk was found to be 63 per cent in which males had a lower literacy rate (53 %) than females (67.8 %).
5. About 85 per cent of the workforce in the study area was engaged in fishing and about 14.41 per cent was engaged in fish vending. Usually women were found to have taken up fish vending.
6. Among the families studied, 22 were owners of boats and 17 per cent owned kattamarams. The rest of the families were wage earners who were engaged in fishing in other's boat or kattamarams. Due to the very high investment cost and maintenance charge of fishing equipments many boat and kattamaram owners were deeply indebted.
7. The average monthly income of a fisherfolk family was found to be Rs. 1918.94. In Vizhinjam village it worked out to be Rs. 2160.20 as against Rs. 1677.68 in Anjuthengu village. When categorised into boat owners, kattamaram owners and wage earners the average monthly income was found to be Rs. 3249.72, Rs. 2194.63 and Rs. 1375.59 respectively.
8. The food consumption pattern showed that the maximum amount of money per month was spent on food from outside the home (Rs. 278/-). The expenditure on purchase of rice followed closely behind (Rs. 266/-). The amount spent on pulses and vegetables other than tubers was seen to be very negligible.



9. Of the total monthly household expenditure of Rs. 1590/-, 62.52 per cent was spent on the food, 12.52 per cent on arrack and 8.5% on fuel and lighting. The percentage expenditure on betel chewing, clothing, medicinal purposes and recreation were 7.58 %, 4.24%, 2.11% and 1.92 % respectively. The expenditure on education was observed to be very meagre.
10. The average value of permanent assets of households was found to be Rs. 4845/- in which the share of gold ornaments was 76.8 per cent. All other assets including radio, television, and household articles like chairs, tables and cots was found to be very few in number.
11. The majority of the respondents (48%) preferred commercial banks as their credit agency. The respondents preferred co-operatives and money lenders by about 24% and 22% respectively. the rest had no particular preference. It was also noticed that the sample households were utilising money lenders for availing credit.
12. The average amount of debt incurred by the fisherfolk families was Rs. 19 565/- and the amount repaid was Rs. 6477.65/-. Of the repaid amount, a major portion went as interests of loans and the outstanding amount per household was found to be Rs. 17 451 -.
13. The majority of loans availed were used for production purposes such as the purchase of fishing equipment (54%) and fish vending (5.3%). About 19.5 per cent of loans were used for marriage purposes and the rest for home consumption and for other purposes.
14. A high positive correlation was observed between loan amount outstanding and the variables viz., total monthly income, maintenance

charge for fishing equipments, present value of boats, present value of nets, total expenditure and expenditure on betel chewing. A significant correlation was noticed between loan amount outstanding and the number of days employed for fishing.

15. The household food consumption pattern showed that the cereal food consumption was 45 per cent of the total requirement. They were consuming large quantities of fish. It was also observed that the intake of vegetables other than tubers, milk, and fat and oils were inadequate as compared to the recommendations of the Indian Council of Medical Research (ICMR). The intake of pulses was found to be very meagre and inadequate.
16. In about 47 per cent of the families, at least one member was suffering from some disease. Asthma or tuberculosis or both were seen in 22 families.
17. It was revealed that 12 per cent of the fisherfolk families did not own houses and lived in houses belonging to their friends or relatives.
18. It was noticed that 54 per cent of the families resided in huts, 24 per cent in pucca houses, two per cent in concrete houses and one per cent in asbestos houses. It was also seen that 65 per cent of the wage earners were living in huts.
19. It was noticed that about 69 per cent of the families were residing in non-electrified houses and about 76 per cent of the families did not have latrine.
20. It was evident that of the total fisherfolk respondents selected for the study, only 15 per cent were utilising news papers as source of information. Respondents utilising television and radio were nine per cent and 17 per cent respectively.

21. It was found that the major influence among the respondent families was the Church as they were all Christians. About 72 per cent of the respondents were members of fisheries organisations such as co-operatives or the Malsyafed.

### **Suggestions**

The educational status of the fisherfolk community is very low and there are good number of school dropouts in the lower primary level itself. The low income level of the community, illiteracy among the adults and poor infrastructural facilities available in schools are major reasons for this poor situation. Hence both formal and informal educational programmes are to be formulate to tackle the above problems and to improve the educational status of the fisherfolk families.

