FINANCIAL INCLUSION OF FISHER HOUSEHOLDS IN COASTAL KERALA- ROLE OF MICRO FINANCE

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by

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DECLARATION

I hereby certify that the dissertation entitled **'Financial Inclusion of Fisher Households in Coastal Kerala- Role of Micro finance'** is a record of bonafide research carried out by me under the supervision of Dr. M Meerabai, in partial fulfillment of the requirement for the award of the degree of Doctor of Philosophy in the Department of Applied Economics, Cochin University of Science and Technology, Kochi-22. I further declare that this has not been the basis of the award of any degree, diploma, fellowship or other similar titles of recognition.

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Dr. M. Meerabai
Supervising Guide

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Dedicated to

AMMA

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"I reckon with gratitude
Thy help has guide me pen"

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Chapter 1

INTRODUCTION

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1.1 Introduction

Economic theory endorses direct relationship between investment and economic growth to saving rate. It is implied that financial exclusion of a vast majority represents a missed opportunity of an enormous potential for economic growth. Finance and poverty are highly interrelated terms; financial inclusion of the poor can ultimately result in reduction of poverty instigating inclusive growth. Inclusive growth means growth with equal opportunities which focuses on both creating opportunities and making opportunities accessible to all. Growth is inclusive when it allows all members of a society to participate in and contribute to the growth process on an equal basis regardless of their individual circumstances. Developing countries all over the world has been constantly emphasizing reduction of poverty, one of the basic agenda of Millennium Development Goals (MDGs). The State, formal financial system and community based organizations are incidental in annihilating poverty while poising as the three pillars in achieving societal transformation (Thorat, 2006). Financial system can play a role in reinforcing many of the objectives of the MDGs involving savings, livelihood and economic infrastructure apart from providing an efficient payments system. Financial exclusion epithets limited accessibility of individuals to formal financial

services. It is estimated that more than three billion people are financially excluded around the world (estimates based on ownership of accounts). India has the second world's largest financially excluded population after China. According to the estimates of Sinha and Subrahmaniam, 2007, in India, 135 million people were financially excluded (in terms of ownership of an account) which accounted for 66 per cent of the population. The report provides an estimate of the potentially bankable group of people who are termed as "the next billion consumers' hitherto neglected by the mainstream financial institutions. Formidably, India is estimated to have 91 million households that fit into the profile of next billion consumers.

Formal financial services in most developing economies serve only a minority, often not more than 20-30 per cent of the population. Financial inclusion denotes delivery of financial services at an affordable cost to vast sections of disadvantaged and low income groups (GOI, 2008). An inclusive financial sector provides effective, ongoing access to all sections of the population and all scales of enterprise. It has the potential to unleash a virtuous cycle, enabling poor households to contribute to economic growth while drawing benefits from it. Bank accounts facilitate better savings and money management in addition to facilitating protection from inflation, access transaction/transmission facilities like remittances. Savings and insurance help reduce risk and vulnerability and prevent a slide into stressful coping strategies such as sale of livestock or other assets (Arora and Leach, 2005). Access to loans and savings ensure much greater choice in managing liquidity and risks, thereby enhancing capacity to invest in emerging opportunities. Effective access to formal resources by a majority of the population can have sobering influence on the informal sector due to competition, hence benefiting those who were otherwise excluded from it. However institutional financing in India is risk averse; concentrating on returns on investment, leaving out low profile clients whose credit worthiness is unknown. Diligence of the financing institutions has resulted in financial exclusion of the poor, with limited physical and financial assets to fall back upon. Though supply side of institutional finance in the country bears a sound financial assets position, its coverage among low income clients is grim due to above mentioned apprehensions. There is

significant disparity in the distribution of commercial bank branches in rural and urban centres and between regions. Financial illiteracy and lack of knowledge of financial products have grappled the poor that they do not even dare to approach any financial institution. In provision of credit to rural poor, there is still dominant hold by informal agencies who charge exorbitant rates of interest. This points to the fact that inspite of significant achievements in spreading bank branches over the country, services that reach poor and marginalised segments of the community are less. Banks remain unapproachable and credit terms are often not suitable to poor borrowers. Even those who have gained access, owing to recent developments in financial services for the low income people are underserved.

Access to affordable financial services, especially savings, credit and insurance opens up livelihood opportunities by empowering the poor. Infact such empowerment aids social and political stability (Thorat, 2007). One common measure of Financial Inclusion, the percentage of adult population having bank accounts estimates that 59 per cent of the adult population is financially included, in other words, 41 per cent of the population is unbanked. In rural areas, the coverage is 39 per cent against 60 per cent in urban areas. North Eastern and Eastern Regions of the country are far behind other regions depicting regional disparity. Extent of exclusion from credit markets is still high that only a meagre 14 per cent of the adult population has access to formal credit. Rural credit is still inaccessible that only a 9.5 per cent comes under its purview. According to Government of India estimates, 2008, out of 203 million households in the country, 147 million are in the rural areas-89 million are farmer households, 51.4 per cent of farm households have no access to formal or informal sources of credit while 73 per cent have no access to formal sources of credit. It was estimated that there are 7.82 lakh non indebted farm households in Kerala, forming 35.6 per cent of the total farm population. Incidence of financial exclusion among all non cultivator households was estimated at 78.2 per cent which comprises of 78.8 per cent of agricultural labour households, 71.4 per cent of artisans and 79.7 per cent of other rural households (GOI, 2008). Though penetration of institutional agencies has increased over the years, the share of

moneylenders in the debt of rural households in the country increased from 17.5 per cent in 1991 to 29.6 per cent in 2002.

Indian economy has been registering fast growth; however there is significant decline in the share of GDP contribution of agriculture sector (from 25 per cent in 1999-2000 to 18 per cent in 2005-06) with the focus shifting to manufacturing, trade and other sectors. Marine fishing community, bound to the coastal transects of the country is characterized as one of the least-developed sector in terms of low level of socio economic status. This is paradoxical in the context of increasing contribution of fisheries sector to forex earnings (Rs.8,363.53 crore in 2006-07) and GDP (fisheries sector GDP constitutes 1 per cent in 2003-04). Marine fisheries play an important role in the coastal economy of Kerala. The inshore sea area falling within the territorial limit of the State (22km) is about 13,000 sq.kms. The continental shelf area of the sea adjoining the Kerala State is 39,139 sq.kms. The pioneering attempts of the State in mechanisation and motorisation led to significant developments in the fisheries sector. The share of fishery sector in the Agricultural State Domestic Product of Kerala increased from 5.18 per cent in the eighties to 9.36 per cent in nineties and thereafter maintained a stable position. The consistent increase in share of fisheries in the agricultural and allied sectors over the years establishes the significance of this sunrise sector. The contribution of fisheries sector registered an annual compound growth rate of 13.32 per cent (during 1980-81 to 2004-05). The gross earnings of marine fisheries sector in Kerala formed 20 per cent of the earnings at national level in 2005. Although technological advances have helped to enhance fish production, there are problems of decline in per capita production, disguised unemployment and growing sectoral inequity disturbing the socio economic frame work of the coastal villages. Benefits from growth of this sector are not percolated to grassroots- ie, the producers. There are a number of causes for this phenomenon. One of the reasons is increase in intermediaries in the channels of distribution, marginalizing the producers. Uncertainty in earning pattern of fisheries sector compels them to seek finances from external sources particularly in lean seasons and during monsoon trawl ban period (ban affects mechanised segment and

secondary and tertiary sectors who are dependent on fisheries for their livelihoods). Lack of institutional financial products suitable to the needs of fisherfolk coupled with procedural hassles and collateral oriented lending strategy and time lag in loan disbursement keep away fishers from the doorsteps of the banker. This leads to indebtedness of fisherfolk to non institutional agencies in the absence of well organised institutional setup, forcing them to apportion a large part of their income for debt servicing. Forced sales to traders at the point of first sales itself offsets the returns that they tend to borrow for day to day needs, thus falling into the debt trap.

The extent and quantum of indebtedness at a reasonable level of interest sourced out from the organised sector is an indicator of development since availability of finances boost up the economic activity and capital formation in a region. Extent of indebtedness and average outstanding debt per indebted households are comparatively less among fishermen as per the figures of institutional sources, but the affairs of the fisher folk is really grim as they are virtually gripped in the hands of non-institutional agencies, namely the money lenders and traders for which legitimate data sources do not exist. Fishermen are attracted to non-institutional agencies on account of simple procedures and timeliness in availing finance. They depend upon the non-institutional sources mainly for meeting their operational expenses. Since majority of the money lenders in fisheries sector are middlemen cum traders, who offer credit on the guarantee of selling of fish to them; often exploit fishermen by offering less price for produce. In traditional fishing villages where non mechanised and motorised fishing units are operating, most of the fishermen approached the traders and moneylenders (55 per cent) whereas in case of mechanised villages where more of mechanised fishing units are operating, 57 per cent of the credit requirements were financed by the banks(Sathiadhas, 1997). Average outstanding debt per indebted households worked out to Rs 60,000 for mechanised villages whilst it was Rs 12,000 for traditional villages. A study on the cost and earnings of traditional fishing units along Kerala (Sathiadhas and Panikkar, 1988) in the Trivandrum coast came out with the finding that moneylenders are supplying about

65 per cent of the credit needs of fishermen and the formal institutional structure contributed only 23 per cent towards the same. The extent of dependence on moneylenders was higher in the case of low income categories and vice versa. It was also found that, lower the income, higher the percentage of loan spent for consumption purposes. In the lower income group(less than Rs 5000) credit is mainly used for household expenditure whereas for higher income groups (above Rs 12,000) diversion is mainly towards social functions especially marriages. Dominant purposes for taking advances were for repair and maintenance of crafts and acquisition of nets etc (Bhattacharya 2002). Further finding money for meeting margin money requirement of banks / FI's created trouble to the hard pressed section of fishermen who were induced to create bondage with the informal sector. A study of the capital structure and credit of small scale fishing units in fishing villages of Trivandrum District, Pulluvila (Rajan, 1993) revealed that in most cases, loans provided by the formal capital market are insufficient that they are forced to approach the unorganised sector to procure additional capital. As a result, benefits of the soft loans in the organised sector are offset by the high interest charged in the unorganised sector. Fishermen co-operatives contributed to an extent of 16 per cent of the credit needs of fishermen. Recent survey by the State Fisheries Department estimates that that fisheries sector debt in Kerala is about Rs. 412 crore, of which a major portion is sourced from moneylenders (Malayala Manorama, 2008).

1.2 The Financial Inclusion Architecture

With banks continuing to veer away from rural to urban India, the number of rural bank branches has shrunk even as urban branches proliferate, and the Government pays lip-service to financial deepening and economic inclusion (Punnathara, 2007). While 50 per cent of all commercial bank branches were located in rural regions in June 2000, the share declined to 40 per cent in March 2009 implying that rural branch expansion has been far behind the growth in the urban centres.

Gaps in the availability of banking services in rural areas have accentuated. Only 18.4 per cent of the rural population through savings/deposit

accounts and even a lower percentage of 17.2 per cent of the rural households by way of loan accounts through the banking network of scheduled commercial banks. Though cooperatives is said to be one of the most suited organization to serve rural India, minimal coverage of deposit and credit products and concentration in few states in addition to structural and organizational problems hamper its popularity. Decline in productivity of rural branches of commercial banks, fragility of co-operative credit structure and weakness of RRBs witnessed since early 90's, have further accentuated the problem of inaccessibility of banking services for a large part of the rural population. Further, number of loan accounts of small borrowers with credit limit range of less than Rs.25,000/- has decreased from 5.88 crore in 1991 to 3.69 crore in 2003 denoting the preference of the bankers towards large size loans(RBI, 2005). However, it has been increasingly recognized that rural retail credit market has significant potential which hitherto had been tapped by informal lenders. Though banks experience increased cost of lending compared to urban transects and are reluctant to expand in rural areas, alternative models of financing through business facilitators/correspondents can serve the purpose. This goes in line with expansion of other corporate retailers particularly the FMCG's tapping the rural markets with small sachets of the product or penetration of mobile phones into rural areas with easy low value recharge facilities. However, inconsistent rural consumer behaviour can be witnessed in case of consumer goods and credit. A rural consumer might prefer a low priced variant of consumer goods, but when it comes to the case of credit they are ready to pay even the highest rate of interest for taking advantage of features of credit supply including timeliness, ease of transactions etc. Undoubtedly, such qualities of credit supply apply to none other than an informal lender, where the formal financial concerns indulge with procedural formalities coupled with delays in financing. Further, consumption/emergency credit to rural people is still beyond the purview of institutional finances.

As far as financial impetus to primary sector is concerned, institutional dimension of agricultural financing is limited to priority sector advances by

commercial banks. This follows the RBI stipulation that 40 per cent of the net bank credit should be earmarked for priority sector advances of which 18 per cent shall be for agriculture. Banks are reluctant to lend to farming sector due to risk of adding to NPAs; on account of crop failures, low production and willful default hopeful of politically driven loan waivers. Fisheries financing is far more neglected be the financing part or waivers. This is evident from the fact that loan waiver for agriculture announced in Budget 2008 was made applicable to fisheries only after constant hues and cries from the fisherfolk inspite of comprehensive marine fishing policy released in 2004 ensuring that artisanal fisheries deploying OBMs and small-mechanised boats up to 12m would be treated at par with agriculture, while small scale fisheries involving mechanised boats under 20m OAL would be treated at par with small scale industries. Fishing vessels above 20 m and fishing activity involving mother ships or factory vessels would be treated as industrial activity while full time/ occasional fishermen households not owning a boat would be treated at par with landless labourers.

Marine fishing community, bound to the coastal transects of the country are characterized as one of the least-developed sector almost akin to the tribals. This is paradoxical in the context of increasing contribution of fisheries sector product to GDP. It can be thus stated that benefits from growth of this sector are not percolated to grassroots- ie, the producers. There are a number of causes for this phenomenon. One of the reasons is increase in intermediaries in the channels of distribution marginalizing the producers. Fisheries sector earnings are characterized by uncertainties, leading to indebtedness of the fisherfolk to non institutional agencies in the absence of institutional setup, forcing them to apportion a large part of their income for debt servicing. The potential for growth in primary sector is enormous.

Provision of institutional finance for agrarian sector was limited to credit initiatives from the cooperative movement and enactment of debt legislation during pre-independence period. After independence, commercial banks prioritized industrial and trade financing totally neglecting farm economy that supported a major chunk of the population. However policy intervention to nationalize

commercial banks in 1969 promoted social banking on a large scale enhancing network of branches to unbanked centres. This was followed by directed institutional interventions focusing rural transects including establishment of RRBs, revival of cooperatives, priority sector advances, Lead Bank Scheme, Service Area Approach, Differential Rate of Interest Scheme and Kissan Credit card. Notwithstanding these interventions limited accessibility is available to affordable financial services such as savings, loans and insurance services by vast majority of population in rural areas. Unorganised sector is believed to be acting as a constraint to growth impetus in these sectors.

The Reserve Bank's broad approach to financial inclusion aims at 'connecting people' with the banking system and not just credit dispensation; giving people access to payments system and portray financial inclusion as a viable business model and opportunity. In consonance with the above approach, during 2007-08, the Reserve Bank emphasised the need for promoting greater financial inclusion and financial literacy. In this direction, a number of initiatives were taken during 2007-08 which included revision of guidelines on lending to the priority sectors with emphasis on enhanced flow of credit to those sectors of the economy which impact large segments of the population and are employment intensive; strengthening of the rural cooperatives; and restructuring of regional rural banks, which cater predominantly to the rural areas. The Reserve Bank also continued with its policy of encouraging multiple channels of lending such as self-help groups (SHGs), micro-finance institutions (MFIs), adoption of business facilitator (BF)/ business correspondent (BC) model; and emphasising the simplification of the procedures and processes for lending to the agriculture and micro, small and medium enterprises (MSME) sectors. (GOI, 2008).

RBI initiatives to build inclusive financial growth include introduction of 'no-frills account' with nil or minimum balances in 2005. This target is normally achievable by the banks while the impetus should lie in applying realistic norms for financial inclusion like availability of adequate credit to all (GOI, 2008).

It has been estimated that there was an increase of 15 million 'no frills' account opened between March 2006-08 (Table 1.1).

Table 1.1. Number of no-frills accounts opened by banks in India

Category of banks	Year ended 2006	2007	2008	% growth over previous year
Public Sector Banks	332,878	5,865,419	13,925,674	137
Private Sector Banks	156,388	856,495	1,879,073	119
Foreign banks	231	2,753	33,115	1202
Total	489,497	6,724,667	15,837,862	135

Source: Annual report of RBI, 2007-08

In addition, regional language options for rural customers was promoted along with simplification of KYC (Know Your Customer) while opening accounts for rural customers with balance less than Rs. 50000 and credit less than Rs. 1 lakh. Banks were also permitted to use the services of NGOs, civil society organizations and micro finance institutions as Business Correspondent (BC) Models. As Mr. V. Leeladhar (Deputy Governor, RBI, on the occasion of the Commemorative lecture at the Fedbank Hormis Memorial Foundation, Ernakulam) said "Despite making significant improvements in all the areas relating to financial viability, profitability and competitiveness, there are concerns that banks have not been able to include a vast segment of the population, especially the underprivileged sections of the society, into the fold of basic banking services. The focus of Indian banks on financial inclusion i.e. delivery of banking services at an affordable cost of the low-income groups has been dismal. This may be due to emphasis on economic efficiency by banks gradually neglecting the social priorities (GOI, 2007)

The formal financial system has to recognize the huge potential from the unmet demand for financial services from those who normally tend to be excluded. The focus of financial inclusion comes from the recognition that there are several externalities that can be adept to mutual advantage of the excluded and banking system permeating benefits to society en masse.

1.2.1 Rural Financial Inclusion/Exclusion Paradigm

The rural population in India suffers from a great deal of indebtedness and is subject to exploitation in the credit market due to high interest rates and the lack of convenient access to credit. Rural households need credit for investing in agriculture and smoothening out seasonal fluctuations in earnings. Since cash flows and savings in rural areas for majority of households are small, rural households typically tend to rely on credit for other consumption needs like education, food, housing, household functions, etc. Rural households need access to financial institutions that can provide them with credit at lower rates and at reasonable terms than the traditional money-lender and thereby help them avoid debt-traps [Vallabh and Chathrath, 2006].

Financial inclusion denotes delivery of financial services at an affordable cost to vast sections of disadvantaged and low-income groups. The various financial services include credit, savings, insurance and payments and remittance facilities. Objective of financial inclusion is to extend the scope of activities of the organized financial system to include people with low incomes within its ambit (GOI, 2008). Financial inclusion and exclusion are mutually exclusive terms; those who are not financially included automatically become excluded. In India, focus of financial inclusion at present is more or less confined to ensuring a bare minimum access to a savings bank account. However, having a current account/savings account on its own, cannot be regarded as an accurate indicator of financial inclusion.

Research on financial exclusion/inclusion has assumed importance even in the developed countries to focus on a minority who are excluded, while developing countries like India have to focus on the majority who are excluded. Financial inclusion by definition assumes individuals access to financial services; whether simply having a savings or credit account non-operational for period of time denote inclusion is questionable. Incidence of financial exclusion/inclusion can be explained in relation to various aspects of finance, namely requirement of financial product, price, delivery, people and attitudes (Table 1.2).

Table 1.2. Paradigm of Financial Inclusion

Aspect	What Financial Inclusion Means	When Financial Exclusion Could Occur
Product	**Range of products and services:** ▪ Access to sound, pragmatic and transparent advice on financial services ▪ Access to bank accounts and savings mechanisms ▪ Access to affordable and flexible credit for consumption purposes ▪ Access to affordable and flexible livelihood financing ▪ Access to risk mitigation services like health, weather, asset and life insurance etc. ▪ Access to vulnerability reducing and economic capacity enhancing financial services like Warehouse Receipt financing, Value Chain financing etc. ▪ Access to other financial services like micro-pensions	Exclusion could occur when products are not customized and of convenient, inflexible, not customized and of low quality Exclusion could occur when alternative [informal source] is available with tailor made products
Price	▪ Affordable and competitive products and mechanisms ▪ Effective cost of product is neither usurious nor perceived as very high ▪ Inefficiencies are not passed on	Exclusion could occur when products are unaffordable
Awareness	▪ Financial literacy of poor ▪ The product needs to be proactively promoted ▪ All terms and conditions must be explained in detail and transparently ▪ Focus on customer service, education and protection	Exclusion could occur when clients are not aware [awareness leads to doubtfulness and they don't approach the institutional lender]
Delivery	▪ Simple and convenient process of delivery ▪ Accessible in remote areas ▪ Lower transaction cost for clients ▪ Documentation and other requirements are minimal and hassle free	Exclusion could occur when clients cannot be reached easily and at low transaction cost
Usage	▪ Usage of savings products that promotes thrift ▪ Usage of transaction banking to manage remittances ▪ Usage of credit facilities to smoothen income variations ▪ Usage of insurance services to guard against uncertainties	Exclusion could occur when clients are not using the products. Voluntary and involuntary exclusion could occur
People and Attitudes	▪ Staff care for the client's welfare always ▪ Staff deal with clients in a timely, patient and concerned manner ▪ Staff are specially trained to deal with the poor	Exclusion could occur when staff services delivering are not well- suited to their role

Source: Adapted and modified from Arunachalam R.S, 2008 www.data.undp.org

Demand pattern of rural finances vary from short term production /consumption loans to investment credit (Fig. 1.1). Financial needs of the poor arise from irregular pattern of earnings where they have no or low income during lean periods. Emergencies in the form of disasters or hospitalization and death also warrant unexpected expenses requiring finances. Though not unexpected, life cycle events like marriages also require customary expenses and hence often exceed the budgeted figures or even other wise requires the poor to borrow. Savings and insurance needs are yet to pick up momentum; due to increasingly cash oriented functions coupled with lack of access to formalized investment avenues. As the rural farm based/non farm based earnings are affected by seasonality, there arises need for smoothening income to facilitate consumption in lean periods in the absence of savings. The institutional finances being averse to the small and risky financing of small and marginal farmers and landless labourers are finally routed to the informal financiers. Also the financial products and procedural hassles of formal institutional lenders do not match the requirement of the poor.

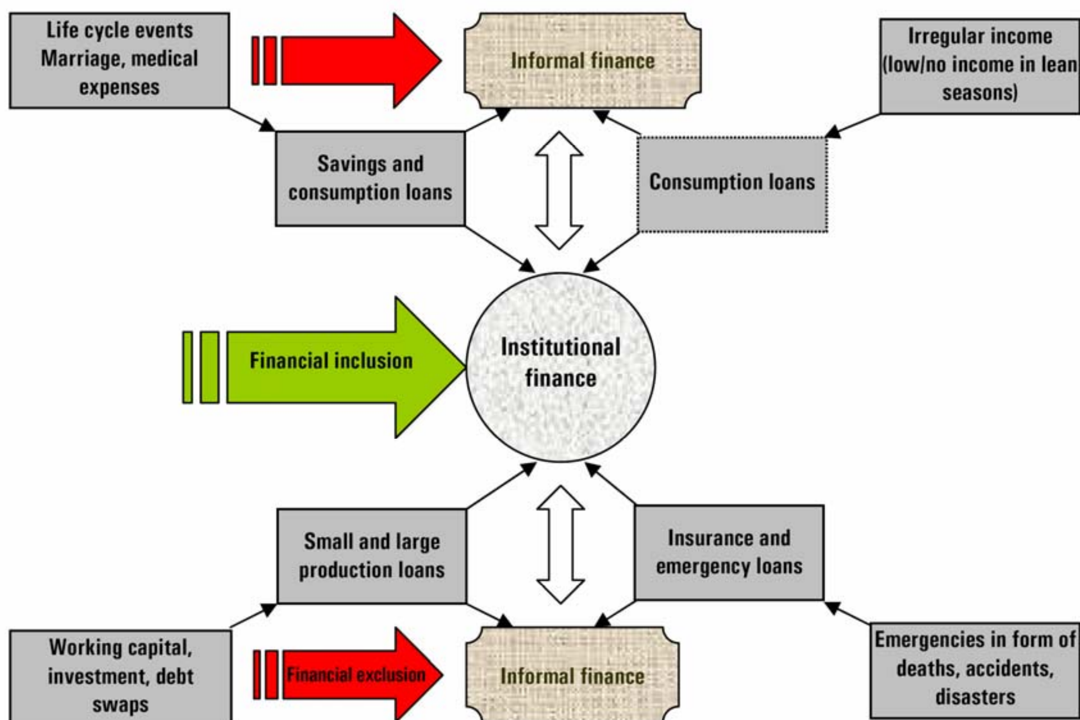

Figure 1.1. Need based financial inclusion/exclusion paradigm for the poor

Financing needs of fisheries sector does not vary significantly from the above pattern. Unlike agriculture sector, inconsistency in earning pattern of marine fisheries sector is frequent, fluctuating between fishing trips besides variation due to seasonality in harvesting pattern. Most often after a fishing trip in loss, the working capital expenses for the next trip need to be borrowed. In the absence of formal system of lending, the trader or commission agent is approached for finances requiring forced sales at the time of next harvest. A series of losses in fishing trips can entangle the fishers in indebtedness with the unscrupulous traders/moneylenders. In addition, fishery management measures like the monsoon trawling ban in the coastal waters curtails the livelihoods of a number of active fishers as also of those in secondary and tertiary sectors. The situation has been aggravated by the absence of alternative avocations and inadequate State sponsored rehabilitation programs. Havoc created by disasters like tsunami and cyclones in the coastal belt are not uncommon, withering disastrous effect on lives and livelihoods of the fishers. All such situations demand finances for rehabilitation and restoration, both for short term and long term. While institutional finance exemplify financial inclusion, which is rather strenuous with limited outreach and inflexible products; informal finance meets timely requirement of the poor with tailor made assistances and ease of accessibility and hassle free lending.