The motorised boats have good efficiency in terms of output when compared with kattamaram. But the higher investment cost of the motorised boat is not affordable for the poor fisherfolk. So co-operatives can help the fisherfolk to get these production inputs. Fisheries Co-operative movement can solve many of the problems in processing and marketing of the fish landings. Marketing of the fish catch and supply of production inputs can be linked through co-operative activity. This will help the fisherfolk to eliminate the intermediaries to some extent and to get remunerative price for their fish catch. Governmental agencies and MALSYAFED can give more support to the co-operative movement in this sector.

Efforts can be made to create awareness among the fisherfolk especially among women about the nutrition, sanitation and health aspects which will help to improve the living condition of the fishermen community.

Measures are to be taken to improve the housing condition and sanitary facilities in the house. Housing colonies and community sanitary facilities can reduce the problem to certain extent.

#### **Future line of research**

The study can be elaborated along the following line of research work in future.

- 1) Similar studies can be conducted in other districts of the state.
- 2) Wide seasonal variation exist in the income and expenditure pattern of the fisherfolk community. Hence detailed studies can be conducted throughout the year to get more clear idea of the income and expenditure pattern.
- 3) More detailed studies can be carried out for different aspects like educational status, credit, nutritional status and health status of the fisherfolk in the state.
- 4) Market studies can be undertaken to get a better understanding of the marketing system prevailing in the fisheries sector.

## REFERENCES

## REFERENCES

- Alagaraja, K. 1987. An Appraisal of the Marine Fisheries in Island territories- Lakshadweep and Andaman and Nicobar Island. *CMFRI special publication* 39 (8)
- Balasubramanian and Kaul, P. N. 1985. Adoption of Improved Practices by Traditional Fishermen in Kerala. *Ind. J. Extn. Edn.* 21 (3&4) : 80- 87
- Blase, F. W. 1982. Coastal Village Development in Four Fishing Communities of Adirampattinam, Tamil Nadu. *Bay of Bengal News* 19 : 1-10
- Dharmaraja, S. K., Vijayalekshme, K., Haja Najeemudeen, S., Prasad, C. J., Karthikeyan, K. and Balakrishnan, G. 1987. An Appraisal of the Marine Fisheries of Tamil Nadu. *CMFRI special publication* 34 : 11-15
- Drewes, E. 1982. Three Fishing Villages in Tamil Nadu- A Socio-economic Study. *Bay of Bengal News* 14 : 15
- Fisheries Research Cell. 1991. *Techno-economic Analysis of Motorisation of Fishing units Along the Lower South West Coast of India*. PCO and South Indian Federation of Fishermen Society, Trivandrum.
- Gopakumar, G., Gopalakrishna Pillai, N. and Radhakrishnan Nair. 1986. Mechanisation of Traditional Crafts with Out board Vizhinjam. *Mar. Fish. Infor. Serv.* No. 69 : 23-28
- Hortmann, W. D. 1983. Marine Small Scale Fisheries in Andhra Pradesh: General Description. *Bay of Bengal News* 4 : 7

- India, Govt. of. 1991. *Census of India (1991) series 10. Kerala (Part II B)*.  
Director of census operations, New Delhi.
- Jacob Mani. 1995. Traditional fishermen community in Kerala - A study on the  
problems of marginalisation. *Ph D Thesis*, University of Kerala,  
Thiruvananthapuram.
- James, P. S., Kurup, K. N. and Pillai, N. G. K. 1991. A Review of Present  
Status of Marine Fisheries of Kerala. *Mar. Fish. Infor. Serv.* No.114 : 3-6
- Jancy Gupta. 1991. Factors Influencing Aspiration of Marine Fishermen. *Ind. J.*  
*Extn. Edn.* 17 (1&2)
- Jessy Thomas. 1989. Socio-economic Factors Influencing Educational Standards  
in a Marginalised Community - A Case Study on the Marine Fisherfolk of  
Kerala. *Research report*, CDS, Trivndrum.
- Karuna, M. S. 1993. Nutritional status of women engaged in fish vending in  
Thiruvananthapuram district. *Ph D Thesis* College of Agriculture,  
Vellayani.
- Kerala. Govt. of. 1993. Evaluation study on the impact of motorisation on  
traditional fishing crafts. *Evaluation series II*, State Planning Board,  
Thiruvanaathapuram.
- Kerala. Govt. of. 1995. *Economic Review (1995)* State Planning Board,  
Thiruvananthapuram.
- Krishna Sreenatha. 1988. Some Observations on the Food Consumption Pattern  
and Nutritional Status of Marine Fishermen Community. *Mar. Fish.*  
*Infor. Serv.* No.80 : 22-26