1.2.2 Cycle of Inclusion/Exclusion

Even after sixty years of independence, in India, the reduction of poverty and the alleviation of its consequences has remained a much debated policy issue. This shows that the strategic initiatives of the policy makers have not been fruitful in assuaging poverty that has always remained a conundrum. The history of anti poverty programmes has not been different in the developing nations, where poverty has been so conspicuous.

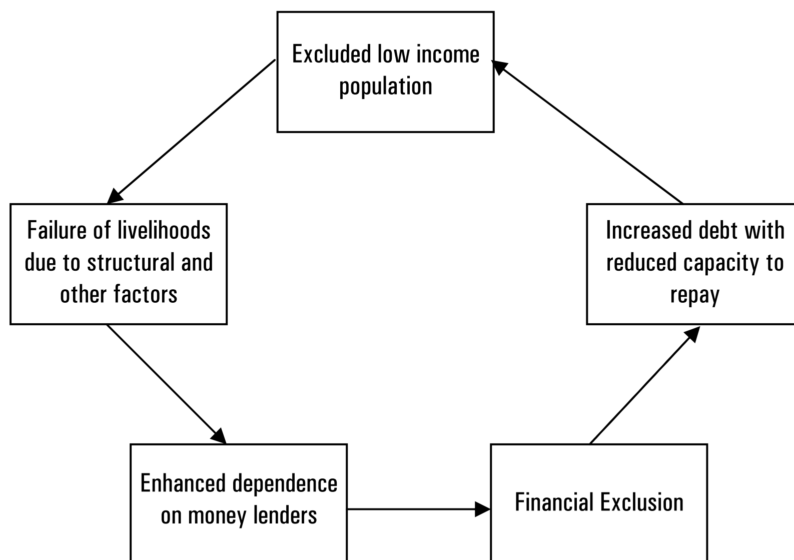

Figure 1.2. Cycle of Exclusion

Quite similar to the envisaged 'vicious circle of poverty', the financial exclusion paradigm also assumes a cyclical registry. Excluded low income population already in the 'vicious circle of poverty' are trapped in the 'debt circle' by borrowings from the informal agencies, usually the usurious moneylender or the traders who charge exorbitant rates of interest and penalty for non repayment. Once money is borrowed, earnings of the poor tend to be redirected towards replenishment of borrowed funds; often the repayment as high as double or thrice the amount of loan. On account of repayment delinquency by the poor, repeat loans are denied forcing them to approach the money lenders. The contravention of 'cycle of exclusion' hence requires double pronged strategic initiatives of financial outreach and deepening by expanding institutional finance and reducing poverty by infusing economic and social empowerment among the poor.

1.2.3 Micro credit - An Alternative to Financial Inclusion of Poor

Leaving behind the basic needs paradigm of the 1970's, for most of the developing world the 80's were a decade of structural adjustment, dominated by stabilization efforts designed to bring national expenditure in line with the national income and by attempts to increase national income through policy reforms that

promote a more rapid accumulation of capital and more efficient use of resources. There was increasing concentration on the poverty alleviation by low income countries mainly promoted by international donors. Among the recent initiatives, specialized credit programs for the poor are becoming increasingly popular (Jordan, 1993; Minsky et al., 1993). Effective design of the poverty alleviation programmes will prevent the earlier shortcomings provided it is possible to identify the critical lacunae in earlier experiments. In dealing with poverty issues it is always difficult to bridge the gap, on one hand, between moral obligations calling for public and private charity and on the other, the economic requirements that could improve the lot of the poor (Slainltz, 1992). Financial services can have sustainable economic role only when opportunities for improvement exist.

In spite of the commendable expansion of branch network and progressive policy initiatives, large number of rural population continue to remain outside the formal banking system for a variety of demand and supply side reasons and constraints. A new paradigm that essentially promotes poor out of the vicious circle of indebtedness is required. The financial products should be moulded such that they contribute to reduce the risk and vulnerability arising from the existing livelihoods. It should essentially create security nets for the poor and ensure them to pursue diversified and migratory livelihoods. Also there should be varied interest in re-inclusion of those who are excluded out of the financial arena after being included for a short while. Sustainability of inclusion is yet another concern; that they remain included within the existing fragile livelihoods [Arunachalam, 2008]. UNDP recognizes financial inclusion paradigm as an integral part of the overall livelihoods framework and any effort towards financial inclusion requires multi-pronged strategies at every level of value chain or bundled financial services integrated with the overall livelihoods framework and not just credit/loan finance. From the experiences gained from the success of the SHG-Bank linkage programme and other micro finance initiatives in India and abroad, it has been established that interfacing NGOs/CSOs and other socially conscious organizations/ persons between the banks and the ultimate customers would prove rewarding in the philosophy of "Financial Inclusion"(RBI, 2005)

The SHG movement in India has enabled social and economic inclusion of the poor by focusing on women (Thorat, 2006). The SHG bank linkage has been proved as effective in promoting savings in the initial stage and then linking with financial institutions in subsequent stages. It is also to be reckoned with that microcredit fails to promote an ultimate solution to poverty alleviation and promotion of livelihoods; that they are far too small or narrow to facilitate income generating capabilities and accumulation of assets. Micro credit is considered a palliative and not a panacea in the context of promoting sustainable livelihoods through 'livelihood finances'.

The SHG bank linkage programme coordinates 15 to 20 people under a homogenous environment (it can be on the basis of profession, location, age, education etc.), where they begin with thrift and small loans to the needy among themselves in rotation and are later linked to the banks that provide credit based on their savings. As on March 31st 2008, more than 34.77 lakh SHG's have been formed in the country (Bhandyopadhyay, 2008). Joint Liability Groups (JLG) is another mechanism in similar lines targeted at mid segment clients initiated during 2004-05. This programme grants the facility of obtaining credit for those who cannot afford to offer collaterals. Further there are rural specific products like Kissan Credit Cards (KCC), General Credit Card (GCC), Grameen Credit Card, Bhoomiheen Credit Card etc.

In 2004, the RBI appointed an internal group to examine ways of increasing financial inclusion and came out with a report in July 2005 (Khan Committee Report). Pursuant to its recommendations, the RBI issued a circular in January 2006 providing for the use of specified agencies including MFIs, as intermediaries in the provision of banking and financial services. The intermediaries were to be of two kinds, Business Facilitators and Business Correspondents. The above development has led to private sector banks increasing their exposure to this sector, using business correspondents [Arunachalam, 2008].

NABARD has been incidental in taking up the concept of 'Neighbourhood groups' into the rural transects; an articulate act of empowerment through self

manageable finances with the provision for earning an income to support the family. An SHG would have an incubation period of six months in which they mobilize funds and distribute as loans in turn after which they could be linked to banks for providing loan on the basis of the corpus of funds mobilized by the group. This has been time tested that a host of agencies including the State and Central Governments have come up mobilising groups for poverty alleviation. The present coverage of the NABARDs activities across the country has been given in Table 1.3.

Table 1.3. Spread of SHG Bank linkage programme

Year	SHGs credit linked (All India)*		SHGs credit linked (Kerala)	
	No.	Amt (Rs. Million)	No.	Amt (Rs. Million)
2004-05	7974572	29943	30662	1266
2005-06	964611	44991	34957	2326
2006-07	1105749	65704	NA	NA
2007-08	1227770	88493	NA	NA
2008-09	1609586	122535	60376	5167
2009-10	1586822	144533	62058	5075

Source: Adapted and modified from Suran and Narayana, 2009 till 2006-07 and rest from Status of Microfinance in India 2008-09, 2009-10

OS- outstanding, NA- Not available

** Figures of SHGs provided bank loans (includes fresh and repeat loans) during the year.*

The status report of microfinance by NABARD states that 4.2 million SHGs maintain savings bank accounts with banks as on 31st march 2007 with an outstanding savings of Rs. 35127.10 million. With an average size of 14 members in each SHG, the programme now connects with 58 million poor households across the country (Suran and Narayana, 2009). As indicated in Table 1.2, the banks had collectively issued loans amounting to Rs 65703.90 million to 1.1 million SHGs during the year 2006-07, which increased to financing 1.6 million SHGs with Rs. 122535 million during 2008-09. Thus credit provided to SHGs suggests that the programme (credit linkages) now touches the lives of almost 40.6 million

households across the country. Kerala state has seen a massive expansion of the SHG Bank Linkage programme under the stewardship of the Government initiative called Kudambasree, the poverty alleviation programme of the state which provides credit to about 17.7 million households in the state.

The key to the process of drawing majority of the economically marginalised population into economic mainstream is providing the unbanked population with access to financial services – especially capability to conduct transactions. As Amartya Sen has pointed out, availability and access to finance can be a crucial influence on economic entitlements of economic agents. Good financial services require "products that suit the poor's capacity to save and their needs for lump sums so that they can save (or repay) in small sums of varied value, as frequently as possible; access the lump sums (through withdrawals or through loans) when they need them; in the short-term for consumption and emergency needs, in the medium term for investment opportunities and recurrent life cycle needs, and in the longer term for other life cycle and insurance needs like marriage, health care, education and old age" (Rutherford, 2000). To enable these envisaged objectives, the Indian financial sector requires transitioning from a supply-oriented approach to a demand-oriented one, sustainability of which would be dependent on profitability of financial services to the poor.

The prevailing financial institutions in the country have left out a major chunk of the masses out of their fold. Primarily this may be due to the reason that their financial products often fail to offer resilience to the demand of the poor. Alternatives for this problem; in designing a credit delivery mechanism, offering savings and loan products, simplifying procedural hassles etc has culminated in emergence of micro credit innovations.

1.3 Statement of the Problem

Even after years of implementing mass banking in the country; committed to extend services of financial intermediaries to the poorest of the poor and downtrodden, a vast majority of rural households are excluded from the formal banking services forced to remain in the grip of non formal agencies. Not different

is the case of marine fishery sector which support 3.5 lakh population who depend upon fishing and allied activities for their livelihood. RBI' strategic initiatives for increasing the level of financial inclusion in the country by means of opening 'no frills' account by banks and relaxing the KYC norms has been intended to increase individual's access to banks in terms of mere possessing an account with the bank, and should focus on availing its services like mobilizing savings, availing credit or usage of money transfer mechanisms.

Availability of cheap and easy credit has been accorded prime importance in the financial inclusion agenda as the poor requires access to timely and adequate credit more than any other financial service. Despite the spread of formal banking in rural areas as part of the nationalisation drive, rural indebtedness to moneylenders has remained unaltered due to inherent issues. The main hurdle faced by banks in financing poor is the high transaction cost in reaching out to a large number of people who require small amounts of credit at frequent intervals. This is found true for savings as well. The poor can afford to save smaller amounts at frequent intervals rather than depositing a lump sum amount. Interestingly the poor also find banks as an institutional set up favouring elites and even when they tried to access it foregoing their employment days, they had to face a number of hurdles including the procedural hassles, not very sure of getting the loan in time. This mutual inconvenience has made the poor and the banks to avoid each other, the poor being attracted to the local moneylender who would attend their immediate needs without bothering to pledge or to comply with the procedural formalities at the expense of foregoing employment days.

Though it appears that fishing community is supported with multiple agencies involved targeting the welfare of the fishing community, several studies indicate that there is considerable proliferation of non institutional agencies like money lenders and traders. These agencies take advantage of the credit gap where the institutional counterparts fail to respond. Fisheries sector is characterized by seasonality of earnings and regulatory measures like trawling ban which create a demand for consumption credit. The seasonality and uncertainty in earning pattern is primarily responsible for their lower socio

economic profile coupled with a host of internal and external factors. Fluctuating earnings often necessitate them to borrow; that any institutional agency is unapproachable (due to lack of security to furnish, procedural hassles etc) and they are forced to move towards informal agencies who supply immediate finance at a higher cost. Further earnings generated are subject to debt servicing, necessitating additional borrowings entangling them in the debt trap. In the given scenario, financial inclusion (that entails mere access to bank accounts) cannot alone serve as a solution. A sustainable relationship with institutional financiers is required, that caters to tailor made requirements of this downtrodden segment. Though solution is apparent, implementation of this alternative is difficult because of aversion of institutional agencies to risky credit. Further, procedural hassles, including need to furnish collateral serves as a major obstacle to formal credit.

Micro financing offers optimal solutions for extending reach of financial inclusion into the coastal hamlets. Microfinance services (depositing savings, taking loans) are made available at low cost and are easily accessible (available next door) and flexible enough to meet poor people's needs. In Kerala also, the microfinance movement has gained popularity among the poor with the success stories of the state poverty eradication mission popularly known as Kudambasree. There are various agencies that has opted the model of microfinance for their operations. In fisheries sector, the Department of Fisheries has given their assistance to fisherwomen to form SHG groups through their programme called Society for Fisheries Assistance (SAF). Matsyafed and SIFFS organized on cooperative principles have also co-opted the concept of micro groups in fishermen societies. NGOs working in this field like ESS (Ernakulam Social Service Society), QSS (Quilon Social Service Society), TSSS (Trivandrum Social Service Society), Jeevana, Win Centre etc. have also opted for formation of groups for their working. In all cases the groups were provided credit after an initial incubation period which promotes financial inclusion. Considering this proliferation of microfinance into rural settlements, it was considered appropriate to take up a study in the maritime districts in Kerala probing the role and prospect of micro financing in supporting financial inclusion of coastal fisherfolk with the following basic questions.

1.4 Research Questions

The study attempts to probe into the following specific research questions

a) What is the status of financial inclusion among fisher households in Kerala?

b) What factors determine the level of financial exclusion/inclusion and is there any significant influence of microfinance models?

c) How far the entry of microfinance has restricted the households from accessing exploitative money lenders?

d) How far microfinance has succeeded in serving the credit gap?

To answer the afore said questions, the study was taken up with the following objectives

1.5 Objectives

a) To estimate the status of financial inclusion among fisher households in Kerala

b) To study the socio economic factors determining level of financial exclusion/inclusion with a view to understand the role of microfinance

c) To estimate factors influencing informal borrowings of households

d) To estimate the existing demand for credit and analyse the role of microfinance in serving the credit gap

1.6 Hypothesis

a) Members of SHGs/SHG with bank linkage have more access to financial services than non members

b) There is decrease in informal borrowings by households with increasing level of financial inclusion

c) Access to microfinance reduces dependence on informal borrowings of households

1.7 Methodology

Working Definitions/ Terminology

Following are the working definitions used in the study which is derived from various published research reports and papers came across during the course of the research work. All the terms used in the study are used in the context mentioned below.

Fishermen family/Households

A family in which at least one member is engaged in marine fishing or associated activities or both (CMFRI, 2005). The study has administered fisher household as the basic unit of inquiry.

Fish workers

International Conference of Fish Workers and their Supports (ICFWS) held at Rome in 1984 defined fish workers as "children, women and men engaged as crew members, small fishers, processing workers and settlers". The term excludes all those involved in the fish economy solely for income from profit or rent, by virtue of ownership of capital alone or involvement in arbitrage or speculation. (George and Domi, 2002). For the purpose of the study families of fish workers are being considered as the basic unit. This provides broad classification of fish workers as those who are involved in fishing activity, not necessarily being from the fishing community which is rather considered as a social group than an occupational group.

Fishing community

"Fishermen community or fishing community means - the society of those who are part of the ancestry and culture of fishing" (Thadeus P, 1999). Hence, fishing community includes families/individuals not actively involved in fishing but belong to the castes considered to be following fishing as traditional occupation. Hence the membership is not voluntary and individual but necessarily compulsory and familial. Fishing community signifies a social rather than an occupational group (George and Domi, 2002)

Financial Inclusion/ exclusion- Definition and Dimensions

Financial inclusion may be interpreted poor households' access, availability and usage of basic financial services from formal service providers which include savings, loans and insurance in a manner that is reasonably convenient and flexible in terms of access and design and reliable in the sense that savings are safe and that insurance claim will be paid with certainty.

This definition is modified from those definitions given by Mor and Ananth, 2007, World Bank 2005, Kamath, 2007, Sharma, 2008, GOI, 2008 and European Commission, 2008)

Elements of Financial Inclusion

Outreach of financial inclusion refers to breadth of financial services, in other words it measures how many people have access to financial services including savings, credit, transferring money and other services. Having a bank account is being considered as a key to access these services (Beck et al, 2006; Mohan, 2006, Littlefield et al, 2006, Ramji, 2009). The study takes into account individuals' access to savings, credit, transaction banking and insurance as indicators of financial inclusion.

The Committee on Financial Inclusion, 2008 has stressed that Financial Inclusion does not essentially focus on providing credit and offering facilities for savings alone, but also includes the whole gamut of financial services including money transmission mechanisms, insurance and savings mode suited to the income pattern of the poor. This study attempts to measure financial inclusion as a composite measure that takes into consideration access to transaction banking, savings, credit and insurance. Each of them are examined in detail

Transaction banking

Refers to access to bank's financial services other than savings, credit and insurance. Individuals require money transmission mechanisms for storing, saving and accessing money safely and for making payments to third parties including services like debit cards, direct debits, automatic transfers etc (Kumar, 2002).

Following can be classified as banking transactions

- usage of banking services with the help of cheque-book and ATM card/Debit Card
- making or accepting remittances through bank
- Receipt of money from various sources as part of social security measures.

Transaction banking usage can be used as an indicator to measure financial inclusion

Savings

It is said that lesser savings leads to lesser capital formation implying lesser development. However savings has been considered as a crucial indicator for measurement of financial inclusion in the study. Savings can be in the form of savings bank account, recurring deposits, fixed deposits with any of the financial service providers including Commercial banks, Cooperative banks, Regional Rural Banks or SHGs.

Credit

Credit is the most valid indicator for assessing the status of financial inclusion. Though other indicators are measured, credit access and indebtedness of a family determines the level of well being achieved. This is because access to credit is widely regarded as a financial service (Schilling, 2003). credit from formal and semiformal sources has been accounted by the study. Commercial banks, cooperative banks, RRBs etc come under the formal service providers, while microfinance has been treated as semiformal finance (Basu, 2006). Leverage through credit is regarded as a standard and crucial financial strategy for a small business; lack of access to credit may place such a business at a distinct competitive advantage (Chant and Link Associates, 2004).

Credit measured as a sole measure of financial inclusion can also be useful that it may provide status of the stakeholder considering aspects like source, cost of borrowing, adequacy, proximity etc.

Insurance

Insurance provides coverage to the accidents/emergencies arising in a society affecting human lives, assets or livelihoods. Research suggests that those consumers those who are least well placed to stand the risks are often those without insurance cover (Whyley and McCormack, 1997). Recent developments have increased popularity and access to insurance. Also Government has enacted insurance policies for the benefit of sea faring fishers. Insurance inclusion is measured as sub element in the financial inclusion designating appropriate weights.

Monitoring Financial Inclusion- Unit selection

Following the NSSO methodology, used in the All India Debt and Investment Survey, households has been identified as the basic unit for measurement of financial inclusion. So compared to the individual’s access, it was found appropriate to find the family’s access to institutional sources of finance and informal credit market.

Approach to measurement of financial Inclusion

Following the definitions, the study has taken into account a mixed approach; ie measuring the access to institutional as well as informal credit markets which often co-exist in poor settlements due to lack of supply of need based financing by institutional financiers. The extent of association with informal credit markets is considered as a negative and impinging on the aim of financial exclusion which is taken into consideration. (Thorat, 2007; Samantharay, 2008).

Financial Inclusion has been monitored in the study in two ways

a) Exclusion from payments system, ie. not having access to a formal financial service.

b) Exclusion from formal credit markets, requiring the excluded to approach informal and exploitative markets.

Efficacy of microfinance in facilitating financial inclusion and keeping away from informal financing has been examined

Micro Finance Provider (MFP)

Microfinance Provider includes all agencies that provide finance (credit/grants) to the SHGs as part of their financial assistance to poor. In the study, MFP includes commercial banks, cooperative banks, Matsyafed, NGOs and other voluntary agencies.

Database and Analysis

The study is predominantly based on primary information and is being supported by secondary information. Secondary information was gathered from published sources like government publications at the national, state and district level, publications of RBI, NABARD, NSSO, CSO and journals and books. The primary information was collected from fisher families through pre structured tested schedules and by conducting focus group discussions and interviews.

Data were collected from the selected sample households using pre-structured schedule. The data analysis was done using statistical tools like percentages, averages and modelling was done using multiple regression analysis and binary logistic regression.

Sampling Design

Multistage sampling was employed to select the samples. Sampling has been done in two stages and each stage is described in detail. The study area covers twelve coastal fishing villages from four selected coastal districts in Kerala.

Stage 1: The first stage of sampling was of selection of the maritime districts for carrying out the study. Demographic indicators of fishing families and fishing villages of districts in Kerala sharing coast of the Arabian sea where marine fishing activity is present is given below. It is observed that Thiruvananthapuram district has the highest number of fishing families and Kasargod has the least (Table 1.4).

Table 1.4. Demographic details of maritime districts in Kerala

State	Geographic Regions	Number of fishing families	Percentage
Kasargod	Northern Districts	4,777	3.96
Kannur		5,929	4.92
Kozhikode		16,058	13.33
Subtotal		**26764**	**22.21**
Malappuram	Central Region	10,462	8.68
Thrissur		6,598	5.48
Ernakulam		8,876	7.37
Subtotal		**25936**	**21.53**
Alappuzha	Southern Region	21,759	18.06
Kollam		11,899	9.88
Thiruvananthapuram		34,128	28.33
Subtotal		**67786**	**56.27**
Total		120,486	100

Source: Marine Fisheries census of CMFRI, 2005

At this stage, through proportionate sampling based on the number of fisher households in the district, four districts were selected, namely Kozhikode district representing northern region (accommodating 22.21 per cent of the fisher families in the State), Ernakulam district from the central region (21.53 per cent) and Kollam and Thiruvananthapuram district from the southern zone (56.27 per cent). These four districts represent 58.91 per cent of the marine fishing families in the State. In the northern region concentration of fishing families was found to be in Kozhikode district, where more than half of the people resided. Hence sample was decided as Kozhikode. In the central region, Malappuram was seen as the populous district. However, as already Kozhikode was selected from the northern region, selection of Malappuram would show similarities between regions. To avoid this problem, Ernakulam district was selected from the central region which was found as the next populous district after Malappuram. From the southern

region, two districts had to be selected. Without hesitation, Thiruvanathapuram, the most populous district was selected from the southern region. One more district had to be selected from the region as per the proportion of fishing families in the region and Kollam district with the least population in the zone was selected.

Stage 2: The next step in the sampling design was to select the fishing villages from the chosen districts based on the proportion of fishing villages in each district (Table 1.5).

Table 1.5. Sampling plan of number of fishing villages from each district

Selected District	No of fishing villages	Sample villages (10% sample)
Kozhikode	35	3
Ernakulam	21	2
Kollam	26	3
Thiruvananthapuram	42	4
Total	124	12

***Source:** Marine Fisheries Census of CMFRI, 2005

From the fishing villages thus selected, 10 per cent of the households were selected for the study. Fishing villages and the sample selection has been summarized in Table. 1.6. Finally a total sample of 508 respondent households was selected for the study.

As employment in fisheries sector is very diverse varying from sector to sector, samples available from the varying population of the selected villages have been randomly chosen for the study. From the randomly chosen sample, households which had no membership in SHGs, those had membership with SHGs and those had association with SHGs having Micro Finance Provider linkage were categorized to understand the effects of microfinance on financial inclusion.

As the membership in SHGs is wide spread that it is difficult to find a household without association with an SHG, it has been decided to classify

households which are inactive in SHG groups for the past three years as non members.

The study covers households engaged in fishing activity in the maritime districts of Kerala. As coverage of nine maritime districts may be impossible due to time and resource constraints, it was decided to select a representative sample of four districts. Accordingly, Kozhikode, Ernakulam, Kollam and Thiruvananthapuram districts were selected for the study.

Table 1.6. Selection of respondents from fishing villages

Sl. No	District/Fishing village	No of households	Sample (10%)	Final Sample
	Kozhikode			
1	Kozhikode south	591	59.1	60
2	Vellayil	350	35	35
3	Thoppayil	450	45	45
	Subtotal	1391	139.1	140
	Ernakulam			
4	Edavanakkad	244	24.4	24
5	Munambam	871	87.1	88
	Subtotal	1115	111.5	112
	Kollam			
6	Neendakara	551	55.1	56
7	Alappad	367	36.7	36
8	Parayakadavu	202	20.2	20
	Subtotal	1120	112	112
	Thiruvananthapuram			
9	Poothura	460	46	46
10	Kochuthura	258	25.8	25
11	Valiaveli	428	42.8	43
12	Kannanthura	296	29.6	30
	Subtotal	1442	144.2	144
	Total sample respondents			508

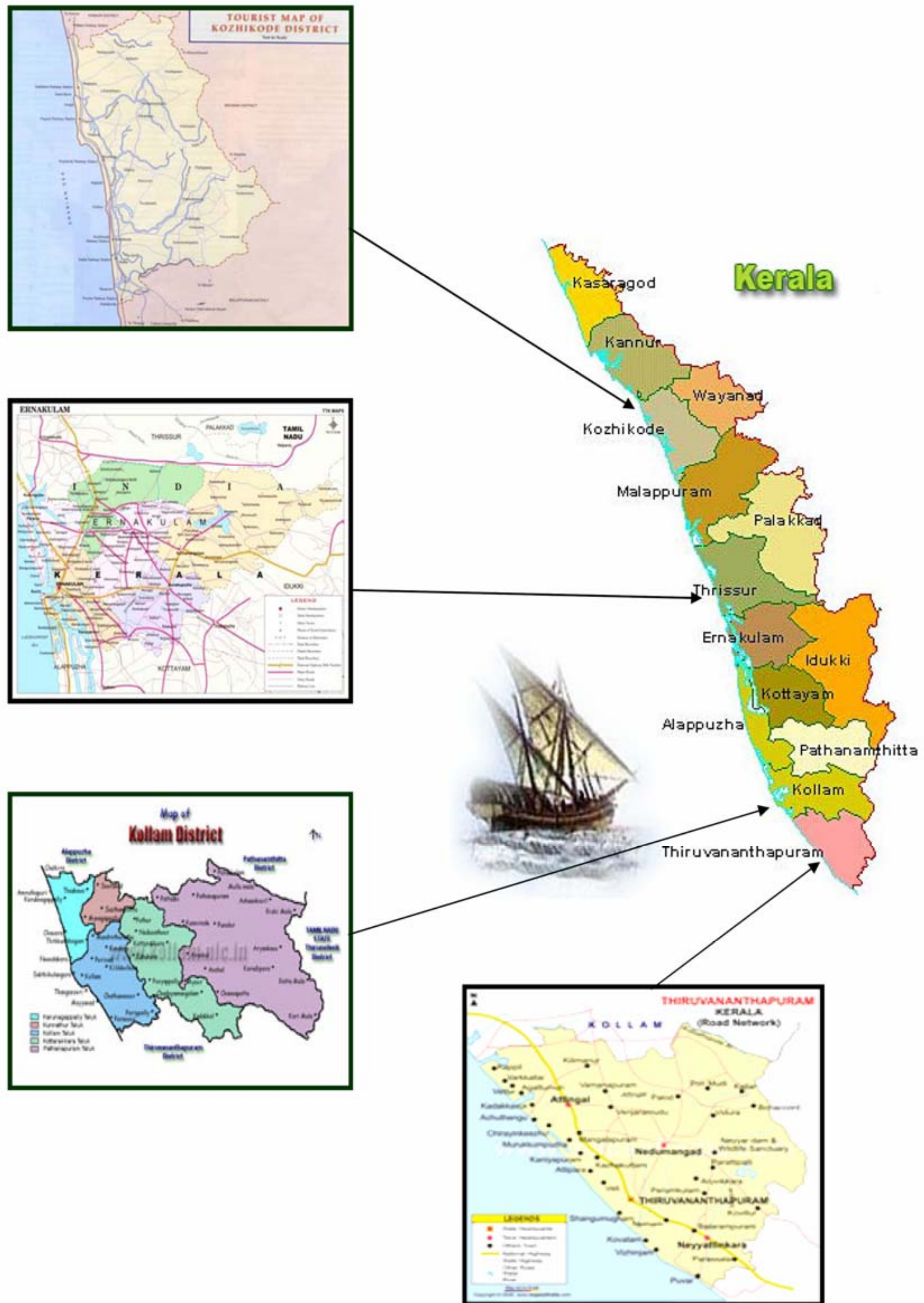

Figure.1.3. Map of Kerala showing area of study

1.8 Limitations

Out of the nine maritime districts in Kerala, the study has covered four districts which is a representative sample. Time and resources was sufficient to cover only the samples and hence an attempt was not made to cover all maritime districts in the State. Further the study has attempted to evolve an index based on usage dimension of financial services. The information on usage of financial services given by the respondent households is subject to severe limitations. There is no particular book maintained for recording financial transactions of households. Clearly 'under reporting' can be expected in some of the cases. Further some of the households may have gone for 'over reporting' to attract Government aid by projecting over indebtedness.

1.9 Chapterisation

The chapterisation scheme shall be as follows:

Chapter 1 *Introduction*

Chapter 2 *Review of literature*

Chapter 3 *A Retrospective of Financial Inclusion*

Chapter 4 *Profile of Marine Fisheries sector in Kerala*

Chapter 5 *Socio Economic Profile of respondents*

Chapter 6 *Financial Inclusion of fisher households and role of microfinance*

Chapter 7 *Vulnerability to informal sources of finance and role of microcredit*

Chapter 8 *Summary and Conclusion*

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Appendices

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Chapter 2

REVIEW OF LITERATURE

Contents

2.1	The Indian Rural Financial Scene
2.2	Conceptual Framework of Financial Inclusion/Exclusion
2.3	Approaches to Measuring Financial Inclusion
2.4	Nature and Causes of Financial Inclusion
2.5	Informal credit – Boon or Bane
2.6	Microfinance and Financial Inclusion
2.7	References

After more than sixty years after planned development in India, the rural transects are still facing impoverishment; a consequence of failure of trickle down of development efforts to the grass roots. Inspite of planner's motivation to achieve development with equality popularly known as 'inclusive growth', the country has been facing wide regional disparities both between urban and rural and between regions. Poverty, a cause and consequence of underdevelopment is a continuing issue to be tackled with. Rural indebtedness has been an agenda of discussion right from the time of independence. Safe, easy and affordable credit and other financial services to the poor and vulnerable groups, disadvantaged areas and lagging sectors is recognised as a pre-condition for accelerating growth and reducing income disparities and poverty. Access to well-functioning financial system by creating equal opportunities, enables economically and socially excluded people to integrate better into the economy and actively contribute to development and protects themselves against economic shocks (RBI, 2009).

Financial inclusion is important because it is considered as an important condition for sustaining growth (Subbarao, 2009). Such access is especially powerful for the poor as it provides them opportunity to build savings, make investments and avail credit. Access to financial services also helps the poor to

insure themselves against income shocks and equips them to meet emergencies such as illness, death in the family or loss of employment. It helps them to get away from the clutches of usurious money lenders. Financial inclusion also permits governments to make payments such as social security transfers and National Rural Employment Guarantee Programme (NREGA) wages into bank accounts of beneficiaries. A review of available literature on rural financial architecture on concepts, focus and studies on financial inclusion is presented in this chapter.

2.1 The Indian Rural Financial Scene

The history of regulating rural financial situation in India dates back to colonial period, which was dominated by moneylenders. The Taccavi loan Act in 1871-79, Land Improvement Loan Act in 1871 and 1893 empowered Local Governments to advance long term loans for investment in land from State funds. Further, Agriculturists Loan Act in 1884 enabled provision of short period loans for purchase of working capital and the Deccan Agricultural Relief Act, 1879 was enacted to regulate the business of money lenders. The cooperative forms of organizations were introduced in India by Cooperative Societies Act in 1904 which was modified in 1912 to overcome the deficiencies of the former, establishing a three tier system at village, district and provincial level. Though this was an earnest step in institutionalising rural financial scene, failure of cooperatives to finance agriculture and other allied activities was identified by Malcom Darling's Report (1935) and the Statutory Report of RBI (1937).

The post independence scenario of rural credit delivery was based on the All India Rural Credit Survey Committee Report (AIRCSC) in 1954 which noted that cooperatives are a failure which accounted for only 3.1% of aggregate rural debt in the country. One of the major steps for State intervention in rural financing was the establishment of SBI, nationalizing the Imperial bank of India. With all these efforts to enact effective regulations, the rural financial scenario remained grim, gripped in the hands of usurious moneylenders who acted as capital contributors in the event of absence of adequate institutional mechanism to serve rural demand. This was

reiterated by the finding of All India Rural Credit Review Committee (AIRCRC) in 1969 that the money lenders ultimate motive was of accumulating assets pledged by borrowers. A policy of social control was enacted prior to nationalisation of commercial banks in 1969, to establish 'mass banking' replacing the then prevalent 'class banking'. This was followed by the establishment of specialized rural focused institutions, the Regional Rural Banks (RRBs) sponsored by the commercial banks in 1975, which was expected to combine the local feel of cooperatives and the business acumen of commercial banks. The second phase of nationalisation was enacted in 1980. However with all these efforts the rural financial architecture remained deficient to serve the financial needs of the rural poor owing to a host of factors. 1991, marked the era of financial liberalisation, with a reversal from the so called objectives of serving the un-served and under served. The reversal of policies with orientation on business than on policy stances of eliminating uneven development was clearly reflected in closing down and reduction of rural branches. Leeladhar, 2005 observed that despite making significant improvements in all areas relating to financial viability, profitability and competitiveness, there are concerns that banks have not been able to include vast segment of the population, especially the underprivileged sections of the society, into the fold of basic banking services. However in 2003, the RBI policy of 'financial inclusion' to provide access to financial services to the poor can be earmarked as another bold initiative in serving the rural transects targeting inclusive growth. Committee on financial inclusion in 2008 (Rangarajan committee) observed that financial inclusion of hitherto excluded segments of the population is critical to sustain and accelerate growth momentum. For achievement of the same, the committee has put forward multi-pronged strategies including establishment of National Mission on Financial Inclusion, revitalizing the RRBs and Cooperatives, introducing MFI model (SHG- bank linkage) and Business Facilitator and Business Correspondent Model.

2.2 Conceptual Framework of Financial Inclusion/ Exclusion

Financial exclusion has been a point of discussion for the planners and policy makers most recently; the emphasis being shifted to 'inclusive growth'

incorporating those who have missed the 'bus of development' and are still abode on the realms of poverty, even after the massive planned economic development along more than six decades of independence. The definitions of financial inclusion or exclusion vary across the geographic regions decided by the concomitant economic development. This study focuses on financial inclusion with respect to the poorest of the poor and emphasizing a wider connotation of the term 'financial services' than defining it in a narrow perspective of owning a savings account with a bank. The definition of several aspects of the term propounded by several authors and committees and commissions is reviewed here to arrive at an acceptable working definition.

The earliest references to "financial exclusion" seem to date from the early to mid 1990s. The vast majority of published works examining financial exclusion, either as the central focus or as a part focus, emanate from the United Kingdom. Definitions of financial inclusion in literature tend to vary on dimensions such as 'breadth', 'focus' and 'degree' of exclusion (RBI, 2009). The breadth dimension is the broadest of all definitions which defines financial inclusion as a consequence of social inclusion which prevents the poor and the disadvantaged from gaining access to the mainstream financial system. The prominence of the term financial exclusion in the late 1990s parallels the rising prominence of the concept of social exclusion in social policy; the notion of "exclusion" is common to both (Chart Link and Associates, 2004). Some of the definitions of financial inclusion reiterating this view are as follows. Financial Exclusion refer to situation in which people encounter difficulties accessing and/or using financial services and products in the mainstream market that are appropriate to their needs (European Commission, 2008). Leyshon and Thrift (1995) define financial exclusion as "those processes that serve to prevent certain social groups and individuals from gaining access to the financial system". According to Sinclair (2001), financial exclusion means the inability to access necessary financial services in an appropriate form. Financial exclusion can be seen as a consequence of social exclusion. Exclusion can come about as a result of problems with access, conditions, prices, marketing or self-exclusion in response to negative experiences or perceptions. Report of the

Committee on Financial Inclusion defines financial inclusion as delivery of financial services at an affordable cost to vast sections of disadvantaged and low-income groups. (GOI, 2008). Unrestrained access to public goods and services is the *sine qua non* of an open and efficient society. This view is reiterated in the definition “the process of ensuring access to timely and adequate credit and financial services to vulnerable groups at an affordable cost (Kamath, 2007). As banking services are in the nature of public good, it is essential that availability of banking and payment services to the entire population without discrimination is the prime objective of the public policy. In India the focus of financial inclusion at present is confined to ensuring a bare minimum access to a savings bank account. The international definitions of financial inclusion have been viewed in much wider perspective (Leeladhar, 2005).

The ‘focus’ dimension links the other dimensions of exclusion. This dimension essentially takes care of the potential difficulties faced by some segments of the population, viz, individuals, households or communities in accessing mainstream financial services. It is a process that ensures ease of access, availability and usage of formal financial system for all members of an economy (Sharma, 2008). These definitions emphasize several dimensions of financial inclusion, viz., accessibility, suitability, availability and usage of the financial system. These dimensions together build an inclusive financial system. Another issue that needs to be taken care of is whether to measure access or usage; because in transaction banking and insurance we can find that people do not use it even if they are having access to it. Access dimension implies mere access to services while usage dimension is a broader term requiring examination of aspects like access, suitability, availability and actual usage. The World Bank also distinguishes between those who are ‘*formally served*’ that is those who have access to financial services from a bank and / or other formal providers and those who are ‘*financially served*’ who also include people who use informal providers. In contrast to the other work described above, the term ‘*financially excluded*’ is only used to describe those who have no access at all (World Bank, 2005). This study considers only the formal sector which includes all legally endorsed financial

service providers for the purpose of measuring financial inclusion. Hence “financial inclusion” also infers accessibility and usage of financial services from formal service providers. The United Nations(UN, 2006) define financially included as the financial sector that provides ‘access’ to credit for all ‘bankable’ people and firms, to insurance for all insurable people and firms and to savings and payments services for everyone. Inclusive finance does not require that everyone who is eligible use each of the services, but they should be able to choose to use them if desired.

The ‘degree’ dimension is the narrowest of all and defines financial exclusion as exclusion from usage of particular sources of credit and other financial services including insurance, bill payment services and accessible and appropriate deposit accounts. World Bank (2005) describes exclusion as a phenomenon where access to key areas such as transaction banking, savings, credit and insurance. For the purpose of the study this definition has been accepted as the bench mark. Though all services including credit, savings and insurance offered by the banks and other financial institutions are taken as the benchmark, more weightage is given to credit segment. Financial inclusion may be interpreted as the ability of every individual to access basic financial services which include savings, loans and insurance in a manner that is reasonably convenient and flexible in terms of access and design and reliable in the sense that savings are safe and that insurance claim will be paid with certainty (Mor and Ananth, 2007). In India, the focus of the financial inclusion at present is more or less confined to ensuring a bare minimum access to a savings bank account without frills to all. However, having a current account/savings account on its own, cannot be regarded as an accurate indicator of financial inclusion. [Vallabh and Chathrath, 2006]. Financial inclusion is characterized primarily as either general access to loans or access to savings accounts. [Arunachalam R.S, 2008]. Very few risk management and vulnerability reducing products are available to small holder producers. Financial inclusion cannot be restricted merely to opening savings accounts and/or providing credit for consumption/consumer spending but should also encompass delivering financial products tailor-made to cope with the fluctuating earning pattern of the poor. Rogaly 1999 defines financial exclusion in the perspective of exclusion from

particular sources of credit and other financial services (including insurance, bill-payment services, and accessible and appropriate deposit accounts)"

The review of literature suggests that most of the definitions are context specific, originating from country specific problems related to financial exclusion with regard to the respective socio economic dimensions which assumes importance in the public policy perspective.

On the basis of the above review the following working definition has been accepted with regard to financial inclusion throughout the study

> "Financial inclusion may be interpreted poor households' access to basic financial services from formal and semiformal service providers which include savings, loans and insurance and other financial services in a manner that is reasonably convenient and flexible in terms of access and design."

In this perspective, the study attempts to measure financial inclusion as a composite measure that takes into consideration access to transaction banking, savings, credit and insurance.

Transaction banking: refers to access to bank's financial services other than savings, credit and insurance.

Savings: Lesser savings leads to lesser capital formation implying lesser development. Not having a savings account can lead to financial exclusion.

Credit: credit is the most valid indicator for assessing the status of financial inclusion. Though other indicators are measured, credit access and indebtedness of a family determines the level of well being achieved. Credit measured as a sole measure of financial inclusion can also be useful that it may provide status of the stakeholder considering aspects like source, cost of borrowing, adequacy, proximity etc.

Insurance: Insurance provides coverage to the accidents/emergencies arising in a society affecting human lives, assets or livelihoods. Recent developments have

increased popularity and access to insurance. Also Government has enacted insurance policies for the benefit of sea faring fishers. Insurance inclusion is measured as sub element in the financial inclusion designating appropriate weights.

2.3 Approaches to Measuring Financial Inclusion

The literature on financial inclusion lacks a comprehensive measure that can be used to indicate the extent of financial inclusion across countries because of diversity in possible quantifiable indicators and factors inducing inclusion/ exclusion. The degree of financial inclusiveness has been less thought about, though indicators of depth of banking system, capital markets, and insurance sector are widely available. Individual indicators such as number of bank accounts and branches can provide only a partial picture. Macro and micro assessment of financial inclusion indicators provides different angles. While the macro indicators help policy makers in assessment of status and depth of financial inclusion, the micro view throws light into the outreach and constraints associated with financial inclusion. Some of the prevalent approaches of measuring financial inclusion are reviewed below.

2.3.1 Macro Assessments

Macro indicators of financial inclusion are built up on available financial monitoring indicators such as number of bank accounts, coverage of population by bank branches, per capita credit, deposit etc. Alternatively this does not suffice an indicator explaining access to financial services. Access is not easy to measure, and empirical evidence linking access to development outcomes has been quite limited because of lack of data. Existing evidence on the causal relations between financial development, growth, and poverty is consistent with theory. However, most of the evidence comes either from highly aggregated indicators that use financial depth measures instead of access or from micro studies that use financial or real wealth as proxy for credit constraints (World Bank, 2008). Economic approach to measuring financial inclusion/exclusion depicts it based on simple economic concepts using ‘exclusion curve’, which plots the proportion of the population in a particular income band that consumes a particular financial service.

A steep rise in the exclusion curve around a particular income band suggests the likelihood that there is an income threshold for acquisition of the service, below which most consumers will be completely unable to afford the service, or below which the product is inappropriate is termed as income exclusion. Price exclusion depicts a relatively even rise in ownership of a given service across income bands which suggest that consumers are able to purchase a service based on their perception of its value and their willingness to pay, which is only partly influenced by their income level (Chant and Link Associates, 2004).

The approach to financial inclusion in India encompasses concentrating on vast majority who are excluded (Thorat, 2007, Sharma, 2008, Subbarao, 2009, RBI, 2009). Financial Inclusion can be monitored in two ways, one; exclusion from payments system, ie not having access to a bank account. The second type of exclusion is from formal credit markets, requiring the excluded to approach informal and exploitative markets. Through nationalisation of banks in 1969, it was envisaged to extend coverage of banks in unbanked areas, thus increasing the scope of covering larger population. Recently the focus has been concentrated on providing affordable basic banking services.

The macro indicators- encompassing aggregate data sets have severe limitations. The number of accounts of the population does not imply access, further there can be multiple accounts for a single person. Therefore the individual survey data can provide better picture of the situation amenable for policy decisions. However the macro view of supply and demand side indicators of financial inclusion/ exclusion is inevitable in framing policies and implementation of plans to support the development process.

2.3.2 Micro Assessments

As indicated earlier, the core/headline indicators of financial inclusion can be arrived from individual survey data that would help in eliminating data insufficiency barriers of measurement. While the micro level assessment can provide a detailed picture; the argument of whether to contend with 'individual' or 'household' level of exclusion has to be framed out. A study on financial services provision and prevention

of financial exclusion carried out in Europe under the auspicious of European Commission (EC, 2008) discussed on whether to assess financial exclusion at individual, family/household level. If the assessment is made at the *individual* level, people appear to be financially excluded even though their partner may make extensive use of financial services. In most countries there is a legal age limit below which credit facilities cannot be granted. As a consequence many studies have looked at adults aged 18 or over, although others cover people from the age of 16 or 15. On the other hand, by assessing access at the *family* level (that is the head of household and their partner if they have one) a clearer idea of the proportion of the population with no ready access is available, even through a partner, but underestimate the proportion of people at risk of being financially excluded if they experienced the break-up of their family. It also underestimates the number of *people* who are affected. For this reason the United Kingdom Government, in its monitoring, estimates the number of adults living in family units without access to banking. Assessing access at the *household* level (that is considering all adults living in a household) compounds these problems still further as there is much less stability of households than of family units. Moreover, household level analysis does not provide estimates of the financial exclusion faced by young adults still living at home.

Suran and Narayana, 2009 used the financial diary approach with a view to understand and map the financial flows of poor families in fishing hamlets. This approach verifies income sources of selected families with a view to understand income and expenditure pattern for a period of 50 days during trawl ban period (monsoon resource conservation measure enacted in the coastal waters of Kerala usually for a period of 45 days during June to August) and consequent incidence of debt, demand pattern and evaluation of sources of finance.

2.3.3 Financial Service Supply Assessments

The financial inclusion studies can be classified in a mixed perspective of macro and micro studies, viewing from the angle of supply and demand of institutional finance.

The institutional supply of credit to poor has been researched both at macro and micro levels. The macro economic perspective analyses country level experiences in routing finances to poor while the micro angle scruitinises institution level performance in credit delivery. Macro economic variables to capture geographic and demographic pattern of banking system includes number of branches and ATMs relative to population and area and actual use of deposit and credit services (number of loan/deposit accounts relative to population and average loan and deposit size relative to GDP per capita) etc. In the analysis of cross country outreach variations in 99 countries using correlation and regression it was found that larger economies enjoy larger levels of outreach due to scale economies in banking service provision and the availability of better communication and transportation facilities (Beck et al, 2005). Better governance and a more effective system of credit information sharing are positively correlated with outreach. Cross-country evidence suggests a positive relationship between financial intermediary development and poverty alleviation. Arora and Leach, 2005 presents a comparative analysis of Indian and South African financial scenario, being countries which have pursued different political paths. Where India's state-led planning heavily emphasised reaching out to the rural poor and other marginalised sections of the population, South Africa excluded blacks from economic, political and social participation. The South African case emphasizes the market-led approach in financial inclusion of the unbanked. The country's achievement in this sector is commendable with 167 per cent of domestic credit (as a percentage of GDP) in 2001, as against 55 per cent by India, while that of low and middle-income countries as a whole stood at 69 per cent and for high income countries, at 173 per cent. However, almost half of the 44.8 million population remains on the periphery of the economy and is disconnected from financial services. Of the 9.4 million who are unbanked, 88 per cent are black, 9 per cent coloured, 1 per cent Asians and one per cent white. A major obstacle in accessing financial services is the cost of providing them on a small scale. In addition to banking costs, for many clients, there is an additional cost of transport to a point of access and the opportunity costs associated with travel time. So cost reduction exercise would need to include an increase in points of interaction with

the banking system (including branches, points of sale, or through use of alternative technology such as cell phones).

The Indian perspective of supply side financing has been discussed widely in light of priority agenda of financial inclusion strategy of the RBI. Even after concerted efforts by Government and the Reserve Bank in pursuing the goals of financial inclusion, out of 6,00,000 habitations in the country, only 30000 have a commercial bank branch. Just about 40% of the population across the country has bank accounts, and this ratio is much lower in the north east of the country. The proportion of people having any kind of life insurance cover is as low as 10% and the proportion having non life insurance is an abysmally low of 0.6%. People having debit cards comprise only 13% and those having credit cards only a marginal 2%.

The lack luster performance of Indian banking sector has been criticized in the 10th Five Year Plan document, Dimensions and Strategies (volume I); "The banking system must be encouraged to reach out to the enterprises in the informal sector through innovative means. This is effectively what is intended by the various targets specified for priority sector lending by commercial banks. However, priority sector lending has created a culture of mechanical lending in public sector banks, in which there is little effort at credit appraisal of lendings made to priority sectors" (GOI, 2007). The need for reaching out to the informal sector through innovative means has been rightly emphasised in the document. According to the Census 2001, only 4.16 crore households out of 13.83 crore households in rural India are reported to have availed banking services. With all efforts made by banks and SHGs, only 30 per cent of rural households are linked to the banking sector. Over 9.67 crore of rural households - inferentially a vast majority of them are dependent on farming – are yet to be reached by banks. Among them 5.59 crore households are the deprived lot, who do not own any of the assets listed in the Census enumerations.

Anjanikumar et al, 2007, analysed the performance of rural credit and factors affecting the choice of credit sources. The study was based on the Debt and

Investment Survey of NSSO, conducted in 48th round and 59th round. They found that performance of rural credit delivery has improved since the indicator of dependence of non institutional sources of finance showed considerable reduction. The share of non institutional sources of rural credit has declined from 91 per cent in 1951 to 44 per cent in 1991-92 and a dramatic achievement was noticed in the increase of share of institutional sources of rural credit from less than 9% in 1951 to 56% in 1991-92. Later on this trend seemed to stagnate and the role of exploitative sources persisted. The share of institutional financing fell in the states like Bihar, Chandigarh, Tamil Nadu and most of the North Eastern States. Rural households continued to depend upon informal sources such as money lenders, traders, landlords etc. The study found that interest charged by informal moneylenders was exploitative and therefore stable, reliable and reasonable credit delivery system is a necessity to prevent the exploitation of rural households by informal moneylenders.