- Kurien, J. 1980. Social factors and Economic Organisation of the Traditional Small scale Fishermen of India. *Social Action* 30 (2) : 111-127
- Leela Edwin. 1988. A Report on the socio-economic Survey of the Fishermen of Narakkal and Kandakadavu. *Research report* CMFRI, Cochin.
- Nalini Nayik. 1993. A study of Socio-economic Conditions of Artisanal Fishing Community on the South West coast of India following Motorisation of Traditional Crafts. *Research report* Programme for Community Organisation, Trivandrum.
- National Council of Applied Economic Research. 1961. *Urban and household survey methods and techniques* : 3
- Panikkar, K. K. P. 1990. A socio-economic Analysis of Prawn Farming in Orissa State. *Mar. Fish. Infor. Serv.* No.106 : 3-10
- Prabhakaran, J. 1978. A study on the Socio-economic Conditions of Marine Fishermen of Thirunelveli District. *M.Sc. (Ag) Thesis* TNAU, Coimbatore.
- Rajhunath. 1987. A Diagnostic Study of Content and Coverage of Fisheries News in National and Regional Dailies. *Annual Report (1987-88)* CMFRI, Cochin.
- Sankar, P. N. 1985. Work, wages and well being of Agricultural labourers in palghat district. *M.Sc. (Ag) Thesis* College of Horticulture, Vellanikkara, Thrissur.
- Sathiadas, R. and Panikkar. 1989. Socio-economic Conditions of the Fishermen of Madras Coastal areas. *Mar. Fish. Infor. Serv.* No.44 : 9-13



- Sathiadas, R., Panikkar, K. K. P. and Kanakkan, A. 1994. Traditional Fishermen in Low Income Trap-A Case Study in Thanjavur Coast of Tamil Nadu *Mar. Fish. Infor. Serv.* No.135 : 5-10
- Sathiadas and Venkataraman, G. 1983. Indebtedness and Utilisation of Fisheries Credit in Sakthikulangara and Neendakara-A Case Study. *Mar. Fish. Infor. Serv.* No.54 : 1-6
- Sehara, D. B., Karbhar, J. P. and Sathiadas. 1986. A Study on the Socio-economic Conditions of Fishermen in Some Selected Villages of Maharashtra and Gujarat Coasts. *Mar. Fish. Infor. Serv.* No.69 : 1-8
- Sen, D., Das, P. K. 1986. Problems of Transfer of Inland Fishermen Technology Among the Small Scale Fish Farmers. *J. Rural Devpt.* 5 (3) : 313-359
- Sister Anne Felce. 1980. Traditional modernity in the fishing community- A study of impact of technological innovations in fishing on the fishermen of Vypeen Island, Kerala. *Ph D Thesis* University of Kerala.
- Sreenath, S., Kumar, V. and Wala, B. N. 1978. Impact of Family Size on Growth and Morbidity of Children From Poor Socio-economic Status. *Journal of Family Welfare* 25 (1) : 48-55
- Swaminathan, M. 1995. *Essentials of food and nutrition. (An advanced text book). Vlo. II.* The bangalore Printing and Publishing Co., Bangalore, p. 45-52
- Thankappan Achari, T. R. 1986. The Socio-Economic Impact of information of Country craft in Purakkad village - A Case Study. Fisheries *Research report* Research Cell and Programme for Community Organisations, Trivandrum.

- Tiab, A., Othman, A. H. and Osman, S. 1982. Structural Changes and Under development in Malay Community with Special Reference to Ternganu. *Akademika* No. 20&21 : 257-371
- Unnikrishnan, G. 1994. Economic status of Agricultural labourers in Thiruvananthapuram district. *M.Sc. (Ag) Thesis* College of Agriculture, Vellayani.
- Vasanthakumar, J., Sundararaj, V., Sukumar, N. and Selvaraj, P. 1987. Research and Development in Marine Fisheries. *Proceedings of Symposium On Research and Development in Marine Fisheries* CMFRI, Cochin. PP. 77
- Veeraputhiran, K. 1988. Training needs of Fisherwomen. *M.Sc. (Ag.) Thesis* TNAU, Coimbatore.
- Vendateswara Rao, K. 1982. Socio-economic Status of Farmers in Ollukkara Block in the Command Area of Peachi Irrigation Project. *M.Sc. (Ag.) Thesis* College of Horticulturre, Vellanikkara, Thrissur.

# APPENDICES

## APPENDIX I

### Socio-economic status of Fisher folk in Kerala

#### A study in Thiruvananthapuram District

#### INTERVIEW SCHEDULE

1. Name of the respondent :
2. Address :
3. (a) Religion : (b) Caste :
4. (a) Locality : (b) Village :
- (c) Panchayat : (d) Block :
- (e) Taluk :
5. Primary data of the household
  - a. Type of family : Joint / Nuclear
  - b. Composition and status of family members

Sl.No	Relation to the head	Age	Sex	Educational status

Educational status : (1) Illiterate (2) Primary (3) Middle (4) High school  
(5) College

#### 6. Employment details of the family members

Sl. No	Relation to the head (2)	Occupational status		No of days employed per year		Working hours per day (5)	break hours per day (6)	Income received per month		Total (8)	Remarks (9)
		Main (3) a	Sub (3) b	Main (4) a	Sub (4) b			Main (7) a	Sub (7) b		
(1)											

Occupational status : (1) fishing (2) Fish vending (3) house hold activities  
(4) private job other than fishing (5) Govt. Job (6) Business

#### 7. Details of land holding

- (a) Do you possess land holding : Yes / No

- (b) If 'yes' total area owned :
- Area leased in / leased out :
- Net area sown :
- Area sown more than once :
- Area used for building and other structures :
- Fallow land if any :

#### 8. Details of crops cultivated

Crop	Area sown	Annual gross returns	Expenditure	Net income
Rice Single				
Double				
Coconut				
Tapioca				
Others (Specify)				

#### 9. Details of live stock enterprises

Livestock	Number	Present value	Income / month	Expenditure / month	Net income	Remarks
Milch cow						
Buffalo						
Goats						
Pig						
Poultry						
Rabbits						
Others (specify)						



## 12. Details of fish vending

Name of family members engaged in fish vending		Source of fish	Cost incurred				Sale proceeds	Net income
Male	Female		Fish (Rs)	Transportation cost (Rs)	Others (Rs)	Total (3) d		
(1) a	(1) b	(2)	(3) a	(3) b	(3) c	(3) d	(4)	(5)

## 13. Details of income

Source of income	Net income per month (Rs)
Fishing	
Fish vending	
Rent	
Livestock	
Agriculture	
Others (specify )	

## 14. Expenditure pattern

### a (1) Expenditure on food (monthly)

Item	source / sources	frequency of use	Quantity purchased per month	Price / unit	Total expenditure per month (Rs)
<u>Cereals</u> Rice Wheat Wheat products Millets (specify) Other cereal products (specify)					

<u>Pulses</u>					
Whole					
Split					
Tapioca					
Other tubers					
Coconut					
Coconut oil					
Other oils & fats					
Leafy vegetables					
Other vegetables					
Spices & condiments					
Fish					
Egg					
Meat					
Milk					
Milk products					
<u>Beverages</u>					
Coffee					
Tea					
Soft drinks					

Source : I Fair price shop, II Open market, III Maveli store

Frequency of use : D<sub>1</sub>-Daily once, W<sub>1</sub> -Weekly once, M<sub>1</sub> - Monthly once,  
D<sub>2</sub>-Daily twice, W<sub>2</sub> -Weekly twice, M<sub>2</sub> - Monthly twice,  
D<sub>3</sub>-Daily thrice, W<sub>3</sub> -Weekly thrice, M<sub>3</sub> - Monthly thrice,  
R - Rarely, N - Nil.