The micro angle of supply side financing looks into the institutional perspectives, particularly the problems related to financing and the underlying factors. Financial services inclusion research (supply side) carried out by SEEDA (South East England Development Agency) to assess the nature and extent of Community Development Finance Institutions (CDFI) including Credit Unions in the region and sustainability of finances assessed gaps and sustainability of CDFI's. The study made use of extensive secondary information in addition to primary information from stakeholders. The findings of the study emphasized that Credit Unions and CDFIs in the South East have potential for financial inclusion in the region lest their scale of challenges and issues are resolved (SEEDA, 2004).

2.3.4 Financial Service Demand Assessments

Attempts have been made all over the world to synthesize the needs of the poor to arrive at demand for financial services by the poor. BMRB Social Research, 2006 on behalf of the Financial Inclusion Taskforce conducted a study to assess the access to financial services of those on margins of banking in Great Britain with the main objective of assessing financial exclusion to access cash and

transfer money. The elements of financial exclusion of relevance to this research relate to lack of ownership, or lack of full transactional use of a bank account. A clear link was established between marginally banked household status and other social exclusion indicators. The research found that reasons for not owning a bank account were two-fold: either due to personal circumstance or personal choice. While circumstances such as lacking the relevant identification or credit rating to open a bank account were important, the large majority of unbanked individuals had made a personal choice not to open an account.

The rural population in India is subjected to great deal of indebtedness and is subject to exploitation in the credit market. Rural households need credit for investing in agriculture and smoothening out seasonal fluctuations in earnings. Since cash flows and savings in rural areas are not sizeable to fit into the consumption needs like education, clothing and household necessities including non-food expenses, they need to rely upon credit [Vallabh and Chathrath, 2006]. The financially excluded sections in India largely comprise marginal farmers, landless labourers, oral lessees, self employed and unorganised sector enterprises, urban slum dwellers, migrants, ethnic minorities and socially excluded groups, senior citizens and women. While there are pockets of large excluded population in all parts of the country, the North East, Eastern and Central regions contain most of the financially excluded population (Thorat, 2007).

The marine fisheries sector in India is not different form the other rural transects. A study conducted by the Microfinance Consulting Group in the auspicious of FAO and the UNTRS (Arunachalam *et al*, 2008) to analyse provision of financial services to low-income fisherfolk, observed that a combination of variability in catch, technology upgrades, over capitalisation, rising costs, aggressive fishing, over crowding, etc. have made economics of fishing and fishing related occupations uncertain. The investment and operational costs have gone up considerably without any drastic increase in output. This has resulted in fishermen getting increasingly dependent on loans to finance their expenditures and also using loans as coping mechanisms. Expenditures take the form of c*apital expenditures***:** which include purchase of boats, launches, nets and engines etc;

Running *expenses:* which include boat, net and engine repairs, ice fuel and food etc and Other *Expenditures*: which include medical, emergency and other expenditure for family including education. The study by Suran and Narayana, 2009 reiterated the above mentioned findings, in their study on financial needs of the poor households in the coastal settlements of Kerala using the financial diary approach with adequate stress on different aspects of incidence of debt, demand pattern and evaluation of sources of finance.

2.3.5 Indebtedness Assessments

The most important financial service requirement of rural poor is credit, which has almost been the topic of discussion right from the time of independence. Seasonality and uncertainty in agricultural production has always forced the farmers to borrow from different sources of finance. Credit to rural area, particularly, the agricultural sector has always been debatable topic, in terms of issues including lesser accessibility to institutional credit by farmers, mounting non performing assets to the lender on account of non repayment of the debt owing to different reasons including failure of crop. Some major milestones in rural credit are the acceptance of Rural Credit Survey Committee Report (1954), nationalisation of commercial banks, establishment of RRBs and establishment of NABARD. Several simultaneous measures like establishment of the lead bank scheme, direct lending for the priority sectors, differential rate of interest scheme, the service area approach, the SHG bank linkage scheme, the most recent Kissan credit card scheme, special agricultural plans and RIDF have also been launched to further the rural development process. Inspite of these developments rural areas continue to be in the darkness for want of institutional credit coupled with wide spread dominance of non-institutional sources. Several committees have suggested means to increase availability of credit to rural areas including the Expert Committee on Rural Credit (V.S Vyas), Committee on Agricultural Credit through Commercial Banks (Chairperson R.V Gupta), Committee on Cooperatives (Chairperson Vikhe Patil), Advisory Committee on Flow of Credit to Agriculture (Chairperson V.S Vyas) and Task force on Revival of Cooperative Credit Institutions (Chairperson A. Vaidyanathan). The menace of exploitative moneylenders has remained inspite of the above said Government efforts.

Governments have tried to give impetus to agriculture and allied sectors by budget allocations; most recent is the debt waiver scheme announced in the 2008 budget intending to rescue the farmers from the deluge of debt. Some of the studies are discussed herein dealing with agricultural sector in general and fisheries sector in particular. A macro scan of the underlying patterns in rural credit supply has been probed by Anjanikumar et al, 2007 using the NSSO debt and investment estimates. The study found that the access and distribution of rural credit is skewed in favour of better and endowed regions and within the same region is in favour of better off households. The persistence of moneylenders remained a matter of concern because of exploitative interest rates and their undesirable financial deepening. Almost similar finding was reported by Sharma, 2006. Using the NSSO estimates it was established that cultivation was the major source of more than one half of the indebted farmer households and that more than 70% of them were marginal farmers. The amount of outstanding debt had positive and statistically significant relationship with the size class of land possessed and per capita capital expenditure in most of the states. Capital and current expenditure on farm business together accounted for more than one half of the total outstanding debt in majority of the states. The debt outstanding to moneylenders and traders was around three fifths in Andhra Pradesh and Rajasthan, 2/5 in Tamilnadu and Punjab, 1/3rd in Assam, Bihar, Haryana ad Madhya Pradesh. A research paper by Aravind, 2007, outlined and examined the hypothesis that decline in the ratio of investment to production credit over time will lead to reduction in output per unit of crop loan, so that there is positive association between the two. Its verification and confirmation has provided significant policy implications in the sense that it had theoretically and empirically demonstrated the weakness of the current piecemeal approach for improving it by determining the optimal range within which crop to term loan of scheduled commercial banks should vary. The ideal range estimated is that investment credit should be around two third to three fourth of the production credit. A study probing into the sources and pattern of credit and utilization of borrowed funds in irrigated and non irrigated regions in Puri district of Orissa (Panda, 1985) which probed into overdues and factors associated with increasing overdues revealed that while

farmers in the irrigated region depended more on institutional credit, those in the non irrigated regions depended on non-institutional sources. Large and medium farmers were found to divert credit for non productive purposes than the small farmers. Incidentally, bulk of the chronic defaulters was found in the medium and large farm categories irrespective of the regions under study. Size of loan, utilization of loan for unproductive purpose and repaying capacity were found to influence overdues pattern.

There is no dearth of studies on indebtedness in fisheries, since it is considered as one of the sectors which have been persistently in indebtedness to non formal sources because of the highly uncertain earning pattern. Some of the studies in fisheries sector has highlighted this problem in particular. BOBP initiated a pilot project in 1980 in four fishing villages of Thanjavur district in Tamil Nadu. Located in Adirampattinam about 40 kilometres from Thanjavur, the four villages are Karaiyur Street consisting of 334 families, Sunnambukara Street with 149 families, Tharagar Street with 88 families, Arumuga Kittangi Street with 46 families. Fisherfolk of these villages described credit as their most urgent need (Anbarasan and Fernandez, 1986). The men needed credit for buying nets; the women for fish marketing. Consequently the project organized loans from a nationalised bank in Adirampattinam for both fisherwomen and fishermen. In addition, loans for fisherwomen were also organised by the Fisherwomen Extension Service of the Tamil Nadu Department of Fisheries, through a cooperative society. Later in 1982, two studies were carried out on the impact of the loans given to the fishermen and the fisherwomen. It was found that around 67% of the debts normally incurred by fishermen are for purchase of nets. The bank provided loans of Rs. 1000 each to 100 fishermen who belonged to nine groups, to be repaid in two years at 4% interest. Only 25% of the borrowers increased their fish catches and earnings; 55% secured a marginal increase while 25% recorded no increase at all. The group approach to credit did influence loan repayment. After 16 months of the stipulated 24-month repayment period, 48% of the repayments due had been made. Two agencies organised credit facilities for fisherwomen — the Working Women's Forum (WWF) and the Fisherwomen's

Extension Service (FWES). Under the WWF, loans were provided by the local Canara Bank. Each loanee received Rs. 100 for fish marketing, to be repaid in six monthly installments at an interest of 4 per cent. The FWES loans were provided by the Fisherwomen's Cooperative Society; each loanee received Rs. 200 for fish marketing, to be repaid in 26 weekly installments at an interest of 15%. The credit programme for fisherwomen was meant to increase the profitability of petty marketing operations, generate investment capital for them through their own savings, and step up the volume of marketing. The study showed that the levels of credit provided to the target groups of fisherwomen were appropriate and that all borrowers found the loans advantageous since they did not have to pay exorbitant rates of interest.

Later on a study was conducted among the fisherfolk in Orissa with the objectives of assessing the earning pattern, spending, borrowing and saving pattern (Mammo, 1987). The study also probed into traditional saving methods and purpose of savings in small scale fishing community in the fishing villages of Udayapur and Gopalpur. The author observed two types of credit systems operate in fishing communities: the traditional and the institutional. Traditional sources comprise moneylenders, middlemen, fish traders etc who charge an interest rate between 40% and 50% per annum. The elasticity of the interest rate is determined by the urgency of the demand for loans, on the one hand, and the number of moneylenders in the community on the other. The traditional lending system, tailored to the community's needs, is still the strongest in fisherfolk villages. Of the 80 households surveyed in each village, 47% and 54% have borrowed from banks and cooperatives, paying interest at the rate of 11-13% per annum. 61% to 68% of the households have borrowed for production-related activities. It was found that the money for consumption expenditure is borrowed from moneylenders, relatives and friends. Although the survey indicates that fisherfolk do want to save, their savings are mostly for short term needs and on a day-to-day basis. Group savings are more appropriate and helpful for lower income groups. Credit facilities and new income-generating activities boost incomes and motivate higher savings.

As part of the BOBP (Bay of Bengal Programme) supported credit project, carried out in four coastal districts of Orissa-Balasore, Cuttak, Puri and Ganjam, it was established that bank credit to artisanal marine fisherfolk can not only be viable but also fully recoverable (Tietze, 1987). Under the project during 1983-86, 29 branches of nine nationalized banks disbursed credit worth Rs. 6.5 million to 2,500 fisherfolk households. (These households represent 12 per cent of the state's artisanal marine fisherfolk and account for more than 60 per cent of Orissa's marine fish production). The loans were advanced without subsidy at 12.5 per cent interest, and were refinanced by NABARD. The Orissa credit project demonstrates that non-subsidized lending to marine fisher-folk in India can help banks and fisherfolk alike, if banking services are able to incorporate the principles of flexibility, timeliness, simplicity and borrower education/extension. Direct priority sector lending by commercial and regional rural bank branches, supported by extension services by the fisheries department, seems to offer the best scope to incorporate the principles mentioned above. The rate of loan repayment by fisherfolk was excellent (95 per cent). Other indicators of the effectiveness of the project were the short period between loan application and disbursement (three or four weeks) and productive utilization of loan assets (almost 100 per cent).

Study conducted by the Microfinance Consulting Group in the auspicious of FAO and the UNTRS (Arunachalam et al, 2008) in 10 districts across 3 states - Chennai, Chengai MGR, Pondicherry/Cuddalore, Nagapattinam, Tanjore, Ramnad, Tuticorin, Kanyakumari, Trivandrum and Kollam to analyse provision of financial services to low-income fisherfolk, especially, in the post tsunami context, with the objectives of understanding the extent to which men and women in fisheries are excluded from the mainstream financial system. The study identified their needs for financial services across pre-harvest, harvest and post harvest fisheries with a view to understand supply side perceptions and constraints. Of the 1000 individuals interviewed, less than 2% had an account with a bank or Post Office and even fewer had an insurance policy. That reflects that despite overall growth in the economy, this sector continues to be excluded by the financial sector. It was found that an institutional credit agency could hardly provide them

with Rs. 50,000 as loan, while the absence of such mechanism directs them to informal credit system, which charges interest rates between 24 to 190 per cent. The study also revealed that it was difficult for them to mobilize money for life cycle events. Their savings pattern was also found erratic with limited number of savings account with an institutional mechanism. The rural markets continue to be operated by few traders. The market operations are not streamlined or automated and hence data is not easily available to capture. Only in those markets where there are intermediaries like SIFFS or Matsyafed are records maintained to track daily sales volumes by the fishermen. Variability in catch pattern affected fishers' repayment ability, which was observed from SIFFS data; where inspite of repayment delinquencies observed for 3-4 months, many of the production loans closed by 18 months, almost before 50 per cent of loan term is over. The study identified that financial deepening is the need of the day. It was found that traditional microfinance interventions are unsuitable to harvesting activities, while it supports the needs of post harvest fishery activities. The study brought out the need for special financial products for fisherfolk and the requirement of alternative delivery mechanisms.

Analysing different types of assessments that attempts to throw light upon various aspects of financial inclusion, it was found that there is no dearth of studies in assessment of supply side of financial inclusion but limited attempts to study comprehensive demand side financial inclusion. Although there had been attempts to study access to savings, credit and other financial services, it fails to reflect the sectoral and regional imbalances and demand driven need for finances. In this context, present study attempts to assess the level of financial inclusion in one of the marginalized sectors in the economy, the marine fisheries sector, often quoted as example for lop sided development.

2.4 Nature and Causes of Financial Exclusion (The underlying variables)

The reasons for financial inclusion are many. This is promoted by a confluence of multiple barriers including constraints to access, physical and social infrastructure, understanding and knowledge, newer technology, support and

confidence among others (Subbarao, 2009). These barriers seem to be not constructed deliberately but have been the result of structure of financial service providers and socio economic milieu of those being excluded (poor). A significant proportion of people excluded from the formal financial system across countries find access to informal markets driven by a host of factors such as the stage of financial sector development, perceptions of dominant financial institutions regarding the business case for providing financial services for the excluded, financial policy and regulatory system and the institutional composition of the financial system (Fernando, 2007).

A study on financial inclusion in Great Britain identified that the elements of financial exclusion relate to lack of ownership, or lack of full transactional use of a bank account. This can be divided into two groups of interest: the unbanked (those without any form of transactional bank account) and the under banked (those who have a bank account but do not use it regularly to manage their money), these two groups in combination may be termed as marginally banked (www.financialinclusion-taskforce.org.uk, 2008). Other factors having a bearing on financial inclusion includes proximity and access to services, user fee of ATMs, banking habits among the population, payment options to marginally banked households, security concerns, access to advice, credit/borrowings and savings. European commission found that supply side factors that demote financial inclusion include refusal from banks to open bank accounts for certain groups of people with poor credit history and unstable patterns of employment who fail in the credit scoring. On demand side people are deterred from accessing and using transaction banking for a range of psychological and cultural reasons like ‘cash only generation’ (elderly people)(European Commission, 2008). Fernando (2007) identified that the root cause of supply-side constraints is the conventional view of potential market consisting of poor and low-income people. Two interrelated ideas dominate the conventional view. First is that given low income levels and lagging social development, there is little profit potential in the low end of the financial markets; hence, the conclusion that market-based solutions cannot lead to improved financial services for low-income people and that the private sector has

no significant role in this market segment. Second is that because this market consists of low-income people, it must be served through government programs and programs of charitable institutions including social mission-oriented non-government organizations. The incompatibility of services offered by the suppliers with the product service requirements of the poor has aggravated the accessed problem.

Financial exclusion is an issue in the developed countries as well, although the proportion of population excluded is much smaller. A comprehensive study by the Financial Services Authority (FSA), UK found that 7 per cent of the households lack access to any financial products at all [FSA 2000]. A further 20 per cent are on the margins of financial services. In addition to exclusion caused by physical distance, five other forms of exclusion were identified by this study, viz, access exclusion, condition exclusion, price exclusion, marketing exclusion and self-exclusion.

Form of Exclusion	Source of Access Restriction
Access exclusion	Process of risk assessment
Condition exclusion	Conditions attached to financial products which are inappropriate for the needs of some people
Price exclusion	Pricing of financial products that make them unaffordable to some
Marketing exclusion	Targeted marketing and sales
Self-exclusion	Anticipation by some of refusal of application

Source: FSA (2000).

There are a variety of factors imposing financial exclusion. For example in remote, hilly and sparsely populated areas with poor infrastructure, physical access itself acts as a deterrent. From the demand side, lack of awareness, low incomes/assets, social exclusion, illiteracy act as barriers. From the demand side, there are number of reasons for the rural poor remaining excluded from the formal banking sector, such as: (a) high transaction costs at the client level due to expenses such as travel costs, wage losses, incidental

expenses, (b) documentation, (c) lack of awareness, (d) lack of social capital, (e) non availability of ideal products, (f) very small volumes / size of transactions which are not encouraged by formal banking institutions, (g) hassles related to documentation and procedures in the formal system, (h) easy availability of timely and doorstep services from money lenders/informal sources and (i) prior experience of rejection by/indifference of the formal banking system(RBI, 2005).

Analysis of type of financial inclusion existing within the poor gives insights into the underlying roots causing exclusion. Financial inclusion exists in many ways like gender exclusion, geographical exclusion, exclusion of the landless etc. While exclusion has many reasons of its existence, a rural resident is subjected to exclusion depending on the possession of land and not personal exclusion (Chaudhari, P C, 2007). Anjanikumar et al, 2007, in their study applied the multinomial logit model to identify the factors which determine the choice of credit outlet using the data from NSSO, Debt and Investment Survey, 48th round and 59th round. The effect of age on probability of borrowing was significant and positive from institutional sources and negative from non institutional sources. It was expected because with age, people mature and hence avoid going for borrowing from non-institutional sources. The effect of gender though was positive for both cases, it was more so for getting loans from institutional sources. The male headed households depicted higher possibilities of getting loans from the institutional sources. Larger farm size enhances the probability of getting the loan from a formal source with an added possibility of repayment of credit. It was also revealed that the people who belonged to the weaker section were found to be having lesser probability of access to institutional credit compared to the general castes. Educational level also had positive correlation with access to institutional sources of credit.

From the supply side, distance from branch, branch timings, cumbersome documentation and procedures, unsuitable products, language, staff attitudes are common reasons for exclusion. All these result in higher transaction cost apart from procedural hassles. On the other hand, the ease of availability of informal credit sources makes it popular even when iit is costlier. The requirements of

independent documentary proof of identity and address can be a very important barrier in having a bank account especially for migrants and slum dwellers. (Thorat 2007). The exclusion of large numbers of the rural population from the formal banking sector may be for several reasons from the supply side as identified by the Khan Committee; (a) persons are unbankable in the evaluation/perception of bankers, (b) the loan amount is too small to invite attention of the bankers, (c) the person is bankable on a credit appraisal approach but distances are too long for servicing and supporting the accounts and expanding branch network is not feasible and viable, (d) high transaction costs particularly in dealing with a large number of small accounts, (e) lack of collateral security, (f) inability to evaluate and monitor cash flow cycles and repayment capacities due to information asymmetry, lack of data base and absence of credit history of people with small means, (g) human resources related constraints both in terms of inadequacy of manpower and lack of proper orientation/expertise, (h) adverse security situation prevailing in some parts of rural India, (i) lack of banking habits and credit culture, (j) information-shadow geographical areas, and (k) inadequacy of extension services which is crucial to improve the production efficiency of the farmers leading to better loan repayments(RBI, 2005).

Sector specific imbalances are common in institutional financing and often agriculture bears the grunt in terms of uncertainness associated with earning pattern. The case of fishery is much more pathetic, being perceived as an extremely risky sector among bankers/suppliers/insurance companies. There is lack of sufficient specialized staff with requisite fisheries background in these suppliers and this makes the task of investment even more difficult (Arunachalam et al, 2008). In a study to assess the status of financial inclusion in coastal small scale fisheries sector in South Asian countries including India, Bangladesh and Sri Lanka with special focus on women, the reasons for financial exclusion has been probed. One of the reasons behind the low status of fishing communities is the caste system and the exploitation by middlemen and merchants. Middlemen have the control over credit and fish marketing which drains away the surplus generated and often make them indebted. A combination of variability in catch, technology

upgrades, over capitalization, rising costs, aggressive fishing, overcrowding etc has made economics of fishing and fishing related occupations uncertain. Moreover the distinctive aspect of fisheries credit is that incomes vary on a daily, seasonal and regional basis (in addition to the type of fisheries). There are also closed seasons where income from fishing is zero. This has increasingly forced fisherfolk to depend on loans to finance their expenses in addition to serving as coping mechanism. The key expenditures include (i) capital expenditure towards purchase of boats, launches, nets, engines etc. (ii) running expenses which include boat, net and engine repairs, ice, fuel and goods, etc. and (iii) other expenditure involving medical, emergency and other expenditure for family including education. (Karmakar, et al, 2009). Fishermen are having diverse credit needs owing to above said problems and the banks are reluctant to cater to these increasing credit needs because they do not have any collateral security. As a result they land in the debt trap of the informal credit system comprising moneylenders, financiers, chitfunds and borrowings from friends and relatives.

The reasons for non preference of financing fisheries sector by institutional agencies include (Arunachalam et al, 2008)

a) *Variability:* variability in catch across fishers/geographies and cyclical income for fishermen was a major issue mentioned by bankers.

b) *Inability to Demonstrate Savings:* The fishermen are unable to generate cash savings. Traditionally they have been conditioned to spend all their earnings and rely on borrowings for any emergencies or additional expenditure.

c) *Seasonality*: The fish stock moves from one place to another based on seasons. Hence

d) the catch is dependent on the seasons. Generally a good season in one place is for 6 to 7 months and the remaining months are lean season. Thus, the cash flow varies on this basis. Also, overall value of the catch is dependent on the type of fish catch.

e) *Perishability:* The fish catch is a highly perishable commodity. Very strong output linkages and storage facilities are a must for getting good price of the catch, as it is a highly perishable commodity. (e) *General Risk*: Fishing is generally a high-risk business. The life and the assets are at high risk during fishing.

f) *Fairly High Depreciation*: Fairly high rate of depreciation applies to fishing equipments. Boats and other equipment depreciate quite fast and they need to be replaced within 3 – 5 years or 7 years at the maximum.

g) *High Investment Business*: As the cost of fishing equipments is very high, it is also prohibitively costly to buy these equipments. The small fishermen generally work in groups where one person owns the equipments and remaining invest through labor. As per informal estimates per boat there are three to four small fishermen dependent on it. Ratio of owners to coolies is 1:4 or so and so, it is high investment with diminishing returns today due to over crowding and unsustainable practices.

h) *Migration*: There has been a tendency for small fishermen to migrate to other areas in search of the better fish catch for longer periods of time.

i) *Continuous Technological Changes*: The bigger fishermen (using trawlers) continuously invest in technological upgradation (GPS, improved nets and improved storage mechanisms) and hence get a better catch as compared to small fisherman using traditional methods and equipments. They generally go for deep-sea fishing by leveraging their technological strength and hence reducing the variability/ seasonality associated with the business. In some ways, the presence of these trawlers causes numerous hardships for the low income fisherfolk.

j) *Exclusive Livelihood*: Most of the fishermen exclusively depend on fishing for their livelihoods. They generally do not have other supporting livelihood activities to fall back on during lean season or during any major calamity. This makes them more of a credit risk as also a very vulnerable group.

k) *Environmental Risk*: Due to continuous degradation of environment, the fish catch is reducing along the coastline. This is evident from the increasing distance from the coast that the fishermen need to travel to catch fish. This increases the risk and also the overall expenses. Management of open access resources require careful attention; and

l) *High Input Cost*: Fishing today has become cost intensive – output per unit of investment is rather low and same output can be got with lesser investment. However, subsidies by Govts is slowly increasing the investment in fishing – for example, subsidies for engines serve to incentivise fishers to go for high investment engines. Corrupt practices are also created by the subsidy component as in Small Scale Enterprises (SSE) sector – e.g., showing of some one else's engine for getting subsidy and also the same aspect in registration of boats, etc. The increasingly intensive nature of fishing is also making it less attractive economically

Several studies analysing the factors behind financial exclusion, particularly credit exclusion were being reviewed above. While credit supply is considered to be most significant in determining financial inclusion, the study has accorded due weightage to access to formal credit supply. Studies in fisheries sector has also concentrated on indebtedness aspect alone leaving behind the question of access to savings and other financial services. The present study would serve to bridge this gap of knowledge by presenting a comprehensive picture of financial inclusion encompassing savings, credit, transaction banking and other financial services.

2.5 Informal credit – Boon or Bane

Whether the informal credit is a boon or bane is still a debatable topic as institutional credit supply in rural areas are often insufficient to promote cent per cent financial inclusion. Inspite of the overall performance of banks, the credit flow to rural, particularly agricultural sector is dismal resulting in financial exclusion of the masses. These sectors are governed by the informal credit markets. Dependence on moneylender supplies the rural residents at least to have access

to finance even at higher cost. It can be said that the moneylenders have dynamically outmaneuvered formal financial system in their reach to poor by their adaptive management skills and resilient social networks. They have been interpreted as structurally supporting capitalism because they provide marginalised people who are beyond the scope of banks with purchasing power for the commodity markets based upon credit (Schrader, 1994). However this leads to a phenomenal debt trap leaving the poor borrowers 'ever in debt' with an incessant process of debt servicing.

Majority of the available literature focuses on the share of informal lending in rural finances, the causes and problems associated with it while a few approaches move in a different angle focusing on efficacy of informal financing. The debt profile of the rural households in India reveals that informal sector forms the major source of credit to poor households [Vallabh and Chathrath, 2006]. Due to several problems involved in sourcing loan from formal financial institutions, rural households depend upon moneylenders, traders, landlords to finance their capital requirements. However, it has not been recognized that moneylenders have adopted management techniques for survival amidst increasing competition from formal agencies. The comparative advantage of non formal agencies in terms of lower transaction costs, locational convenience, minimal procedures and immediate cash disbursement attracts the poor. However the interest rate charged on such borrowings are high; the average interest rate charged by non institutional agencies being 36% per annum in 1991-92 and 42 % in 2002-03, roughly triple the interest charged by formal lenders (Anjanikumar et al, 2007).

One of the problems that has been a concern promoting uneven development is the aversion of the institutional financing agencies to financing agriculture. Gavan and Dixon, 1975 notes the importance of moneylenders especially where the risk of crop failure is high; most farmers, especially small ones, still rely heavily on local moneylenders, who charge very high rates. Basu, 1997 found that the risk of the lender is high being offered with the standing crop as the mortgage by poor farmers. Similar view has been expressed by Gavan and Dixon, 1975.

The case is not much different in the case of fisheries sector. The coastal residents are considered as an 'outlier' in the development process due to the socio economic backwardness. It was revealed that in the absence of institutional credit, the fish worker's only recourse is mainly the informal credit system (Arunachalam et al, 2008) owing to highly variable (income providing) livelihood like capture fisheries. Viability of fish vending and marketing is affected by the risk of perishability, erratic supply of fish stock, lack of appropriate storage facilities and several other aspects including borrowings for emergencies at high cost and the like. Data across all states indicate that small-scale fish workers cannot access formal institutional credit except through intermediary peoples organisations (SIFFS), State cooperatives (MATYSAFED), NGOs, MFIs (Dhan, ICNW, Sneha, Shanti Dhan, IASC etc) and SHGs. The lone exception seems to be gold loans for which the fishing community accesses banks/NBFCs quite easily and directly. People rely on money lenders, financiers, chit funds, borrowings from friends and relatives for raising funds for life cycle needs, housing, education of children, setbacks and emergencies, etc. In many cases, even for production purposes, they have to rely on informal money markets including trader, merchant and money lenders. And for the poorest among these, even that appears to be seemingly difficult.

The study on deluge of debt and financial needs of the poor households in the coastal settlements of Kerala (Suran and Narayana, 2009) analysing the income and expenditure and borrowing patterns of selected 13 families in Neendakara fishing village in Kollam district in Kerala also reports similar findings. The study found that more than 50% of the poor households in the socially excluded hamlet are not yet connected with the formal institutionalised system for their financial needs. The poor frequently borrow small amounts from money lenders, friends and relatives even though about 46% of the households had access to SHG [Self Help Groups] or bank linkages. In the sample households, the maximum amounts of over 72% of such loans were less than Rs 500. Debt or borrowed funds constituted about 47% of the resource inflow for the sampled households. The share of food in the expenditure basket of the poor was very

high, regardless of the occupation and the source of livelihood of the household. The paper suggests the need for a relook at the design of financial products that banks offer to these underserved, vulnerable clients. More research in the area is recommended with a clear client consultation process before designing financial products for the poor.

However an interesting school of thought developed in this connection is the formal-informal financing institution linkages that formidably conceives the idea of nexus between the bank and moneylender, where the formal financial service has not reached or is unviable. In short, it is not possible to eliminate the role of moneylenders in serving the unbanked or underbanked poor, in light of the inability of the financial system to expand its accessibility to the poor. Studies have reported the weakness of moneylenders, that when the borrowers (small cultivators) differ in their likelihood of default, the moneylenders are asymmetrically informed about the client specific degree of risk. The policy of providing cheap credit through the formal sector can generate adverse 'composition effects' which worsen the terms of credit and the availability of loans in the informal sector. Reportedly an informal nexus already exists between the formal and informal credit suppliers. The market for informal credit is created by the delay in disbursement of formal credit. The delay is controlled by the official of the formal credit agency, and he is bribed by the farmer to reduce the delay. The official and the moneylender play a non-cooperative game in choosing the bribing rate and the informal interest rate, respectively. The informal sector interest rate and the effective formal sector interest rate (incorporating the bribe) are equal in equilibrium (Chaudhari and Gupta, 1996). An innovative redesign of financial system that legitimately works for the poor is therefore called for. In order to make the money work for the poor a comprehensive financial system based on the bank-moneylender linkages is required. Without a full integration of traditional and contemporary financial innovations any attempt to expand the formal financial system in India is likely to be of limited utility to the poor (Crosson, 1975, Bell, 1990, Garg and Pandey, 2009). Andersen and Moller, 2006 studied the strategic interaction between informal and formal lenders in undeveloped credit markets. In

a model with adverse selection, loan seniority, market power, and differences in the cost of lending, it is shown that under general conditions a co-funding equilibrium will be a Nash outcome. Authors demonstrate that a collateral requirement in connection with formal loans always generates a new co-funding equilibrium in which both lenders earn higher profits. It is a common observation in many developing countries that enterprises are active borrowers in both formal and informal credit markets (Jain, 1999). Authors propose a model in which the formal sector's superior ability in deposit mobilization is traded off against the informational advantage that lenders in the informal sector enjoy. The formal sector can screen borrowers by providing only partial financing for projects, thereby forcing borrowers to resort to the informal sector for the remainder of the loan. Authors use the model to predict how the market structure responds to changes in the environment, and authors consider the policy implications of various forms of government intervention. The metaphor of symbiotic mutualism describes the depiction of the relationship between consumers and moneylenders put forward by the moneylending industry (Leyshon et al, 2006). This is created by a nexus created by the moneylender's agent who is responsible for collection of the weekly dues. Because of traditional relationships of trust, it is almost impossible to replace the moneylender, but possible to re-define the relationship by providing an atmosphere for formal competition (Sriram, 2002).

Whether the moneylender turns out to be a significant element of rural financial system is clear from afore mentioned studies. Trying to abolish the informal finances is actually not possible, because of inadequacies of alternative lending agencies. Fisheries sector is no exception with informal financing being considered as shock absorbers particularly facilitating income smoothening. The present study attempts to understand the role of SHGs in displacing the informal lenders in rural financial set up.

2.6 Microfinance and Financial Inclusion

Despite the inability of the formal financial system to provide financial services to the poor, microfinance revolution has helped poor to unfold the "under

served" status, contributing to economic and social empowerment of poor particularly women (Yaron, 1994; Christen et al, 1995). Micro finance represents something more than micro credit. It is a financial service of small quantity provided by financial institutions to the poor. These financial services may include savings, credit, insurance, leasing, money transfer, equity transaction etc that is any type of financial service provided to customers to meet their normal financial needs, life cycle and economic opportunity and emergency with the only qualification that (i) the transaction value is small (ii) the customers are poor (Dasgupta, 2005). Micro credit thus becomes distinct from other regular credit where not only the credit amount is small and the clientele is poor, but also the credit is provide with collateral substitute instead of traditional collateral and non financial services for increasing the productivity of credit.

RBI, 2005 (Khan Committee) suggested that micro finance is expected to be substantially beneficial to both the demand and supply sides. The rural customers shall benefit by increased access to composite financial services in a relatively hassle free manner, inclusion of those in remote and resource scarce regions/ areas into formal system, significant reduction in borrower level transaction costs in view of doorstep/near doorstep availability of services, and better understanding of their needs by empathetic functionaries of outreach entities engaged by banks. The banks shall benefit by a substantially increased client base in rural areas large numbers of which are upwardly mobile. The increased outreach will also help banks to include a large number of excluded farmers and others in the unorganised sector into the banking fold. Better identification of clients and the possible diversification of activities shall spread risks. These benefits can be achieved at much lower costs than that is feasible under the conventional systems and procedures. The arrangements will also provide an opportunity for a large number of socially proactive organizations and individuals to work in tandem with resource rich financial sector. This is likely to lead to a financial inclusion oriented growth model that aims at achieving socioeconomic empowerment of the less advantaged sections which will also provide an ideal platform for the microfinance institutions to grow at a faster pace.

Several demonstrated studies have upheld the success stories of micro lending, including impact assessments from cross country experiences and accepted models like 'Grameen Bank' model of Bangladesh. The debate whether the poor can save or not has become obsolete. In the new micro-financial service area, the large scale success of self help group (SHG) methodology has proved the ability of poor to save. Accordingly there are significant opportunities to broaden and deepen the range of financial services (credit, savings, insurance and money transfer) (Kapoor, 2007). The importance of financial services, especially savings allow rural people to reallocate expenditure across time has been conceptualized by Rutherford (2000) using three different approaches namely 'saving up', saving down' and 'saving through'. Tripathi and Sharma, 2007 evaluated the impact of micro credit through SHG Bank Linkage on the financial behaviour of the rural poor in Raibareli district of Uttarpradesh. The study showed that there is improvement in saving and credit usage by SHG members. A gradual shift was observed with respect usage of loans, ie shift from consumption to production loans. Interest burden of the borrowers were considerably reduced with a notable increase in the income and asset base of SHG members. A study was carried out among 240 respondents in four villages in Davangere district of Karnataka State to assess the relative impact of SHG bank linkage programme on financial inclusion [Rangappa et.al, 2008]. The samples included respondents from landless labourers, marginal farmers, small, medium and large farmers. Households having association with SHG and ones without any association were assessed simultaneously for serving as a comparative platform. Financial inclusion index, which measures the degree of financial inclusion, was calculated by giving appropriate weights to the selected financial services. Results of this study clearly show that the SHG-Bank linkage programme has increased the flow of institutional credit to landless and marginal farm households and discouraged non-institutional borrowing through thrift creation. Based on the index value, households were classified into the households with low, medium and high degree of financial inclusion. Percentage of household which reached the medium and high degree of financial inclusion, increased with the size of the land holding. The percentage of households, which reached the higher degree of financial inclusion, is relatively

more among SHG member households compared to non-member households. The chi-square ($\chi 2$) results lead to the conclusion that the SHG-Bank linkage programme increased the degree of financial inclusion among landless, marginal and small farm size category.

SHG bank linkage promotes financial inclusion and resultant lesser dependence on the moneylenders. This has been promoted by the banks since their priority sector targets would be served by less riskier loans (as the SHG linked loans are considered more risk free due to borrower's prompt repayment). The main advantage to the banks of their links with the SHGs is the externalisation of a part of the work items of the credit cycle, viz, assessment of credit needs, appraisal, disbursal supervision and repayment, reduction in the formal paper work involved and a consequent reduction in the transaction costs (Rangarajan, 1996). Banks need to think in terms of designing products in such a manner that they are able to cater to the needs of the bottom of the pyramid customers by introducing flexibility in working hours, documentation, mode of interaction and transactions. They need to explore ways to utilize local knowledge and information for effective loan monitoring and risk mitigation (Nagayya and Rao, 2009). A study among SGSY beneficiaries revealed that the groups were adviced to establish link with the local banks which benefits them to have access to the formal banking system, to safe keep savings and to assure credit support in long run (Narayanaswamy et al, 2007). Vallabh and Chathrath, 2006 opined that appointing MFIs as 'banking correspondents' could help in reducing the costs, that it is possible to delegate some of the routine function of the bank's to MFIs. The Self Help Groups-bank linkage has several benefits like lower transaction costs, negligible NPA's and generation of goodwill among the rural populace.

Credit programs that target poor women are likely to produce substantial improvements in women's social and economic status (Das and Nanda, 2008). A study assessing the economic impact of SHG in the district of North 24 Parganas of West Bengal observed that income generated through group activities has improved the average income of group members than that of non members (Banerjee, 2009). Amin et al, 1998 examined the hypothesis that participation in

credit related activities by NGO credit members leads to greater empowerment of credit members compared to non members. The study found that NGO credit members had significantly higher scores on all three indices of female empowerment: inter-spouse consultation, autonomy, and authority. This was reiterated in the observations of Nirmala et al, 2004 in their study of poverty alleviation in Pondicherry through SHG who found that SHGs benefited the participants with increased social participation and organized action. A study conducted by Karmakar et al, 2009 in the small scale fisheries sector in South Asian countries observed that they have been exploited by the middlemen and merchants which often drain away the surplus generated. Microfinance programmes initiated by SIFFS integrating supply of finance and other technological inputs was found as replicable model.

Basu and Srivasthava, 2004 examined the efficacy of SHG Bank linkage, facilitated by linkage with commercial banks, NGO's and informal local groups, found that its remarkable growth in effectively targeting poorer segments to reduce vulnerability is attributed to the good policy and skillful and committed leadership in conjunction with a facilitating government policy and legal framework. Authors strongly recommended microfinance as an alternate strategy for scaling up of access to finance to poor ensuring sustainability.

While the microfinance success stories have been emulated across the globe, the actual impact of microfinance on the poor and the vulnerable has been studied by experts in the field. Amin et al, 2003 found that while microcredit is successful at reaching the poor, it is less successful at reaching the group most prone to destitution, the vulnerable poor. Coleman, 2006, evaluated the outreach and impact of two microfinance programs in Thailand, controlling for endogenous self-selection and program placement. Results indicate that the wealthier villagers are significantly more likely to participate than the poor and they often become program committee members and borrow substantially more than rank-and-file members. But it has also been observed that the focus has been on delivering credit with least importance to other financial services sub serving the term micro finance to narrower micro credit (Agarwal, 2008).

Studies on microfinance in general have embarked upon impact assessments measuring economic and social empowerment. While these studies have concentrated on overall improvements in beneficiaries' socio economic milieu, there are rarely few which speaks about the financial services utilisation in detail. The present study is such an attempt that looks into the contribution of microfinance in facilitating financial inclusion.

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Chapter 3

FINANCIAL INCLUSION –A RETROSPECTIVE

Contents

3.1 Demand for financial services in rural areas: An overview
3.2 Informal financing in Kerala
3.3 Institutional mechanism facilitating financial inclusion
3.4 The Microfinance Experience
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3.1 Demand for Financial Services in Rural Areas: An Overview

Indebtedness of households in India has been reviewed periodically by Government of India. The demand side of financial services of Indian households has been analysed from National Sample Survey Organization (NSSO) reports. Debt and investment survey of NSSO, 59th round has estimated Incidence of Indebtedness (IOI) that is defined as percentage of indebted households. It was observed that in 2002 every fourth household in rural India was indebted, while it was 18 per cent among the urban households in comparison with 23 per cent for rural and 19 per cent for urban in 1991. Figures corresponding to rural scenario in Kerala report an IOI of 39.4 per cent while that of urban transects is lower at 37.3 per cent. The other side of the coin is that about 75 per cent of households in rural India and 60 per cent of households in rural Kerala do not have access to either institutional/non-institutional sources of credit. In urban areas, the situation is grimmer with respective rates pegged at 62 per cent (Kerala) and 82 per cent (India) (GOI, 2003(Report 501)).

It was observed that the share of indebted households in the total population has been decreasing over the years (Table 3.1). The share of rural indebted households came down to 20.8 per cent in 2002-03 from 27.7 per cent in 1971-72 (GOI, 2003). This trend was found true in case of urban households also. Lower share inspite of increase in absolute number of indebted households can be explained as a consequence of increase in population. Inspite of wide expansion and calibration of

the institutional financial setup to fine tune with the objective of financial inclusion, it is established that there are a wide majority who are out of coverage. However in case of Kerala, it can be observed that share of rural population reporting borrowing has increased from 27.7 per cent in 1971-72 to 35.9 per cent in 2002-03, though an intermittent decline was noted in 1991-92. In urban areas, share of population reporting borrowings declined in 1991-92, but picked up later to attain 33.4 per cent in 2002-03. The average amount of borrowings increased 21 times for rural and 9 times for urban households. However, the borrowings of the urban counterpart was higher (average by 1.5 times) than that of the rural households. Average amount of borrowing per household in Kerala stood at more than double in case of rural areas and almost thrice in case of urban areas compared to national figures.

Table 3.1. Indebtedness of households in India and average amount of borrowings

Year	Households reporting borrowing (per cent share)		Average amount of borrowing per household (Rs.)	
	Rural	Urban	Rural	Urban
1971-72				
India	27.7	NA	174	NA
Kerala	23.8	NA	136	NA
1981-82				
India	19.7	19	446	674
Kerala	33.7	32.7	919	2598
1991-92				
India	19.9	18.5	1160	1892
Kerala	25.8	19.6	2171	2175
2002-03				
India	20.8	15.3	3726	6162
Kerala	35.9	33.4	11066	17620

Source: Adapted from AIDIS, NSSO 59th Round, 2002-03.

3.1.1 Sources of Indebtedness

The financial strength of the country in terms of financial inclusion can be measured by share of institutional agencies in borrowings of households. Among the institutional agencies, cooperatives dominate the rural scene and commercial

banks dominate the urban areas. Professional money lender still takes a lead role among non institutional agencies. It is note worthy that in rural areas, cooperatives, commercial banks and professional money lenders have equal patronage in the cash borrowings of households.

Of the cash borrowings of rural households at national level, 57.2 per cent is from institutional agencies while the rest is mobilized from non institutional agencies (Table 3.2). While in urban areas, institutional agencies account for 75.7 per cent of the cash borrowings of households. In Kerala, institutional share in borrowings of households are on the higher side; 81.6 per cent in rural areas and 85.1 per cent in urban areas. The non-institutional segment claims comparatively lesser share than the national level both in rural and urban areas.

Table 3.2. Percentage share of credit agencies in cash borrowings of households (2002-03)

Credit agency	Rural		Urban	
	India	Kerala	India	Kerala
Government	2.7	1.5	6.2	9.2
Cooperative societies/bank	28	46.9	22	42.6
Commercial banks	22.7	26.7	30.6	25.9
Insurance	0.3	0.1	1.5	0.2
Provident fund	1	1.6	3	2.4
Financial corporations/institutions	0.6	0.8	8.4	3.3
Financial companies	0.8	3	2.5	0.4
Other institutional agencies	1	1	1.5	1
Total Institutional agencies	**57.2**	**81.6**	**75.7**	**85.1**
Landlord	0.6	0	0.2	0
Agricultural moneylender	9.6	0.2	0.6	0
Professional moneylender	20.6	9	13.3	7.3
Traders	2.9	0.4	1.3	0.3
Relatives and friends	7.4	7.6	7	6.9
Others including doctors, lawyers etc.	1.7	1.1	1.8	9.1
Total Non institutional agencies	**42.8**	**18.4**	**24.2**	**14.8**

Source: Adapted from AIDIS, NSSO 59th Round, 2002-03.

3.1.2 Asset Class and Lending Pattern

It is highly essential to look into the asset composition of the households and indebtedness position to reveal the actual position of the poor regarding access to finance. It is evident that households with low asset holding in rural and urban areas are mostly depending on non institutional agencies. The non institutional source dominates the asset holding class till Rs. 1,50,000- 2,00,000(Table 3.3). This is inevitable because of the requirement of collateral security for borrowings insisted by institutional financing agencies. Low income and low profile clients are thus excluded from formal financial intermediation and often run into the hands of moneylenders and traders.

Table 3.3. Percentage share of institutional and non institutional agencies by asset holding class (rural)

Asset holding class Rs. ' 000	India		Kerala	
	Institutional	Non Institutional	Institutional	Non Institutional
<15	18	82	29.0	71.0
15-30	35	64.5	4.4	56.6
30-60	26.6	73.4	39.6	60.4
60-100	39.5	60.5	79.4	20.6
100-150	43.6	56.4	75.0	25.0
150-200	48.1	51.9	72.0	28.0
200-300	51.5	48.5	81.6	18.4
300-450	58.7	41.3	73.2	26.8
150-800	63.4	36.6	78.9	21.1
800 & above	73.8	26.2	90.6	9.4
All	57.2	42.8	81.6	18.4

Source: Adapted from AIDIS, NSSO 59th Round, 2002-03.

In Kerala, the situation is better off, with asset class below Rs. 60,000 in rural transects being dominated by non-institutional agencies (Table 3.3). While in the urban areas, it can be observed that asset holding class from Rs. 30,000 are under the fold of institutional agencies (Table 3.4). This may be due to the concentration of institutional agencies in the urban areas.

Table 3.4. Percentage share of institutional and non institutional agencies by asset holding class (urban)

Asset holding class Rs. ' 000	India		Kerala	
	Institutional	Non Institutional	Institutional	Non Institutional
<15	13.4	86.6	10.6	89.4
15-30	40.1	59.9	46.2	53.8
30-60	46.9	53.1	74.7	25.3
60-100	59	40.8	70.9	22.6
100-150	65.6	34.4	58.1	41.9
150-200	47.9	52.1	67.1	32.9
200-300	71.7	58.3	85.3	14.7
300-450	72.5	27.5	89.9	10.1
150-800	84.9	15.1	80.8	19.2
800 & above	89.8	10.2	89.9	10.1
All	75.7	24.2	85.1	14.8

Source: Adapted from AIDIS, NSSO 59th Round, 2002-03.

3.1.3 Agency wise interest rates

A very important concern connected to borrowing pattern in the country is the rate of interest charged by lending agency. It is a well accepted fact that non institutional agencies charge a higher rate of interest than formal financing institutions. The national scenario of agency wise interest rates reveals that majority of loans by institutional agencies in rural areas charge interest rate between 12 to 20 per cent, while in urban areas it ranges from 10 to 20 per cent (Table 3.5). Non institutional lenders charge interest as high as 30 per cent and above in both rural and urban areas. For Kerala, agency wise figures are not available in the report of NSSO.

Table 3.5. Percentage distribution of amount of cash debt by rate of interest separately for institutional and non-institutional agency in India (2002)

Rate of interest class (%)	Rural		Urban	
	Institutional	Non institutional	Institutional	Non institutional
nil	1	18	3	33
less than 6	2	2	4	1
6-10	4	1	12	1
10-12	9	1	25	1
12-15	48	1	32	4
15-20	34	3	22	9
20-25	1	33	1	18
25-30	0	0	0	1
30 & above	0	40	1	32
All	**100**	**100**	**100**	**100**

Source: Adapted from AIDIS, NSSO 59th Round, 2002-03.

Of the reported cash debts in Kerala in both rural and urban areas, majority of the households paid 12 to 15 per cent interest (46 and 46.2 per cent respectively). However at the national level majority of households pay interest rate on borrowings spread over a band of 12- 20 per cent (Table 3.6). It is also observed that there is considerable proportion of households which borrow at more that 30 per cent in rural India.

Table 3.6. Percentage distribution of amount of cash debt by rate of interest in India and Kerala

Rate of interest class (%)	Kerala		India	
	Rural	Urban	Rural	Urban
nil	10.1	7.5	8.4	10.4
less than 6	2.9	1.4	2.1	3.2
6-10	4.9	5.2	2.5	9.2
10-12	4.1	16.5	5.2	18.7
12-15	46	46.2	27.9	24.9
15-20	27.9	18.7	20.8	18.7
20-25	1	0.4	15.1	5.3
25-30	0	0	0.1	0.4
30 & above	2.7	2.4	17.4	8.4
Not reported	0.4	1.7	0.5	0.8
All	**100**	**100**	**100**	**100**

Source: Adapted from AIDIS, NSSO 59th Round, 2002-03.

From the analysis it is clear that there is dire need for including the excluded population (not coming under the fold of formal financial services) in the development efforts to promote inclusive growth. A vast majority are left out without catering to financial needs. It is imperative to design ameliorative strategies to overcome this situation and with a view to promote development agenda. Non institutional agencies dominate while analysing the case of lending to low asset based classes perhaps due to the reason that institutional agencies that follow collateral based lending are averse to this segment. The interest rate charged by non institutional lenders is often higher than 30 per cent. It is highly essential to analyse the supply side responses catering to institutional finance requirements. The non institutional and institutional financial service providers catering to the demand for finances of the economy and the status of financial inclusion and efforts towards the same is dealt with in detail in the following sections.