(ii) Expenditure on meals taken from outside

Meal	Frequency	Expenditure / month (Rs)
Break fast		
Lunch		
Supper		
Snack		
Tea		
Soft drinks		

Frequency : D<sub>1</sub> - Daily once, W<sub>1</sub> - Weekly once, M<sub>1</sub> - Monthly once  
D<sub>2</sub> -Daily twice, W<sub>2</sub> - Weekly twice, M<sub>2</sub> - Monthly twice,  
D<sub>3</sub> -Daily thrice, W<sub>3</sub> - Weekly thrice, M<sub>3</sub> - Monthly thrice,  
D<sub>x</sub> - Any time a day, R - Rarely, N - Nev



b. Other expences

Item	Quantity consumed	Total expenditure (Rs)	
		Per month	Per year
Cloths			
House rent			
Fuel			
Lighting			
Conventional - necessities			
Betel chewing			
Cigarette / Beedi			
Tobacco / snuff			
Toddy / Arrack			
Gambling			
Medical expenses			
(a) Doctor			
(b) medicines			
<u>Education</u>			
(a) Books			
(b) Fees			
(c) Private tuition			
<u>Religious / social functions</u>			
(a) Festivals			
(b) Gifts			
(c) Others			
Taxes			
Insurances			
<u>Recreation</u>			
(a) Cinema			
(b) Drama			
Travelling expenses			
Newspaper / magazines			
Repairs , Maintenance			
Fuel for boat			
<u>Luxuries</u>			
(a) Ornaments			
(b) Motor vehicle			
(c) Costly cloths			
(d) others (specify)			

15. Consumer durables

Item	Number	Present value (Rs)	maintenance charge (Rs)
Radio TV Fan Bicycle Table Chairs Cots Iron Others (specify)			

16. Savings

Type of saving	Institution	Period	Amount / installment	Total value

Institution : I Commercial bank, II Co - operative,  
III Money lenders, IV Chitty

17. (a) Credit availed and its utilization

Source (1)	year of borrowing (2)	Purpose (3)	Security (4)	Amount (Rs) (5)	Interest (6)	Mode of repayment (7)	Amount repaid (8)

(contd.)

Amount outstanding (9)	Amount over due (10)	Reasons for over due (11)	Remarks (12)

b) Agency most preferred for credit : Bank / Money lenders / Co - operative /  
 Relatives /Friends

c) Reasons : (1) Easiness to obtain loans (2) Lower interest rate  
 (3) Less formality (4)  
 (5)

d) Problems for obtaining loans if any : Yes / No

If 'Yes' give reasons

e) Use of availed credit

1) Used for original purpose : Yes / No

2) Used for other purpose : Yes / No

If answer is yes for (2), give reasons

### 18. Benefits from fisheries welfare scheme

Awareness about the scheme (1)	Facilities availed (2)	Amount (3)	Purpose (4)	Utilisation pattern (5)

Amount outstanding (6)	Amount over due (7)	Reasons for over due (8)	Remarks (9)

### 19. Social participation

a) Cosmopolitaness:

I Frequency of visit to nearest town:

Two times or more per week/ once in a week/ once in 15 days/  
 once in a month/ seldom/ Never.

II Purpose of visit:

Related to fishing/ personal and domestic/Entertainment/

Others

b) Are you a member of :

Fishermen's forum/co-operatives/Trade union/ political party/  
Voluntary organisation.

- c) Name of the organisation(s):
- d) Do you attend the meetings and other programmes:  
Regularly/Occasionally/ Never
- e) Reasons to join the organisation:  
Beneficial to me/ Forced to join/ Beneficial to community/  
No specific reasons
- f) Tenure of membership :
- g) If not a member of any organisation : Give reasons  
Ignorance/ not interested/ not beneficial/ A nuisance/  
subscription fees/ Others (specify)

## 20. Information source utilisation

Source	Frequency	Source of utilisation
News paper		
Radio		
Television		
Others(specify)		

Frequency: 1. Regular, 2. sometimes, 3. Never

## 21. Housing condition and hygiene

- a) Type of house wall: Pucca / Katcha
- b) Roofing: Thatched/ Tiled/ concrete/others
- c) Whether house is having: Electrification/ Gobar gas/ solar lighting
- d) Nature of house ownership : Owned/ rented
- e) Latrine in the house: Yes/ No
- f) If 'Yes', type of latrine: Ordinary/ with septic tank/
- g) If 'No', Disposal of excreta in : Back waters/ sea shore/ own land
- h) Type of hearth : Ordinary fire wood/ smokeless choola/ Kerosene stove/Gas stove/ electric stove.
- i) Source of drinking water: Well/ Pipe/ Pond/ River.