3.2 Informal Financiers in Kerala

The unregistered Non Banking Financial Institutions (NBFIs) contribute a significant share in the Kerala economy and hence cannot be neglected. This business supports rural and urban poor where there exists a credit gap in the absence of penetration of formal banking, though without enough legal backing (rather termed as illegal business) in addition to non transparency in its working. These informal agencies provide easy finance in terms of hassle free procedures with or without security, but charge unscrupulous rate of interest from the borrowers. Some of these aspects with respect to informal financing are analysed here.

Table 3.7. District wise number of registered Non Banking Financial Institutions (2005)

District	Money lending	Chitty operating	Others	Total
Kasargod	19	48	0	67
Kannur	87	37	9	133
Wyanad	123	51	51	225
Kozhikode	530	264	16	810
Malappuram	318	378	26	722
Palakkad	622	98	33	753
Thrissur	272	46	23	341
Ernakulam	640	370	56	1066
Idukki	333	60	36	429
Kottayam	462	300	8	770
Alappuzha	570	196	36	802
Pathanamthitta	229	94	2	325
Kollam	639	474	90	1203
Thiruvananthapuram	550	270	10	830
State	5394	2686	396	8476

Source: GOK, 2006

According to a survey conducted by the Department of Economics and Statistics in 2005, there were 5394 money lenders, 2686 chitty operators and 396 engaged in other financial activities (Table. 3.7). Ernakulam, Kollam and Palakkad districts were found to be the flourishing ground for money lenders. In case of chitty operators, Kollam tops with 474 chitty operators, followed by Malappuram (378) and Ernakulam (370). It was also observed that out of loans outstanding provided by NBFIs, 87 per cent was supplied by money lenders (Table 3.8). Total loan outstanding from NBFIs during 2005 was estimated as Rs. 232.51 crore.

Table 3.8. Loans outstanding of Non Banking Financial Institutions in Kerala (2005)

Source	Amount outstanding (Rs. Crore)	Percentage to all NBFIs
Money lenders	203.37	87.47
Chitty/Kuri operation	13.96	6.00
Other financial activities	15.19	6.53
All NBFIs	232.51	100

(Figures in parenthesis represent percentage to total) **Source:** GOK, 2006

It was seen that money lending activity has been booming in the State with highest number of money lending institutions started during 1996-2000 (Table 3.9). Of the 5394 money lenders in Kerala, 75 per cent were started after 1996. Chitty business also seemed to flourish after 1996; 76 per cent of them opened after 1996. Considerable boost up was seen in case of other financial activities also after 1996.

Table 3.9. Growth of Non Banking Financial Institutions over the years

Time Span	Money lenders	Chitty/Kuri operation	Other financial activities
Before 1990	300 (6)	155(6)	28(7)
1991-95	1022(19)	479(18)	85(21)
1996-00	2446(45)	1190(44)	196(49)
After 2000	1626(30)	862(32)	87(22)
Total	5394(100)	2686(100)	396(100)

(Figures in parenthesis represent percentage to total) **Source:** GOK, 2006

One of the reasons why poor are attracted towards informal lending is ease of providing security. Often collateral security is not insisted by these agencies, but settles with blank signed cheques or promissory notes. It can be observed from Table 3.10 that 39.10 per cent of the money lenders and 25. 6 per cent of chitty/kuri operators receive cheques while 26.75 per cent and 26.06 per cent of them respectively receive promissory notes as security. There were few instances where no security was being accepted for providing loan.

Table 3.10. Securities accepted by Non Banking Financial Institutions in Kerala (2005)

Security Furnished	Money lenders	Chitty/Kuri operation	Other financial activities
Land	794 (8.23)	209 (8)	28 (5.57)
Cheques	3773 (39.10)	669 (25.60)	40 (7.95)
Promissory Note	2581 (26.75)	681 (26.06)	40 (7.95)
Gold	959 (9.94)	62 (2.37)	244 (48.51)
Others	1386 (14.36)	932 (35.67)	146 (29.03)
No security	157 (1.63)	60 (2.30)	5 (0.99)

(Figures in parenthesis represent percentage to total) **Source:** GOK, 2006

Though it may sound easy getting finance from an informal source, repayment is the most difficult part, burdened by higher rates of interest. However poor are ready to borrow even at this higher rate due to non availability of formal financing agencies catering to tailor made requirements of small borrowers. From the point of view of unorganized agencies, higher interest protects from repayment delinquency, if any. Interest rates prevailing among the agencies are higher than 30 per cent and even may go as high as above 50 per cent. While 41.55 per cent of the money lenders charge exorbitant rates above 50 per cent interest, in chitty operation it is only 27.57 per cent (Table 3.11). Around 43 per cent of the money lenders and chitty operators charge interest rates between 31 to 50 per cent.

Table 3.11. Interest rates charged by Non Banking Financial Institutions in Kerala (2005)

Interest Rate (%)	All NBFIs	Money lenders	Chitty/Kuri operation	Other financial activities
0-10	69 (1.18)	58 (1.08)	9 (4.86)	2 (0.68)
11-20	285 (4.85)	184 (3.41)	29 (15.68)	72 (24.66)
21-30	700 (11.92)	586 (10.86)	18 (9.73)	96 (32.88)
31-50	2498 (42.55)	2325 (43.10)	78 (42.16)	95 (32.53)
Above 50	2319 (39.50)	2241 (41.55)	51 (27.57)	27 (9.25)

(Figures in parenthesis represent percentage to total) **Source:** GOK, 2006

Though informal financing may appear unscrupulous in addition to lacunae like absence of any legal backing, it caters to the unmet financial needs of the local people. What attracts the populace to the informal lenders is the ease of procedures without much security requirements. Timely credit is inevitable for the poor and these agencies cater to their custom-made requirements and serves as gap filler where the formal fold fails to act.

3.3 Institutional Mechanism Facilitating Financial Inclusion

Formal financial intermediation in the domain of rural development has been led by NABARD with adequate thrust from the central bank of the country with recent initiatives like the Financial Inclusion drive. However the burden of indebtedness in rural India particularly to informal credit markets has been one of

the most pervasive and persistent features that has facilitated exploitation of the masses (Ramachandran and Swaminathan, 2004). Seasonality in earnings pattern, an indispensable feature of agriculture and allied systems, necessitate credit support for smoothening of fluctuations in earnings to cope with day to day expenditure. In the absence of social security nets, institutional credit seems to be an absolute panacea to surpass the vulnerability of the affected population. Ramachandran and Swaminathan points out four significant issues connected with the supply of credit in the country. First, the supply of formal sector credit to rural transects has been inadequate. Second, existence of imperfect and fragmented rural credit markets in India. Thirdly, the distribution of formal sector credit has been unequal, particularly with respect to region and class, caste and gender in the countryside. Fourthly, the major source of credit to rural households, particularly income-poor working households, has been the informal sector which advances loans at very high rates of interest. Further supply side of institutional financial intermediation in rural areas in India is crippled by issues like regional disparity in banking development and aversion of commercial banks towards rural centers.

The financial exclusion of the poor is an emerging issue in this context. Though there are specialized financial institutions like RRBs and cooperatives which cater to requirements of rural scene; their coverage seems to be inadequate with limited funds and poor financial performance. This situation often leads the poor to unorganized sector, where finances are hassle free, but are costlier and riskier leading to debt trap and loss of assets leading to sensitive issues like farmers suicides. The State of Kerala is also notorious for farmer suicides owing to crop failures and related issues and consequent delinquency in repayment schedules of loans from financial institutions. In this backdrop, an overview of the supply side institutional finance in the rural areas in the State and at the national level is attempted here.

Financial liberalisation, enacted as part of the economic reforms has progressively released the banks commitment to serve the rural transects by putting an end to rural oriented policies and phasing out of directed credit

programmes targeting the poor. This is clearly signified by the shift in rural branch expansion and credit utilisation in rural areas especially after 1991(Table. 3.12). The achievements after nationalisation in terms of branch expansion and promoting rural segments have been experiencing a reversal.

Table.3.12. Indicators of scheduled commercial banks (1969-2009)

Particulars	1969	1991	2001	2009
No of commercial banks	89	276	301	175
Scheduled commercial banks	73	272	296	171
RRBs		196	196	91
Non scheduled commercial banks	16	4	5	4
Number of bank offices	8262	60220	65919	76050
Rural	1833	35206	32562	31076
Semi-urban	3342	11344	14597	17675
Urban	1584	8046	10293	14391
Metro	1503	5624	8467	12908
Population per office (in 000's)	64	14	15	15

Financial inclusion in the Indian context entails access to savings, credit and remittance facilities to the poor. Necessarily, it has been emphasised that these services should be available to the poor at an affordable cost. RBI with its spearheaded policy of financial inclusion in 2005, has prompted the bankers to extend their helping hand to the poor so that they come out of the paradigm of poverty through inclusive growth fuelled by finance.

The phases of banking development could be summarized as follows (Table. 3.13)

Table 3.13. Phases of rural banking development

Phase	Period	Initiatives
I	1960's-1980-1990	Channeling credit to neglected sectors
II	1991-2004	Strengthening of financial institutions (Introduction of SHG bank linkage programme and Kisan Credit Cards-KCC)
III	2005 till date	Financial Inclusion as a policy objective and enabling savings account through 'no frills accounts'

The broad strategy for financial inclusion in India comprises the following strategies (RBI, 2008)

- Encouraging penetration into unbanked centres
- Encouraging agents such as NGOs, MFIs, CSOs and Business Correspondents
- Focusing on decentralized strategy by using existing arrangements such as State Level Bankers Committee (SLBC) and District Consultative Committee (DCC)
- Strengthening local institutions such as cooperatives and RRBs
- Using technology for furthering financial inclusion
- Advising banks to open a basic banking ‘no frills’ account
- Emphasis on financial literacy and credit counseling
- Creating synergies between formal and informal segments.
- Utilising the SHG model and Business Correspondent/Facilitator model for penetrating into the rural masses

Finance is the lifeblood of any business/activity. Sources of finance and their level of penetration determine the pace of development by fuelling economic growth by means of funding for income generation activities. Financial intermediation in the country in terms of spread of banking facilities have increased since the time of independence with effective steps like nationalisation drive. Financial inclusion strategies of the central bank have made significant strides in including the unbanked masses into the banking fold. Some of the indicators confirming afore mentioned dimensions has been discussed below. The number of bank offices in India increased from 8262 in 1969 to 80369 in 2009 recording a ten fold increase. In Kerala, the bank branch expansion achieved a pace of more than six times during the reference period from 601 offices in 1969 to 4086 offices in 2009. However, average population served by a branch showed considerable growth in Kerala compared to national average. The population

served by a branch in Kerala was 8000 in 2009, compared to the national average of 16000 persons/branch (Table 3.14).

Table.3.14. Number of bank offices and average population served over the years

Year	Number of offices		Average population served (in 000's)	
	Kerala	India	Kerala	India
June 69	601	8262	34	65
June 03	3370	66692	10	16
June 06	3615	69801	9	16
June 09	4086	80369	8	15

Additional indicators regarding banking indicators shows the superior position of the State compared to the national average. The deposit accounts per 100 population increased from 73 to 85 during the period 2004 to 2009, while at the national level it was 42 to 57 per 100 population (Table. 3.15). Though the per capita deposit was higher in case of Kerala, the per capita credit stood behind the national average in 2009 showing the inadequacy in Credit-Deposit ratio.

Table.3.15. Indicators of financial inclusion: India and Kerala (2004-09)

REGION / STATE /	Kerala		All India	
	2004	2009	2004	2009
No. of offices	3522	4170	68645	81802
No. of deposit accounts (000's)	23880	28956	457158	662302
Amount of Deposits (Rs. Crore)	68121	135119	1511273	3921980
No. of credit accounts (000's)	4069	5703	66390	110056
Amount of Credit (Rs. Crore)	30973	80713	880312	2847713
Projected Population 2009	32707	34063	1079117	1160813
Deposit accounts per 100 population	73.01	85.01	42.36	57.06
Branches per 1000 population	0.11	0.12	0.06	0.07
Population served per branch	9286	8169	15720	14191
Per capita banking business (Rs)	30298	63363	22162	58319
Per capita deposit (Rs)	20828	39667	14005	33786
Per capita credit (Rs)	9470	23695	8158	24532

Source : RBI (March 2004 and March 2009 data)
Population Projection from Census of India

Institutional Finance to Agriculture in India

Organised financial intermediaries are known for their risk aversion; while unorganized sector are ready to shoulder risks, but effectively transferring it to poor borrowers in terms of high interest rates. This risk aversion has pushed the poor to the unscrupulous practices of informal lending; the other side of the coin being revealed - poor is ready to borrow (credit worthy) even at higher rates of interest.

Rural credit delivery in India has been dominated by multi agency approach. Cooperatives emerged as nodal rural financing hubs during the initial efforts to channelise institutional credit delivery. However cooperatives failed to achieve what was expected, even though considerable efforts in the form of cooperative regulations and the like were implemented. Government nationalized commercial banks in 1969 (Phase I) and further in 1980 (Phase II) inorder to streamline commercial banks finances to rural masses. The introduction of social banking by nationalisation enabled directed phase of streamlining credit to rural transects. Further this was supported by multi pronged strategy for provision of institutional credit by the introduction of Regional Rural Banks (RRBs) in 70's to spearhead rural institutional financing. This was followed by the second phase of nationalisation in the 80's that augmented the pace of social banking. With this institutional architecture to support rural financing front, the share of institutional agencies in the borrowings of the cultivator households increased from a mere 7.3 per cent in 1951 to 66.3 per cent in 1991. However, with the economic reforms there occurred a paradigm shift in the focus of the financial sector policies on the basis of the recommendations of Narasimham Committee. The Committee said that redistributive objectives should use the instrumentality of the fiscal rather than the credit system and accordingly directed credit programmes should be phased out. The recommendations extended to cover deregulation of interest rates and revoking branch licensing policy that would support an institutional structure that is market driven based on profitability.

Poorly functioning banks that simply funnel credit to connected parties and elites slow down growth and exert a disproportionately negative influence on the

poor and small businesses by depriving them of the capital they need to succeed. Unfortunately, billions of people live in countries with poorly functioning banks. Thus banks influence the ability of people, rich and poor, to improve their living standards. The demand for rural credit is analysed in this context to assess the level of indebtedness and share of institutional and non institutional agencies. In short, inspite of the multi pronged strategy to uplift the rural transects with an idea that the rural folk would benefit out of any of them, it is found that very little benefits have percolated to the masses due to inbuilt rigidities of financing institutions with a host of other factors.

Institutional finance to agriculture in India comprises commercial banks, cooperative banks and RRBs (Table. 3.16). The share of cooperatives in financing agriculture was highest during the 80's while it declined thereafter and reached 22 per cent in 2007-08. The case of RRBs is also disgusting contributing more or less constant share in total agricultural finances since inception. While cooperatives and RRBs failed to attain their envisaged objectives, commercial banks have made headway in this front, contributing a share of around 70 per cent after 2005.

Table 3.16. Finance to agriculture in India by different institutional agencies

Year	Cooperative Banks	Share (%)	RRBs	Share (%)	Commercial Banks	Share (%)	Total	Growth (%)
1985-86	3,874	55	–	–	3,131	45	7,005	–
1990-91	3,408	39	–	–	5,438	61	8,846	-10
1995-96	10,479	48	1,381	6	10,172	46	22,032	18
2000-01	20,801	39	4,219	8	27,807	53	52,827	14
2005-06	39,404	22	15,223	8	1,25859	70	1,80,486	44
2007-08	41,813	22	22,227	11	1,28,495	67	1,92,535	-16

Source: NABARD, Economic Survey various years

Rural financing by different agencies have been refinanced by NABARD. NABARD functions as the national level apex body for agricultural and rural development. With its formation, it has taken over the functions of the agricultural credit department of RBI and those of ARDC. NABARD provides assistance to

commercial banks, cooperative banks and other eligible institutional financing agencies providing rural credit in the form of refinance. Financial assistance obtained by different agencies supplying rural credit in Kerala given below (Table 3.17). This gives an overall view of institutional financing available for various activities of rural development in the State. It is clear from the table that institutional assistance extended by commercial banks for rural development eligible for refinance assistance in the State has increased considerably from 32.72 crores in 2000-01 to 605.14 crores in 2009-10.

Table 3.17. Agency-wise Disbursement of refinance assistance by NABARD in Kerala 2000-01 to 2009-10)

Rs.crore

Financing Agency	2000-01	2005-06	2009-10
KSCARD Bank Ltd.	172.5	240	252.79
Commercial Banks	32.72	19	605.14
State Coop. Banks	--	87	0
Regional Rural Banks	31.46	69	55.71
Total	237	415	913.64

Source: Kerala State Planning Board (2001-2006)
NABARB Statistical statement 2009-10

3.4 The Microfinance Experience

High level of dependence of the informal sector on non- institutional sources has continued despite rapid growth of banking network in India. NSSO data reveal that 45.9 million farmer households in the country (51.4 per cent), out of a total of 89.3 million households do not access credit, either from institutional or non-institutional sources. Further, despite the vast network of bank branches, only 27 per cent of total farm households are indebted to formal sources (of which one-third also borrow from informal sources)(GoI, 2008).Despite the spread of formal banking in rural areas as part of the nationalisation drive, rural indebtedness to moneylenders has remain unchanged due to inherent issues. The main hurdle faced by banks in financing poor is the high transaction cost in reaching out to a large number of people who require

small amounts of credit at frequent intervals (Kropp and Suran, 2002). This is found true for savings as well. Interestingly the poor also find banks as an institutional set up favouring elites and even when they tried to access it foregoing their employment days, they had to face a number of hurdles including the procedural hassles, not very sure of getting the loan in time. This mutual inconvenience has made the poor and the banks to avoid each other, the poor being attracted to the local moneylender who would attend their immediate needs without bothering to pledge or to comply with the procedural formalities at the expense of foregoing employment days.

SHG-Banking is a programme that helps to promote financial transactions between the formal rural banking system in India comprising public and private sector commercial banks, regional rural banks and cooperative banks with the informal Self Help Groups (SHGs) as clients. SHGs are financial intermediaries owned by the poor. They usually start by making voluntary thrift on a regular basis. They use this pooled resource (as quasi-equity) together with the external bank loan to provide interest bearing loans to their members. Such loan provides additional liquidity or purchasing power for use in any of the borrower's production, investment, or consumption activities. These banking services (depositing savings, taking loans) are made available at low cost, are easily accessible and flexible enough to meet poor people's needs (Kropp and Suran, 2002).

Financial Inclusion through SHG bank linkages

Microfinance has made tremendous strides in India over the years and has become a household name in view of the multi-pronged benefits reaped by poor in the country. SHG bank linkage programme was launched by NABARD in 1992. At present, in addition to banks a large number of Self Help Promoting Institutions (SHPIs) and MFIs are pursuing the programme for upliftment of the poor. The formal banking system comprising public sector commercial banks (27), private sector banks (28), Regional Rural Banks (86), State Cooperative Banks (31) and District Central Cooperative banks (371) supports the microfinance

movement in India supporting SHGs by way of canalising credit by bank linkage (NABARD, 2009). NABARD has been instrumental in facilitating various activities under microfinance sector involving all possible partners in the arena. This programme is also the main contributor towards the Financial Inclusion process in the country. As on 31 March 2010, there are more than 69.53 lakh saving-linked SHGs and more than 48.51 lakh credit-linked SHGs having loans outstanding and thus, about 9.7 crore poor households are covered under the programme. In view of the large outreach and predominant position of the microfinance programme, its status, progress, trends, qualitative and quantitative performance has been assessed comprehensively. To achieve this objective, Reserve Bank of India and NABARD had been in the process of compiling data from the year 2006-07 from Commercial Banks, Regional Rural Banks and Cooperative Banks. This has been reviewed to assess the status of microfinance experience in India with special reference to Kerala.

The status of microfinance linkage with banks has been compiled on the basis of two models; i) The SHG bank linkage model- where the SHG is directly linked to the financing bank and ii) MFI- bank linkage model where the MFIs are linked to the banks for on-lending to SHGs. As on 31 March 2009, total 69,53,250 SHGs with linkage to banks were having saving bank accounts with the banking sector with outstanding savings of Rs. 6198.71 crore as against 4160584 SHGs having savings of Rs. 3512.71 crore as on 31 March 2007(Table 3.18). There has been substantial increase in the number of SHGs promoted by the linkage model in case of savings (13.59 per cent) and loans disbursed (11.78 per cent). While the MFI linkage model in which the MFI takes the loan from the bank and facilitate on-lending to SHGs also achieved increase with respect to loans disbursed (34.08 per cent) and outstanding (187.45 per cent). As regards the MFI bank linkage, loans were disbursed to 581 MFIs amounting to as much as Rs. 10728.49 crore.

Table. 3.18. Status of bank linkage of Microfinance Institutions and SHGs in India

Particulars	2006-07	2007-08	2008-09	2009-10	2006-07	2007-08	2008-09	2009-10
SHG bank Linkage Model	**No of SHGs**				**Amount (Rs. Crore)**			
Savings	4160584	5009794	6121147	6953250	3512.71	3785.39	5545.62	6198.71
(Growth Rate)	--	***20.41***	***22.18***	***13.59***	--	***7.76***	***46.5***	***11.78***
Loans disbursed (Rs. Crore)	1105749	1227770	1609586	1586822	6570.39	8849.26	12253.5	14453.30
(Growth Rate)	--	***11.04***	***31.1***	***-1.41***	--	***34.68***	***38.47***	***17.95***
Loans outstanding (Rs. Crore)	2894505	3625941	4224338	4851356	12366.5	16999.9	22679.8	28038.28
(Growth Rate)	--	***25.27***	***16.5***	***14.84***	--	***37.47***	***33.41***	***23.63***
MFI Bank Linkage Model	**No of SHGs**				**Amount (Rs. Crore)**			
Loans disbursed (Rs. Crore)	334	518	581	779	1151.56	1970.15	3732.33	10728.49
(Growth Rate)	--	***55.09***	***12.16***	***34.08***	--	***71.09***	***89.44***	***187.45***
Loans outstanding (Rs. Crore)	550	1109	1915	1659	1584.48	2748.84	5009.09	13955.75
(Growth Rate)	--	***101.64***	***72.68***	***-13.37***	--	***73.49***	***82.23***	***178.61***

Source: Status of Microfinance in India 2008-09

The agency wise linkage of SHGs to banks in the country from 2008-2010 reveals that lion's share of the linkage is financed by the commercial banks (Table 3.19). Commercial banks financed 58.29 per cent of the SHGs while RRBs and cooperatives supported 26.19 per cent and 15.52 per cent respectively in the year 2010. The growth of number of savings accounts opened by SHGs financed by the commercial banks showed highest growth (44.19 per cent) followed by RRBs and cooperatives. The share of loans disbursed and outstanding was also highest for commercial banks (61.6 per cent and 66.73 per cent respectively). A high growth rate was recorded for SHG loan disbursed and outstanding financed by cooperatives (40.91 per cent and 37.36 per cent).

Table. 3.19. Number of SHGs linked to banks in India according to status

Savings of SHGs	**2008**	**Share of Total**	**2010**	**Share of Total**	**Growth rate**
Commercial banks	2810750	56.11	4052915	58.29	44.19
RRBs	1386838	27.68	1820870	26.19	31.30
Cooperative banks	812206	16.21	1079465	15.52	32.91
Total	5009794	100.00	6953250	100.00	38.79
SHG loan disbursed	**2008**	**Share of Total**	**2010**	**Share of Total**	**Growth rate**
Commercial banks	735119	59.87	977521	61.60	32.97
RRBs	327650	26.69	376797	23.75	15.00
Cooperative banks	165001	13.44	232504	14.65	40.91
Total	1227770	100	1586822	100	29.24
SHG loan outstanding	**2008**	**Share of Total**	**2010**	**Share of Total**	**Growth rate**
Commercial banks	2378847	65.61	3237263	66.73	36.09
RRBs	875716	24.15	1103980	22.76	26.07
Cooperative banks	371378	10.24	510113	10.51	37.36
Total	3625941	100	4851356	100	33.80

It was also observed that lion's share of SHG financing was also done by commercial banks. Though RRBs and cooperative banks were exclusively

designed to support the weaker section financing, the proportion of SHGs financed were far low compared to commercial banks. Amount of savings in cooperatives harnessed through SHGs recorded quantum jump of 126.44 per cent during 2009-2010 (Table 3.20).However, this pace could not be maintained by cooperatives in loan disbursal.