j) Is the source owned by you: Yes/ No

k) If 'No' give details:

l) Waste disposal

I Solid - Thrown out / made into compost/ other methods

II Liquid - Thrown out/ Directed to sea

22. Health status

a) Distance to PHC: Near/ Less than 1 km./ more.

b) Access to medical care other than PHC : Yes/ No

c) If 'Yes' give details

Name of Hospital/ Dispensary	Ownership	Type	Distance

Ownership: a) Government, b) Private, c) Co-operative

Type : 1) Allopathy, 2) Homeopathy, 3) Ayurvedic

d) Details of health problems of family members (if any)

23. Leisure:

Do you get enough leisure time: Yes/ No

Leisure time activities:

24. Aspiration and values

a) Level of education you would like to give to your children:

Metric/ Graduate / professional/ Not necessary

b) Occupation you prefer for your children:

Fishing / Govt. job/ Private job/ Business

c) Which one do you prefer :

Fishing and related activities/ Other jobs

## APPENDIX II

### MARINE FISHING VILLAGES AND POPULATION IN THIRUVANANTHAPURAM DISTRICT

Sl. No	Name of Village	Population (1994-95)	Sl. No	Name of Village	Population (1994-95)
1	Kollengode	4594	22	Kannamthura	1514
2	Paruthiyoor	5207	23	Vettukadu	3139
3	Poovar	5159	24	Kochuveli	2553
4	Karumkulam	2361	25	Valiaveli	3480
5	Kochuthura	3345	26	Pallithura	527
6	Puthiyathura	6147	27	Vettuthura	2974
7	Pallom	1385	28	Puthenthope	2238
8	Pulluvila	8382	29	Vettiyathura	1885
9	Adimalathura	1729	30	Mariyanad	1398
10	Chowara	5707	31	Puthukurichi	6096
11	Vizhinjam North	8674	32	Perumathura	3298
12	Vizhinjzm South	11124	33	Thazhampally	2268
13	Kovalam	1407	34	Poothura	2334
14	Panathura	2514	35	Anjuthengu	5316
15	Poonthura	11386	36	Mampally	7025
16	Beemappally	5053	37	Kaikkara	1268
17	Cheriathura	1818	38	Arivalam	1474
18	Valiathura	5460	39	Vettoor	5790
19	Kochuthope	3569	40	Chilakkur	3634
20	Valiathope	1645	41	Odayam	3877
21	Sanghumughom	1398	42	Edava	1678

(Source : Dept. of fisheries, Government of Kerala, 1995)

## APPENDIX III

### CODE LIST

Serial number of schedule	: 1, 2, 3, 4, 5, 6, ....., 100.
Locality	: 1. Vizhinjam, 2. Anjuthengu.
Type of family	: 1. Joint, 2. Nuclear
Total area owned	: (Area in cents)
Net area owned	: (Area in cents)
Area under coconut	: (Area in cents)
Annual gross return	: (Rs.)
Expenditure of coconut cultivation	: (Rs.)
Size of poultry	: Number
Income from poultry per month	: (Rs.)
<u>Details of fishing equipments owned</u>	
Boat	: Number
Ownership status	: 1. Owned, 2. Wage earner, 3. NA
Maintenance charge of boat per month	: (Rs.)
Present value of boat	: (Rs.)
Receipt as rent per month	: (Rs.)
Kattamaram	: Number
Ownership status	: 1. Owned, 2. Wage earner, 3. NA
Maintenance charge of Kattamaram per month	: (Rs.)
Present value of kattamaram	: (Rs.)
Receipt as rent from Kattamaram per month	: (Rs.)
Engine	: Number
Ownership status	: 1. Owned, 2. Wage earner, 3. NA
Maintenance charge of engine per month:	(Rs.)

Receipt as rent from engine per month : (Rs.)  
 Net : Number  
 Ownership status of net : 1. Owned, 2. Wage earner,  
 3. NA  
 Maintenance charge of net per month : (Rs.)  
 Present value of net : (Rs.)  
 Receipt as rent from net per month : (Rs.)  
 Number of family members  
 engaged for fishing : Number  
 Number of wage earners engaged per day : Number  
 Fish used for home consumption per day : (kg.)  
 Marketing cost per day : (Rs.)