Table: 3.20. Status of SHG –bank linked savings, loan disbursed and outstanding in India

Savings of SHGs	**2008**	**Share of Total**	**2010**	**Share of Total**	**Growth rate**
Commercial banks	207773	54.89	367389.24	59.27	76.82
RRBs	116649	30.82	129937.49	20.96	11.39
Cooperative banks	54117	14.30	122544.16	19.77	126.44
Total	378539	100	619870.89	100	63.75
SHG loan disbursed	**2008**	**Share of Total**	**2010**	**Share of Total**	**Growth rate**
Commercial banks	540390	61.07	978018.55	67.67	80.98
RRBs	265184	29.97	333320.06	23.06	25.69
Cooperative banks	79352	8.97	133991.75	9.27	68.86
Total	884926	100	1445330.4	100	63.33
SHG loan outstanding	**2008**	**Share of Total**	**2010**	**Share of Total**	**Growth rate**
Commercial banks	1147547	67.50	2016471.2	71.92	75.72
RRBs	442104	26.01	614458.24	21.91	38.98
Cooperative banks	110339	6.49	172898.62	6.17	56.70
Total	1699990	100	2803828.1	100	64.93

Source: Status of Microfinance in India 2008-09

In Kerala also, the microfinance movement has gained popularity among the poor with the success stories of the state poverty eradication mission popularly known as Kudambasree. There are various agencies that has opted the model of microfinance for their operations. For example in fisheries sector, the Department of Fisheries has given their assistance to fisherwomen to form SHG groups through their programme called Society for Fisheries Assistance (SAF). Matsyafed,

organized on cooperative principles has also co-opted the concept of micro groups in fishermen societies. NGOs working in this field like ESS (Ernakulam Social Service Society), QSS (Quilon Social Service Society), Win Centre etc. have also opted for formation of groups for their working. In all cases the groups were to be linked to banks for providing credit after an incubation period of six months of mobilisation of savings corpus which promotes financial inclusion.

As on March 2010, in Kerala, savings with banks were recorded by 394197 SHGs constituting 5.67 per cent of total SHGs opening a savings account with banks in the country. Loans amounting to Rs. 619870.89 lakhs were disbursed to as many as 62058 SHGs (Table 3.21).

Table 3.21. SHG-bank linkage in Kerala (March 2009-10)– A comparative perspective

Particulars	Region	No of SHGs		Amount Rs. Lakh	
		2009	2010	2009	2010
Savings of SHGs	Kerala	358863	394197	23241.84	37556.32
Share in All India position		***5.86***	***5.67***	***4.19***	***6.06***
	India	6121147	6953250	554561.82	619870.89
Loan disbursed	Kerala	60376	62058	51673.52	50745.31
Share in All India position		***3.75***	***3.91***	***4.22***	***3.51***
	India	1,609,586	1586822	1225351.4	1445330.36
Loan outstanding	Kerala	176153	257760	95,093.05	101530.66
Share in All India position		***4.17***	***5.31***	***4.19***	***3.62***
	India	4224338	4851356	2267984.3	2803828.07

Source: Status of Microfinance in India 2008-09

The agency wise SHG bank linkage in Kerala was also dominated by commercial banks as in shown by All India figures (Table 3.22). Bulk of the savings of SHGs was parked with commercial banks (85.95 per cent) and similar trend was observed in case of loans disbursed and outstanding also. This may be due to the wide spread coverage achieved by the commercial banks unlike cooperatives and RRBs coupled with impetus provided by financial inclusion drive

under the auspicious of RBI. Unlike the national scenario, RRBs in Kerala failed to make a substantial contribution for establishing linkage with SHGs being a specialized institution established to cater to the requirements of the poor.

Table 3.22. Agency wise SHG bank linkage in Kerala (March 2009-10)

		No of SHGs		Amount (Rs. Lakh)	
Commercial bank		**2009**	**2010**	**2009**	**2010**
Savings of SHGs	Kerala	282666	306422	18883.87	32282.68
	India	3549509	4052915	277298.94	367389.24
Loan disbursed	Kerala	43842	47884	39461.34	39284.96
	India	1,004,587	977521	806053.1	978018.55
Loan outstanding	Kerala	144192	223741	74788.47	80591.57
	India	2831374	3237263	1614942.8	2016471.2
Regional Rural Bank		**2009**	**2010**	**2009**	**2010**
Savings of SHGs	Kerala	28769	34190	545.2	849.88
	India	1628588	1820870	198975.08	129937.49
Loan disbursed	Kerala	3328	5136	3162.18	5805
	India	405,569	376797	319349.01	333320.06
Loan outstanding	Kerala	10341	12042	5,955.77	8675
	India	977834	1103980	522441.61	614458.24
Cooperative bank		**2009**	**2010**	**2009**	**2010**
Savings of SHGs	Kerala	47428	53585	3812.77	4423.76
	India	943050	1079465	78287.8	122544.16
Loan disbursed	Kerala	13206	9038	9050	5655.35
	India	199,430	232504	99949.28	133991.75
Loan outstanding	Kerala	21620	21977	14,348.81	12264.09
	India	415130	510113	130599.84	172898.62

Source: Status of Microfinance in India 2009-10

Micro Finance Institutions (MFIs) in India also promote SHGs and establish linkage with banks by borrowing directly from banks and facilitating on-lending to groups. Though an additional transaction cost is incurred by way of an additional channel partner in the credit flow, it helps to avoid the exploitative moneylender to whom the poor tends to be utterly bonded. In Kerala, MFI assistance tends to be low with seven MFIs promoting SHG bank linkage with a history of completion of

43 projects (Table 3.23). No increase was recorded with the indicators worked out for monitoring progress over 2009-10. While the national scenario records a growth in number of SHGs promoted, the amount sanctioned shows a quantum jump compared to previous year. The SHGs promoted by the MFIs were invariably induced to have the bank account which is certainly a step towards financial inclusion.

Table 3.23. Status of MFI bank linkage in India and Kerala (2009-2010)

Particulars	Kerala		Growth	India		Growth
	2009	2010		2009	2010	
Number of SHGs to be promoted and credit linked	9590	9590	0.00	291780	345173	18.30
Amount sanctioned Rs. Lakh	112.29	112.29	0.00	6405.71	9025.81	40.90
Total amount released(Rs. Lakh)	73.51	74.37	1.17	2773.93	3469.69	25.08
Number of SHGs promoted	5899	5799	-1.70	214927	244367	13.70
Number of SHGs with SB a/c	5899	5799	-1.70	187203	232217	24.05
Number of SHGs credit linked	4513	4522	0.20	134861	157831	17.03

Source: Status of Microfinance in India 2008-09

The demand for finance in the rural areas have been analysed from the NSSO, 59th round survey (AIDIS), which has reported an indebtedness of 20.8 per cent of rural households in the country. However in case of Kerala, it was observed that share of rural population reporting borrowing has increased from 27.7 per cent in 1971-72 to 35.9 per cent in 2002-03. In Kerala, institutional share in borrowings of households are on the higher side; 81.6 per cent in rural areas and 85.1 per cent in urban areas. However the proliferation of non institutional segment in the State cannot be neglected with the presence of 5394 money lenders, 2686 chitty operators and 396 engaged in other financial activities according to a survey conducted by Department of Economics and Statistics in 2005.

The financial inclusion drive in the country has been spearheaded by RBI and one of its multipronged strategies to include the poor into the banking fold has been through SHG bank linkage, popularly known as linkage banking. The

population served by a branch in Kerala was 8000 in 2009, compared to the national average of 16000 persons/branch. Other indicators also reflect the superior position of the State compared to national average. To bring the unbanked population to the banking fold, microfinance has made tremendous strides in India over the years and has become a household name in view of the multi-pronged benefits reaped by poor. Commercial banks, cooperative banks and RRBs have promoted the SHG bank linkage programme recognizing its importance to penetrate into the masses. Considering the success of the programme, not only main stream financial providers, but the State sponsored poverty reduction programmes and sectoral development programmes have been routing their developmental assistance to the poor through SHGs.

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Chapter 4

AN OVERVIEW OF MARINE FISHERIES SECTOR AND FISHERIES FINANCING

Contents

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4.1 Introduction

Fishing has been considered as a primary livelihood option since time immemorial, for the occupants of the coastal belt in India, stretching along 8129 kms. Fisheries play a predominant strategic role in the economic activity of our country by its contribution to national income, foreign exchange, food and employment. Moreover it supports the deprived coastal community with sufficient nutritional security which is otherwise unreachable for such segment. Marine fisheries sector produces about 2.71 million tonnes (2006) of fish per annum. About 12.49 lakh fisherfolk operate using diverse types of craft-gear combinations with regional and seasonal variations all along the Indian coastline. The secondary sector provides employment to more than 15 lakh people and another two lakh people is employed in the tertiary sector. It is estimated that fishery and allied activities provide livelihood security to about 30 million people (Sathiadhas et al, 2007).

4.2 Economic Significance of Fisheries Sector

Fisheries sector plays an important role as a foreign exchange earner, in addition to contributing to food and nutritional security. It also acts as a principal

source of livelihood to people in coastal areas. Contribution of fisheries sector to GDP of the country is presented in the Table 4.1.

The customary analysis reveals that in terms of share of fisheries in total GDP over the years, an increase was noted from 0.62 per cent in 1970-71 to 1.18 per cent in 2000-01 that gradually dropped out in the later period. But in terms of absolute value it can be seen that revenue from this sector has increased at a compound annual growth rate (CAGR) of 16.27 per cent during 1970-71 to 2000-01 and later on at a CAGR of 1.52[①] per cent. Marginalization in terms of share of contribution to GDP may be attributed to dominance of other upcoming sub sectors like IT and industries. This is also rampant from escalating trend in share of fisheries in agriculture, which increased from 1.46 per cent in the seventies to almost 5 per cent during the current decade.

Table 4.1. Contribution of fisheries sector to national GDP (Rs crore)

Year	Total GDP	GDP contribution		GDP contribution of fisheries as percentage of	
		Agriculture	Fisheries	Total GDP	Agricultural GDP
1970-71	39708	16821	245	0.62	1.46
1980-81	122427	42466	921	0.75	2.17
1990-91	475604	135162	4556	0.96	3.37
2000-01	1902998	468479	22535	1.18	4.81
2003-04	2222758	441360	22444	1.01	5.09
2004-05	2388768	441647	21987	0.92	4.98
2005-06	2616101	467984	23594	0.90	5.04
2006-07	2871118	487010	24300	0.85	4.99
2007-08	3129717	511274	25416	0.81	4.97

Source: Till 1990-91: Tenth Plan Document (Fisheries), From 2000-01: CSO, New Delhi

[①] CAGR of 1.52 per cent for a period of 8 years from 2000-01 to 2007-08

Table 4.2. Contribution of marine and inland fisheries to GDP and NDP (Value at constant (1999-2000 prices)

Rs. crore

Particulars	1999-00	2003-04	2004-05	2005-06	2006-07	2007-08
Value of output	22293	26326	25682	27411	28170	29353
Inland fish*	10768	13065	13144	14114	15142	16476
Percentage of value of output	48.30	49.63	51.18	51.49	53.75	56.13
Marine fish**	11525	13261	12538	13297	13029	12877
Percentage of value of output	51.70	50.37	48.82	48.51	46.25	43.87
Repairs, maintenance and Other operational costs	3354	3881	3695	3817	3870	3937
Gross domestic product**	18939	22444	21987	23594	24300	25416

*including subsistence fish

** including domestic product from gathering of pearls, chanks and other sea products

Source: CSO, www.mospi.nic.in accessed on 8th July 2009

A breakup of factor contribution of inland and marine components of fishing activity is given below (Table 4.2.). Consistent increase in value of fish production was observed over the years, along with increasing importance of inland fishery resources.

4.2.1 Fish Production during Five Year Plans

Fisheries production in the country mainly arises from marine and inland fisheries which includes both capture and culture fisheries. Early nineties witnessed a boom in total fish production followed by sluggish trend towards the end of the decade mainly because of reduction in marine fish production (Table 4.3). Analysis reveals that while marine fisheries sector does not exhibit a consistent production trend, inland production was found growing throughout the years.

Table 4.3. Fish production during the plan period

Plan Period	Fish Production at the end of the period ('000 t)			Growth rate (percentage)			Average Annual Growth Rate
	Marine	Inland	Total	Marine	Inland	Total	
Pre- Plan Period (1950-51)	534	218	752	-	-	-	
1st Plan (1951-56)	596	243	839	11.61	11.47	11.57	2.31
2nd Plan (1956-61)	880	280	1,160	47.65	15.23	38.26	7.65
3rd Plan (1961-66)	824	507	1,331	-6.36	81.07	14.74	2.95
Annual Plans (1966-69)	904	622	1,526	9.71	22.68	14.65	4.88
4th Plan (1969-74)	1,210	748	1,958	33.85	20.26	28.31	5.66
5th Plan (1974-79)	1,490	816	2,306	23.14	9.09	17.77	3.55
Annual Plan (1979-80)	1,492	848	2,340	0.13	3.92	1.47	1.47
6th Plan (1980-85)	1,698	1,103	2,801	13.81	30.07	19.70	3.94
7th Plan (1985-90)	2,275	1,402	3,677	33.98	27.11	31.27	6.25
Annual Plan (1990-91)	2,300	1,536	3,836	1.10	9.56	4.32	4.32
Annual Plan (1991-92)	2,447	1,710	4,157	6.39	11.33	8.37	8.37
8th Plan (1992-97)	2,967	2,381	5,348	21.25	39.24	28.65	5.73
9th Plan (1997-02)	2,830	3,126	5,956	-4.62	31.29	11.37	2.27
10th Plan (2002-03)	2,990	3,210	6,200	5.65	2.69	4.10	4.1
10th Plan (2003-04)	2,941	3,458	6,399	-1.64	7.73	3.21	3.21
10thPlan(2004-05)	2,780	3,520	6,300	-5.47	1.79	-1.55	-1.55
10thPlan (Average) (2002-05)	2,904	3,396	6,300	2.60	8.64	5.77	1.92

Source: Central Marine Fisheries Research Institute, Kochi for the period up to 1970-71, State Governments/ Union Territory Administrations since 1970-71; Hand Book on Fisheries Statistics, 2005
(Adapted and modified from GOI 2006)

While total fish production registered growth at a compound annual growth rate of 4.01 over the five decades since independence, for marine fish production it was 3.1 per cent. Growth of inland fish production was dynamic over the same period with a growth rate of 5.29 per cent.

4.2.2 Export Performance of Fish and Fish Products

Exports played a crucial role for development of marine fisheries and socio-economic scenario of coastal rural sector. The infrastructure development in terms of ice plants, pre-processing centres, processing centres, export houses, consequent transport and other facilities along the fishing villages greatly owes to the growth of marine product exports. Seafood business in India is oriented towards international trade. International trade in fish and fish products has been increasing very rapidly in recent decades. Although export played a vital role for development, the WTO regime on exports should be closely watched and parallel development of domestic marketing system, which will act as shock absorbers, should be accorded paramount importance in our future strategies. Fresh fish, once inaccessible to distant locations are now easily available due to vast improvements in handling technologies coupled with advanced transportation facilities and consequent market penetration. About 80 per cent of the catch is channelised through domestic marketing system and the rest for exports.

Table 4.4. Export growth of marine products from India (1995-96 to 2006-07)

Year	Quantity (Tonnes)	Value (Rs.Crores)	Unit Value (Rs/kg)
1961-62	15732	3.92	2.49
1971-72	35523	44.55	12.54
1980-81	75591	234.84	31.07
1990-91	139419	893.37	64.08
1995-96	296277	3501.11	118.17
2000-01	440473	6443.89	146.29
2001-02	424470	5957.05	140.36
2002-03	467297	6881.31	147.26
2003-04	412017	6091.95	147.86
2004-05	461329	6646.69	144.08
2005-06	512164	7245.3	141.46
2006-07	612641	8363.53	136.52
2007-08	541701	7620.92	140.68
2008-09	602835	8607.94	142.79
2009-10	678436	10048.53	148.11

Source: MPEDA Export Statistics

Global fish trade was worth US$ 63 billion in 2003, and it is estimated that it will have increased to US$ 68 billion in 2004. Over the last decade, developing country exports of fish and fishery products have increased at an average rate of 6 per cent per annum. Net exports earned by developing countries from fish trade in 2002 were US$ 18 billion. India is the sixth largest fishing nation and the marine products industry is today the largest single net foreign exchange earner for the country accounting for 7 per cent of the net exchange earning and 3 per cent of the total earnings in 1997(Dehadrai and Yadava, 2004). During the last 25 years, the Indian seafood export increased from 75,591 tonnes in 1980-81 to 678436 tonnes in 2009-10 (Table 4.4). During the same period, the value of seafood trade also increased from Rs.234.84 crores to Rs.7620.92 crores. The unit value has increased from Rs.31.07 to Rs.148.11 per kg during the same period. The growth in the value of sea food trade is nearly twice that of the volume of trade, which can be attributed to the increase in prices of different varieties coupled with liberalisation and consistent demand in the export market for Indian sea food.

The declining fish catches and international legislations regarding seafood exports pose serious consequences on livelihoods of poor fishermen. Despite improvements in the sector, benefits are not uniformly distributed among different stakeholders of fishing industry. Post-harvest fisheries activities including processing, preservation, product development, transport and marketing provide greater employment to labour than harvesting sector.

4.2.3 Socio Economic Milieu -National Perspective

The marine fishery resources of India comprise 2.02 million sq km of Exclusive Economic Zone with a continental shelf area of 4,91,000 sq. km. Amongst the different maritime states, Gujarat has the longest coast line of 1600 Kms followed by Tamil Nadu (1076 Kms) and Andhra Pradesh (974 Kms). There are 641 fishing villages in Orissa followed by Tamil Nadu (581) and Andhra Pradesh (498).

With regard to basic fish landing facilities, Tamil Nadu ranks first with 352 centres followed by Andhra Pradesh (271) and Kerala (178). The marine fisher population is concentrated in the East coast of India (59 per cent) constituting

West Bengal, Orissa, Andhra Pradesh and Tamil Nadu (17,50,790). In the West coast, 17 per cent of fisher men population is from Kerala alone. Among the maritime states, fisher population is highest in Tamil Nadu (22 per cent) followed by Kerala. A similar trend is observed in case of distribution of fisher families across the states. An average fisher household in India has a family size of five, ranging from four in AP, TN and Pondichery to six in Karnataka and Daman & Diu (Table 4.5).

Table 4.5. Profile of Marine Fishermen Population in India (2005)

State	Fishermen population	Number of fishermen families	Average Family size	Average population/fishing village
West Bengal	269,565	53,816	5	779
Orissa	450,391	86,352	5	703
Andhra Pradesh	509,991	129,246	4	1024
Tamil Nadu	790,408	192,152	4	1360
Pondichery	43,028	11,541	4	1537
Kerala	602,234	120,486	5	2713
Karnataka	170,914	30,176	6	1096
Goa	10,668	1,963	5	274
Maharashtra	319,397	65,313	5	787
Gujarat	323,215	59,889	5	1229
Daman and Diu	29,305	5,278	6	1332
Total	35,19,116	756,212	5	1099

Source: Marine Fisheries Census, 2005, CMFRI

The coastal fishing villages in India are thickly populated as fishermen prefer to stay along the coast line owing to access to sea. The Coastal Zone Regulations are not strictly adhered to coupled with reluctance of fishers to move away from proximity to sea. Among ten maritime states, Kerala is the most densely populated (population per fishing village) state in India (2713 people per fishing village).

4.2.4 Literacy Level

The literacy rate among fisherfolk in maritime states of India was found to be 56.50 per cent (Table 4.6) as against All India literacy rate of 64.84 per cent

(Census, 2001). In all maritime states, the literacy rate for coastal population is much lesser than the State averages indicating poor social development index adding to their vulnerability.

Table 4.6. Literacy status of marine fisherfolk in India (2005)

State	Literacy rate		Status of Education			
	State Average (2001)	Coastal sector (2005)	Primary	Secondary	Above secondary	Total
West Bengal	68.64	45.65	83,301 *(67.70)*	33,734 *(27.41)*	6,018 *(4.89)*	123,053 *(100)*
Orissa	63.08	47.88	142,005 *(65.84)*	56,879 *(26.37)*	16,783 *(7.78)*	215,667 *(100)*
Andhra Pradesh	60.47	32.47	111,403 *(67.27)*	45,827 *(27.67)*	8,384 *(5.06)*	165,614 *(100)*
Tamil Nadu	73.45	66.75	260,088 *(49.30)*	206,257 *(39.10)*	61,229 *(11.61)*	527,574 *(100)*
Pondichery	81.24	63.18	12,763 *(46.95)*	10,904 *(40.11)*	3,518 *(12.94)*	27,185 *(100)*
Kerala	90.86	72.84	171,470 *(39.09)*	218,704 *(49.86)*	48,493 *(11.05)*	438,667 *(100)*
Karnataka	66.64	69.93	52,572 *(43.98)*	49,606 *(41.50)*	17,346 *(14.51)*	119,524 *(100)*
Goa	82.01	69.12	1,691 *(22.93)*	4,581 *(62.12)*	1,102 *(14.94)*	7,374 *(100)*
Maharashtra	76.88	67.04	94,303 *(44.04)*	97,446 *(45.51)*	22,368 *(10.45)*	214,117 *(100)*
Gujarat	69.14	40.93	70,658 *(53.40)*	52,088 *(39.37)*	9,560 *(7.23)*	132,306 *(100)*
Daman and Diu	78.18	58.28	7,760 *(45.44)*	7,273 *(42.59)*	2,045 *(11.97)*	17,078 *(100)*
Total	64.84	56.50	1,008,014 *(50.70)*	783,299 *(39.40)*	196,846 *(9.90)*	1,988,159 *(100)*

- *Figures in parenthesis denote percentage to total*
- Source: Marine Fisheries Census of CMFRI, 2005

Among the maritime states, Kerala ranks first in literacy of marine fisherfolk with 72.84 per cent which is found lower than State literacy rate of 90.86 per cent (Census, 2001). It is seen that, 50.70 per cent of the fisherfolk (excluding children) are educated up to primary level, followed by 39.40 per cent upto secondary and 9.90 per cent above secondary level education. In contrast to previous trend of huge drop outs from education after primary level, above 50 per cent of the fisherfolk studied beyond primary level. This shows that once fisherfolk get exposed to education they are inclined to get educated to higher levels as seen in most of the maritime states provided there is availability of educational infrastructural facilities.

Table 4.7. Change in educational status of fisherfolk in India

Educational status	Primary	Secondary	Above secondary	Not educated	Total	Literacy rate
1980	280987	56998	13489	1541442	1892916	18.57
Percentage to total	14.84	3.01	0.71	81.43	100	
2005	1008014	783299	196846	1530957	3519116	56.50
Percentage to total	28.64	22.26	5.59	43.50	100	

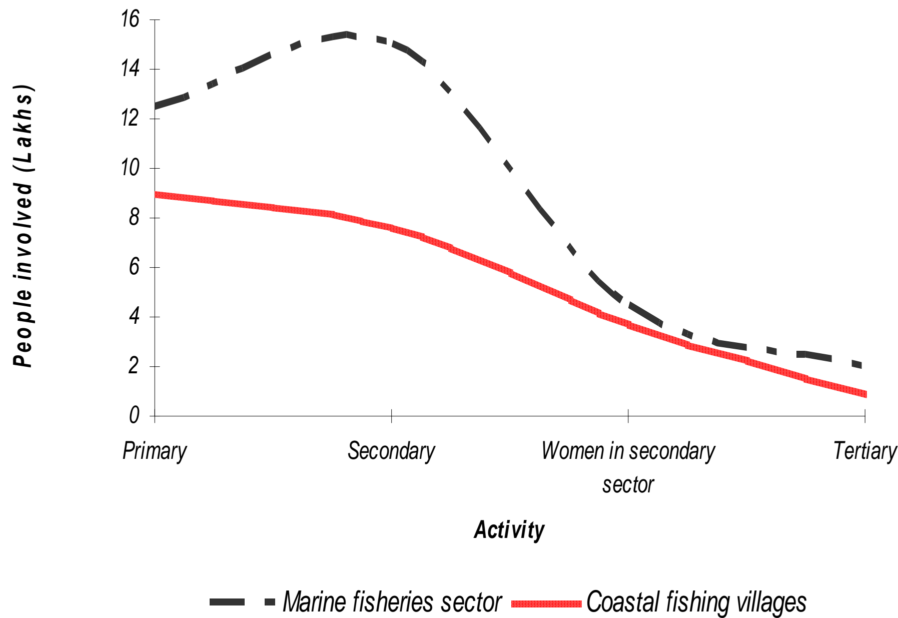
Source: Marine Fisheries Census of CMFRI, 1980 and 2005

The overall literacy status doubled from 18.57 per cent in 1980 to 56.50 in 2005. The improved socio economic status of fishers is reflected by increase in literacy level (Table 4.7). The situations in the past have improved that almost half of the population could access education facilities. Among the educated persons, only 20 per cent were able to have higher education beyond primary level in 1980 while now the situation has improved that almost half of them studies above primary level.

4.2.5 Occupational Pattern

In India, marine fisheries sector employs around 2.9 million people of which 12.47 lakh people are in active fishing, 14.97 lakh in secondary sector avocations and 2 lakhs in tertiary sector. Out of the total employed 59 per cent of them hail from the coastal fishing villages alone. It is observed that most of the sea faring

fishers also live in the nearby coastal villages. 71 per cent of those employed in primary sector reside in coastal fishing villages (Fig. 4.1).



Source: SEETTD, CMFRI and Marine Fisheries Census of CMFRI, 2005

Fig 4.1. Employment pattern in marine fisheries and coastal fishing villages (2005)

Similarly 51 per cent of secondary sector workers and 42 per cent of tertiary sector workers are from the fishing villages. The export orientation of marine fisheries sector has led to mushrooming of seafood export units doing varied activities like peeling, curing, pre-processing, processing and packing. These units have high employment potential and employ women in large numbers. Women in non fishing areas also are attracted to such jobs which have resulted in over crowding effect leading to low wage rate. In secondary sector, around 30 per cent are women workers of which 81 per cent are residents of fishing villages in the coastal belt. The tertiary sector undertakes fishing allied activities in which non fishermen dominate.