Details of fish vending

Family members engaged for fish vending: Number  
 Source of fish : 1. local, 2. distant,  
 3. NA  
 Cost incurred per day : fish (Rs.)  
 Cost incurred per day : for transportation (Rs.)  
 Cost incurred per day : for ice (Rs.)  
 Sale proceed per day : (Rs.)

Expenditure per month

Rice : (Rs.)  
 Wheat and wheat products : (Rs.)  
 Other cereals : (Rs.)  
 Pulses (Dhal) : (Rs.)  
 Tapioca : (Rs.)  
 Coconut : (Rs.)  
 Oils : (Rs.)  
 Vegetables : (Rs.)  
 Spices and condiments : (Rs.)  
 Fish : (Rs.)  
 Egg : (Rs.)



Meat	: (Rs.)
Milk	: (Rs.)
Beverages (Coffee, Tea)	: (Rs.)
Expenditure for meals from outside the home	: (Rs.)
Cloths	: (Rs.)
Fuel	: (Rs.)
Lighting	: (Rs.)
Betal chewing, Cigarette, Beedi, Tobacco	: (Rs.)
Toddy / Arrack	: (Rs.)
Medicinal expense	: (Rs.)
Education	: (Rs.)
Recreation, News paper, Magazines.	: (Rs.)

Present value of consumer durables possessed

Ornaments	: (Rs.)
Radio	: (Rs.)
Television	: (Rs.)
Fan	: (Rs.)
Bicycle	: (Rs.)
Table	: (Rs.)
Chairs	: (Rs.)
Cots	: (Rs.)
Iron box	: (Rs.)

Agency most preferred for credit :

- |                        |                  |                  |
|------------------------|------------------|------------------|
| 1. Bank                | 2. Money lender  | 3. Co-operatives |
| 4. Relatives & friends | 5. No preference |                  |

Reasons for preference :

- |                             |                        |
|-----------------------------|------------------------|
| 1. Easiness to obtain loans | 2. Lower interest rate |
| 3. Less formality           | 4. Easiness to repay   |
| 5. Subsidy                  | 6. Ignorance           |

Use of availed credit :

- |                              |                           |       |
|------------------------------|---------------------------|-------|
| 1. Used for original purpose | 2. Used for other purpose | 3. NA |
|------------------------------|---------------------------|-------|

Whether availed benefits from fisheries welfare scheme

1. Yes,                      2. No,                      3. Not aware.

Social participation

Membership in fisheries forum :

1. Malsyafed,                      2. Co-operative,  
3. Trade union,                      4. Political party  
5. Co-operative and Malsyafed,                      6. Not a member

Do you attend the meeting and other programmes regularly

1. Regularly,                      2. Occasionally,                      3. Never

Reason to join the organisation

1. Beneficial to me,                      2. Forced to join,  
3. beneficial to community,                      4. No specific reasons,  
5. NA

If not a member of the organisation, give reason

1. Ignorance,                      2. Not interested,  
3. Not beneficial,                      4. A nuisance,  
5. Subscription fee,                      6. NA.

Information source utilisation

- News paper                      : 1. Yes,    2. No.  
Frequency                      : 1. Regular, 2. Some times, 3. Never  
Television                      : 1. Yes,    2. No.  
Frequency                      : 1. Regular, 2. Some times, 3. Never  
Radio                      : 1. Yes,    2. No.  
Frequency                      : 1. Regular, 2. Some times, 3. Never

Details of health problem

1. Asthma,                      2. TB,  
3. Asthma and TB,                      4. Paralysis  
4. Other diseases                      5. NA



4. Govt. job, 5. Money lender. 6. NA

Number of days employed per year for II occupation : Number

Income per month from subsidiary occupation of first member : (Rs.)

(For each family member engaged in any of the occupation, codes were given as above.)

Number of credit availed : Number

Source of first credit

1. Bank 2. Money lender 3. Co-operatives

4. Relatives & friends 5. No preference

Purpose of credit

1. Purchase of fishing equipment, 2. Household expenses

3. fish vending 4. Marriage

5. Others

Loan amount : (Rs.)

Amount repaid : (Rs.)

Amount out standing : (Rs.)

(For each credit codes were given as above)

**SOCIO-ECONOMIC STATUS OF  
TRADITIONAL FISHERFOLK IN KERALA - A STUDY  
IN THIRUVANANTHAPURAM DISTRICT**

By

**JINRAJ. P. V.**

**ABSTRACT OF THESIS  
SUBMITTED IN PARTIAL FULFILMENT OF THE REQUIREMENT FOR  
THE DEGREE  
MASTER OF SCIENCE IN AGRICULTURE  
(AGRICULTURAL ECONOMICS)  
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KERALA AGRICULTURAL UNIVERSITY**

DEPARTMENT OF AGRICULTURAL ECONOMICS  
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VELLAYANI  
THIRUVANANTHAPURAM**

1997

## ABSTRACT

The study, "Socio-economic status of traditional fisherfolk in Kerala - A study in Thiruvananthapuram district" was undertaken with the following objectives.

1. To understand the present socio-economic status of the traditional fisherfolk in Kerala with particular emphasis on the income and expenditure pattern of the community concerned.
2. To analyse the levels of living of the fisherfolk with respect to food intake, shelter, educational status and sanitary conditions.

Thiruvananthapuram, which is one of the districts with the highest fishermen population in the State, was selected for the study. From Thiruvananthapuram district Vizhinjam and Anjuthengu villages were selected due to their larger size compared to the other fishing villages and variation in fishing activity. A sample size of 50 traditional fisherfolk families from each village was selected using stratified random sampling technique, taking motorised and non-motorised fisherfolk families as two strata. A well structured and pre-tested questionnaire, was used for collecting data from the selected sample households. Data collected was analysed using suitable statistical tools such as mean, percentage analysis, correlation coefficient and regression analysis.

The variables used in the study included general information on households, educational level, employment status, income and expenditure pattern, extent of credit availed and indebtedness, food intake, health status, housing conditions, social participation and other relevant characteristics which are useful in measuring the socio-economic status of a household.

The study revealed that the average family size of the fisherfolk was 5.19. It was 5.58 in Vizhinjam village and 4.8 in Anjuthengu village. It was also seen that the majority of the fishermen under study were in the age group of 21-35 years. The female to male ratio was found to be 784 females for 1000 males. Landless fisherfolk families constituted 37 per cent and among land owners 55 per cent had less than 5 cents of land. The literacy rate of the fisherfolk was found to be 63 per cent in which males had a lower literacy rate (53 %) than females (68 %). It was noted that about 85 per cent of the workforce in the study area were engaged in fishing and about 14.41 per cent were engaged in fish vending.

The average monthly income of a fisherfolk family was found to be Rs. 1918.94. In Vizhinjam village it worked out to be Rs. 2160.20 as against Rs. 1677.68 in Anjuthengu village. Of the total monthly household expenditure, 62.52 % was spent on food, 12.52 % on arrack and 8.5 % on fuel and lighting. The percentage expenditure on betel chewing, clothing, medicinal purposes and recreation were 7.58 %, 4.24 %, 2.11% and 1.92 % respectively. The expenditure on education was observed to be very meager.

It was revealed from the study that the fisherfolk were mainly utilising money lenders for availing credit. The majority of the loans availed were used for production purposes such as the purchase of fishing equipment (54%) and fish vending (5.3%). About 19.5 % of loans were used for marriage purposes and the rest for home consumption and for other purposes.

The household food consumption pattern showed that the cereal food consumption was 45% of the total requirement. They consumed large quantities of fish. It was also observed that the intake of vegetables other than tubers, milk and fat and oils were inadequate

when compared to the recommendations of the ICMR. The intake of pulses was found to be very meagre.

It was revealed that 12 % of the fisherfolk families did not own houses and lived in houses belonging to their friends or relatives. It was also noticed that 54% of the families resided in huts, 24% in pucca houses, 2% in concrete houses and one per cent in asbestos house. It was also seen that 65 % of the wage earners lived in huts. About sixty nine per cent of the houses were non-electrified and about 76 % did not have a latrine.

Among the total fisherfolk respondents selected for the study only 15% utilised news papers as sources of information. Respondents utilising television and radio were 9% and 17% respectively.

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