4.2.6 Occupational Profile of Coastal fisherfolk

The overall dependency ratio of marine fisherfolk in India is estimated to be 2.04 denoting that every person working in marine fisheries sector supports two persons (Table 4.8).

Table 4.8. Occupational profile of coastal fisherfolk in India (2005)

State	Number of fisherfolk engaged in				Dependency ratio
	Primary Sector	Secondary sector	Tertiary sector	Total	
West Bengal	70,750 *(54.23)*	57741 *(44.26)*	1,968 *(1.51)*	130,459 *(100)*	2.07
Orissa	121,282 *(41.94)*	152,534 *(52.75)*	15,359 *(5.31)*	289,175 *(100)*	1.56
Andhra Pradesh	138,614 *(46.17)*	152,892 *(50.92)*	8,727 *(2.91)*	300,233 *(100)*	1.70
Tamil Nadu	206,908 *(63.81)*	104,509 *(32.23)*	12,817 *(3.95)*	324,234 *(100)*	2.44
Pondichery	10,341 *(46.72)*	10,095 *(45.61)*	1697 *(7.67)*	22,133 *(100)*	1.94
Kerala	140,222 *(62.43)*	71,074 *(31.64)*	13,310 *(5.93)*	224,606 *(100)*	2.68
Karnataka	37,632 *(41.43)*	45,699 *(50.31)*	7,500 *(8.26)*	90,831 *(100)*	1.88
Goa	2,515 *(39.30)*	3,382 *(52.85)*	502 *(7.84)*	6,399 *(100)*	1.67
Maharashtra	72,074 *(43.79)*	81,780 *(49.69)*	10725 *(6.52)*	164,579 *(100)*	1.94
Gujarat	83,322 *(49.36)*	75,082 *(44.48)*	10,390 *(6.16)*	168,794 *(100)*	1.91
Daman and Diu	5,868 *(77.73)*	1,603 *(21.23)*	78 *(1.03)*	7,549 *(100)*	3.88
Total	889,528 *(51.45)*	756,391 *(43.75)*	83,073 *(4.80)*	1,728,992 *(100)*	2.04

Figures in parenthesis denote percentage to total
Source: Marine Fisheries Census of CMFRI, 2005

The dependency ratio varies across the states from 1.56 (Orissa) to 3.88 (Daman and Diu). Among those employed in marine fisheries, most of them are active fishermen while 43.75 per cent are involved in secondary sector and 4.80 per cent in tertiary sector.

4.2.7 Income, Inter-sectoral Disparity and Poverty

The pressure for employment in active fishing is increasing more than proportionate to harvestable yield in the open access marine fisheries. The proportion of catch by mechanised sector as a whole increased from 40 per cent during 1980 to 68 per cent in 1997 and again declined to 66 per cent in 2003. At the same time, number of active fishermen depending on mechanised fisheries increased from 1.14 lakh to 2 lakh and again increased to 4.1 lakh respectively during the same period. Among those engaged in the mechanized sector, 75 per cent work in trawl fisheries and rest 25 per cent in other sectors. In case of motorized sector, 50 per cent are engaged in ring seine fishery alone. There is a wide disparity in income between those engaged in different sectors. It may be noted that still non-mechanized sector is providing about 30 per cent of employment in active fishing, yet harvesting hardly 7 per cent of annual landings (Sathiadhas, 2005). Marginalisation of indigenous non-motorised sector by motorized and mechanized sectors frequently creates conflicts among fishers. The number of annual fishing days per worker reveals that level of employment for hired labourers as well as those not having sufficient equipment is low and they are very much underemployed. The seasonal nature of fishery and risk and uncertainties associated with marine fishing entangled fishermen in low-income trap. The poor economic condition coupled with less availability of finance from institutional agencies compel them to sustain with less equipped fishing implements which in turn results in diminishing returns.

4.2.8 Incidence of Poverty

The cornerstones of development agenda of a nation is based on strategies that rests on economic growth, poverty and inequality. In India rising poverty is of great concern and the official estimates of poverty tend to vary very sharply from year to year. According to the results of the 55th round of the National Sample Survey, the percentage of people below poverty line in India decreased from 36 per cent in 1993-94 to 26 per cent in 1999-2000. The vast majority of India's poor, estimated to be anywhere between 320-400 million, live in rural areas. A study by

the International Food Policy Research Institute (IFPRI) notes that while overall economic growth has been impressive since the start of reforms in the early 1990s, positive impact on rural poverty was not observed. The failure to reduce rural poverty is attributed to declining public investment in agriculture, which provides a livelihood to 70 per cent of Indians.

The incidence and persistence of poverty in marine fisheries sector can be attributed mainly to open access nature of marine fisheries and unconstrained labour mobility (FAO, 2005). At times labour mobility to fisheries is accentuated by social factors such as caste system prevailing in India. Notwithstanding the above factors there is considerable growth of population within the fishing community and the newer technologies are adopted that pave way to biological and economic over fishing, lesser per capita production stressing the need for efficient fisheries management essentially directed towards sustainable development ensuring distributive justice. The economics of different craft gear combinations and per capita earnings of fishing labour clearly indicates that the people living below poverty line is not less than 60 per cent in the coastal rural sector (Sathiadhas, 2005). It is explicitly clear that the coastal rural people could not get much of the benefits of the economic development taken place in our country since independence. The policies for alleviating poverty in fisheries sector should focus on certain specific points in addition to common measures adopted. The marine inshore fisheries resources are already over exploited and this result in loss of potential resource rents. The capture of these resource rents by appropriate management efforts can add to economic growth in long run. Further increasing adoption of newer technologies coupled with inadequate use of property rights is an important cause of sectoral disparity and inequitable income distribution. The policies pertaining to advent of alternative avocations to fishers by providing awareness, training and initial resource capabilities can do better in the way of providing mobility to other sectors.

4.2.9 Gender Dimension

The activity wise occupational structure of fisherfolk engaged in secondary sector is given in Table 4.9. Activities like fish marketing and labour for the various

tasks from landing centre to retail points provide employment to more than 56 per cent of the fisherfolk. While marketing is dominated by females (MF ratio (male female ratio) of 2.8), labour in the secondary sector is done by men (MF ratio of 0.4). Curing /processing and peeling are undertaken by women (MF ratio of 3.1 and 3.4 respectively). Male female participation in secondary sector is almost equal denoted by the ratio of 0.9. Of the fisher population engaged in secondary sector, women accounted for 48 per cent of the work force in marketing, curing/processing and peeling sectors.

Table 4.9. Gender wise occupational structure in secondary sector (2005)

Sl. No	Activity in secondary sector	Number of fisherfolk involved			Male female participation Ratio
		Male	**Female**	**Total**	
1	Marketing	54670 *(26.36)*	152692 *(73.64)*	207362 *(100)*	2.8
2	Making/repairing of net	111661 *(79.92)*	28057 *(20.08)*	139718 *(100)*	0.3
3	Curing/processing	21211 *(24.34)*	65931 *(75.66)*	87142 *(100)*	3.1
4	Peeling	5251 *(22.69)*	17892 *(77.31)*	23143 *(100)*	3.4
5	Labourer	153431 *(69.53)*	67231 *(30.47)*	220662 *(100)*	0.4
6	Others	44704 *(57.05)*	33660 *(42.95)*	78364 *(100)*	0.8
	Total	390928 *(51.68)*	365463 *(48.32)*	756391 *(100)*	0.9

Figures in parenthesis denote percentage to total

4.3 Fisheries Sector – An Outlier in the Kerala Model of Development

Fishing villages all along the Indian coast are comparatively backward, synchronized with underdevelopment. Marine fishery sector in Kerala exhibits

disparities, both inter-sectoral and intra-sectoral, while existing within the most acclaimed “Kerala Model of Development” with high human development comparable to developed countries not compromising to low per capita income (Kurien, 2000 and Sathiadhas, 2006). Lack of permeation of development efforts to fishing community is tacit inspite of State’s overall advancement. Literacy rate in marine fishing villages in Kerala is 73 per cent, far lower than State literacy rate of 90.86 per cent. A paradoxical picture of low level of human development in fisheries sector is underscored by lower sex ratio of coastal fishing villages (979) compared to the State average of 1058.

4.3.1 Economic Importance

Marine fisheries play an important role in the coastal economy of Kerala. The inshore area falling within the territorial limit of the State (22km) is about 13,000 sq.kms. The continental shelf area of the sea adjoining the Kerala State is 39139 sq.kms. This part of the sea is considered as the most productive portion of the Arabian Sea.

Table. 4.10. Contribution of fisheries sector to GSDP of Kerala

(Rs lacs)

Year	(1) GSDP	(2) Agriculture	(3) Fishing	(3) as % of (1)	(3) as % of (2)
1999-00	6916847	1278486	152648	18.48	11.94
2000-01	7265883	1142449	155234	15.72	13.59
2001-02	7792375	1196739	161836	15.36	13.52
2002-03	8689476	1323695	146996	15.23	11.10
2003-04	9669803	1414462	149058	14.63	10.54
2004-05	11025991	1510490	181422	13.70	12.01
2005-06	12438942	1699022	248196	13.66	14.61
2006-07	14247004	1956352	264409	13.73	13.52
2007-08	16241479	2165238	272942	13.33	12.61

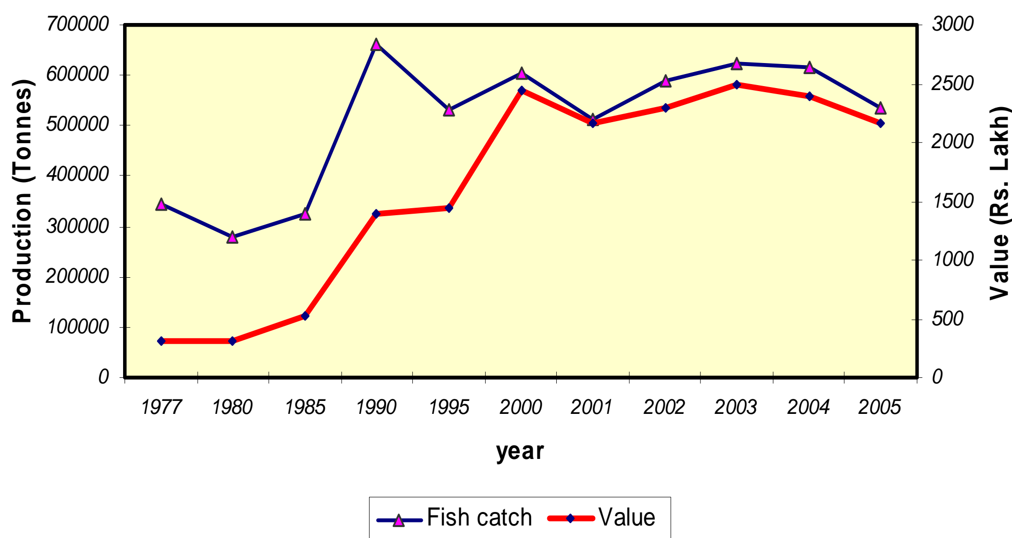
Source: www.mospi.nic.in

The pioneering attempts of the state in mechanisation and motorisation led to significant achievements in the fisheries sector. The share of fishery sector in

the Agricultural State Domestic Product of Kerala maintained a stable position between 10.5 per cent and 13.5 per cent establishing the significance of this sunrise sector (Table 4.12). The contribution of fisheries sector to GSDP of the State showed a declining trend from 18.48 per cent in 1999-00 to 13.33 per cent during 2007-08. Although absolute value of fisheries sector product has almost doubled over the years, its share in GSDP is declining due to increased contribution of other sectors especially service sector after 2001-02.

4.3.2 Production and Exports

The gross marine fish landings in Kerala have shown an increasing trend during 1961 to 2005. The overall production has increased from 2.69 lakh tonnes in 1961 to 5.36 lakh tonnes in 2005 mainly due to technological advancements in fishing methods, increased utilisation of extended fishing area and increase in number of fishing fleets. Though there was a decrease in total landings during 1980s (2.79 lakh tonnes) gross landings showed a steep increase to the highest (6.63 lakh tonnes) in 1990.



Source: SEETTD, CMFRI

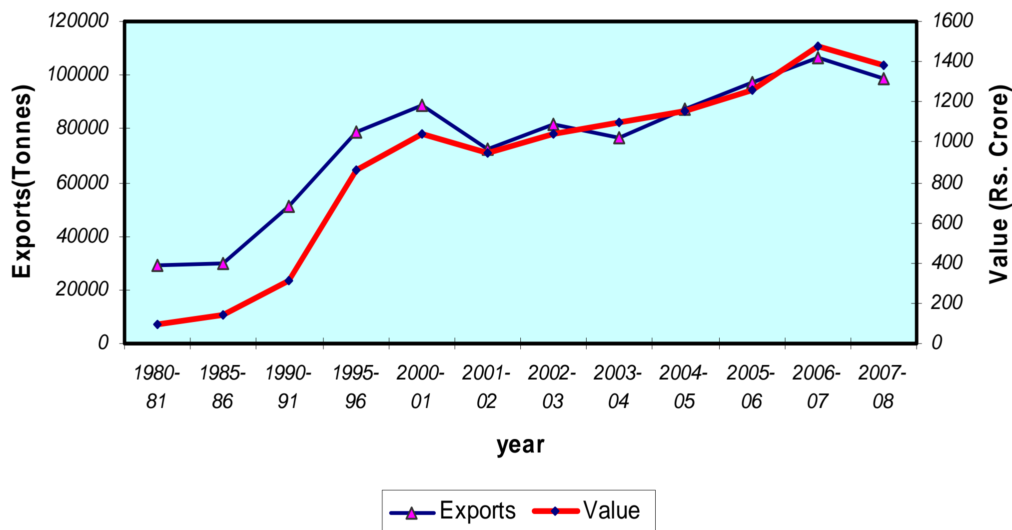
Fig. 4.2. Marine fisheries production and gross earnings in Kerala

In 2000, the landings increased to the level of 6.04 lakh tonnes, almost similar position to nineties when all time high landings were observed. However, in 2005 there was a reduction of 0.68 lakh tonnes compared to 2000. The sector wise catch trends in Kerala showed significant variation over the decades. Following intensive motorisation and mechanisation of crafts in Kerala, the catch by those units increased and marginalised the non mechanised segment. Fish landings were highest in the motorised sector till 2003 but the trend has reversed recently with mechanised segment contributing 53 per cent of the landings. The non mechanised segment has been phased out of the scene with a share of a meagre 2 per cent of total marine fish landings. In addition technological improvements in capital intensive fishing implements have rendered the existing older units less economical or non operational, leading to substantial idling of fleets and underemployment.

Earnings from marine fisheries at landing centre level showed that there was marginal decline from 2000 to 2005 (Fig. 4.2). The decline in revenue can be due to the significant reduction in landings by Penaeid and Non Penaeid prawns inspite of continuous increase in price level of almost all varieties. However the landings of cephalopods have been consistent over the years.

An all time high level of gross revenue was generated during 2003(Rs. 2497 crore). While there is increase in the number of people depending on fisheries for their livelihoods, the production declined and the gross revenue generated remains more or less stagnant indicating the need for opting alternative employment opportunities. This trend most severely affected fishing labourers with drastic reduction in their per capita earnings. There is significant difference in the first and last sales value indicating high involvement of intermediaries between producers and consumers. The high price spread or marketing margins are mostly benefiting the traders and majority of them are from non- fishermen communities.

Marine fisheries exports from Kerala increased from Rs. 95 crores in 1980-81 to a whopping Rs. 1384 crores in 2007-08 (Fig. 4.3). It has further increased to Rs. 1576 crores during 2009-10. Consistent increase in export value was observed during this period. Kerala contributes 18 per cent of the seafood exports of the country both in terms of quantity and value.



Source: MPEDA Statistics

Fig. 4.3. Marine fish exports from Kerala

4.3.3 Demographic Profile

The coast of Kerala extends to 590 Kms spreading over nine coastal districts, the maximum coastline being shared by Alleppey and Kannur (82 Kms)(Table 4.11). Trivandrum district has maximum fishing villages (42) and Kannur with minimum (11). Number of landing centres is found proportionate to fishing villages. Average fisher households per village in the state is 543 while the highest is in Trivandrum (813) and lowest is in Kasargod (299). Maximum fisher population was observed in Trivandrum (24 per cent) followed by Alleppey (17 per cent) and Kozhikode (15 per cent).

Table 4.11. District wise fisher families and population

Districts	Length of Coast line	Fishing villages	Landing centres	Number of fishermen families	Total fishermen population	Average fisher households/ village
Thiruvananthapuram	78	42	50	34,128	143,436	813
Kollam	37	26	18	11,899	43,210	458
Alleppey	82	30	13	21,759	101,341	725
Ernakulam	46	21	13	8,876	42,069	423
Thrissur	54	18	19	6,598	34,078	367
Malappuram	70	23	12	10,462	79,858	455
Kozhikode	71	35	25	16,058	87,690	459
Kannur	82	11	11	5,929	36,686	539
Kasargod	70	16	17	4,777	33,866	299
Total	590	222	178	120,486	602,234	543

Source: Marine Fisheries Census of CMFRI, 2005

The average number of households per fishing village in the country was estimated as 236 with a maximum of 543 in Kerala and a minimum of 50 in Goa. The sex ratio in fishing villages stands high at the level of 980 in Kerala as against 948 at all India level. High density of population all along the coast with limited accessibility of land resources lead to over dependence on marine resources for their sustenance.

4.3.4 Infrastructure facilities in fishing villages

Infrastructure facilities in a village determine the level of development. It was observed that all fishing villages were electrified with health care facilities extending to all villages in terms of 137 community centres and 357 villages. (average distribution being 1.6 hospitals per fishing village) (Table 4.12). Institutional financing is facilitated by banks and cooperative societies present in the fishing villages. There were 306 banks (average of 1.4 per fishing village) and 381 cooperative societies (1.7 per fishing village). Concentration of banks and cooperative societies was highest in fishing villages in Kozhikode district.

Table. 4.12. Institutional infrastructure for health care and finances in coastal fishing villages

Districts	No of villages	Electrified	Community centres	Hospitals	Banks	Cooperative societies
Thiruvananthapuram	42	42	27	61	39	53
Kollam	26	26	22	80	31	39
Alleppey	30	30	20	31	33	39
Ernakulam	21	21	18	20	27	25
Thrissur	18	18	13	30	34	34
Malappuram	23	23	2	27	34	38
Kozhikode	35	35	14	52	51	75
Kannur	11	11	10	24	38	46
Kasargod	16	16	11	32	19	32
Total	222	222	137	357	306	381

Source: Marine Fisheries Census of CMFRI, 2005

Fisheries related infrastructure is concentrated in different parts of the State according to the type of fishing allied activities carried out in the region. We can see that freezing plants, curing yards and peeling sheds are concentrated in Kollam, Kozhikode and Alleppy districts. Ice factories are seen all over the state with more of them in Kollam, Alleppy, Ernakulam and Kozhikode districts (Table 4.13).

Table. 4.13. Fisheries related infrastructure in coastal fishing villages

Districts	Boat yards	Ice factories	Cold storages	Freezing plants	Curing yards	Peeling sheds	Fishmeal plants
Thiruvananthapuram	25	19	3	2	0	2	0
Kollam	19	45	7	20	10	29	0
Alleppey	18	62	16	15	52	93	0
Ernakulam	17	57	3	17	2	12	0
Thrissur	2	12	0	0	12	6	0
Malappuram	1	16	0	0	3	0	0
Kozhikode	21	64	2	2	288	11	4
Kannur	9	25	0	0	47	0	0
Kasargod	0	15	0	0	0	0	0
Total	112	315	31	56	414	153	4

Source: Marine Fisheries Census of CMFRI, 2005

4.3.5 Housing

Housing pattern is an important yard stick to measure the economic well being of any society. Substantial improvement has occurred in the housing pattern and lifestyle of people all over the country during last few decades due to all round development. The improvement in living standards of fishers is also reflected in the changing pattern of their dwellings (Fig 4.4; Source: Sathiadhas and Venkataraman (1981); Marine Fisheries Census-Kerala (2005), CMFRI).

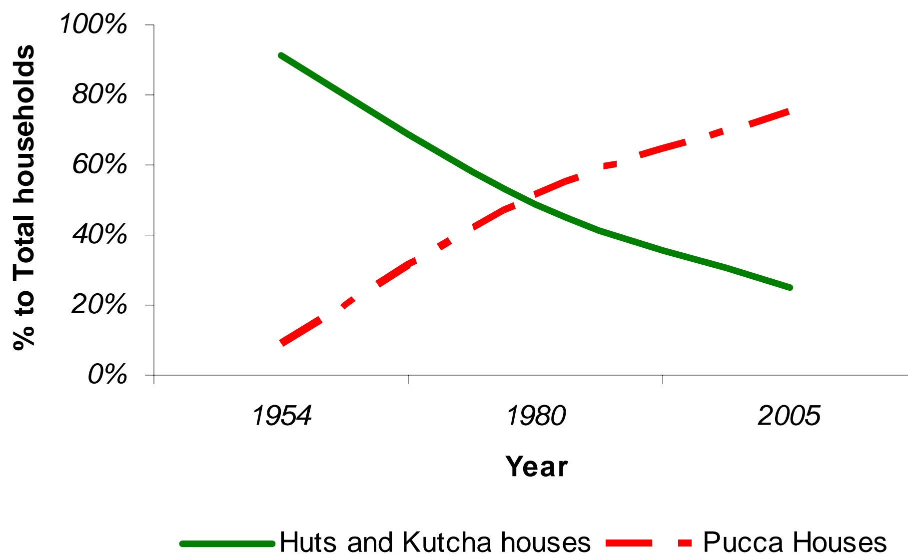


Fig. 4.4. Improvements in housing type of coastal fisherfolk

Households living in huts/kutcha houses came down from 91 per cent in 1954 to 49 per cent in 1980 and further reduced to 25 per cent in 2005. This was complemented by an increase in pucca houses on the other side, showing an increase from 9 per cent in 1954 to three fourths of the fisher households living in pucca houses in 2005.

According to Marine Fisheries Census of CMFRI, 2005, 75 per cent of the marine fisherfolk in Kerala live in pucca houses (Table 4.14). Variation is seen amongst districts where almost half of the population lives in kutcha houses in Thrissur, Malappuram and Thiruvananthapuram districts.

Table.4.14. District wise distribution of marine fisherfolk according to type of housing

Districts	Kutcha houses (%)	Pucca houses (%)
Thiruvananthapuram	40.18	59.82
Kollam	24.14	75.86
Alleppey	3.37	96.63
Ernakulam	14.52	85.48
Thrissur	53.18	46.82
Malappuram	47.81	52.19
Kozhikode	8.18	91.82
Kannur	2.97	97.03
Kasargod	21.35	78.65
Total	24.83	75.37

Source: Marine Fisheries Census of CMFRI, 2005

4.3.6 Educational level

The State of Kerala is the pioneer in achieving maximum literacy level among all states in India. Educational status over the years clearly reveals a structural transition. The literacy rate amongst the coastal fisherfolk in Kerala worked out to be about 40 per cent in 1980, which increased to 73 per cent in 2005. The educational facilities currently available in proximity to the coastal fisherfolk include 458 primary schools, 202 secondary schools, 37 colleges and 54 technical institutions. The improvement in educational status of fishers can be attributed to improved earning potential and economic status of fishers which has increased the standard of living and access to education. The drop outs at primary and secondary level also have drastically reduced in recent years.

The literacy rate of fisherfolk in Kerala varies from 53 per cent in Malappuram to 86 per cent in Ernakulam (Table 4.15). The overall literacy of fisherfolk in the State is estimated to be 73 per cent as against national average of 56.5 per cent. Of the total educated 39 per cent received primary education while

50 per cent was educated till secondary level and 11 per cent got above secondary education.

Table 4.15. District wise educational status of fisherfolk in Kerala (2005)

Districts	Educated				Literacy rate
	Primary	Secondary	Above secondary	Total	
Thiruvananthapuram	36,638	47,117	9,804	93,559	65
Kollam	11,667	16,832	6,025	34,524	80
Alleppey	35,741	37,506	11,261	84,508	83
Ernakulam	13,532	17,674	5,051	36,257	86
Thrissur	9,645	14,032	2,888	26,565	78
Malappuram	19,101	21,508	1,643	42,252	53
Kozhikode	24,626	36,940	5,970	67,536	77
Kannur	9,911	15,703	3,691	29,305	80
Kasargod	10,609	11,392	2,160	24,161	71
Total	171,470	218,704	48,493	438,667	73

Source: Marine Fisheries Census of CMFRI, 2005

4.3.7 Occupational Profile

The fisher population in coastal villages in Kerala has increased steadily from 6,39,872 in 1980 to 8,08,638 in 2000 and recently (2005) it has declined to 6,02,234. This shows the higher awareness due to high literacy and adoption of small family size norms among the fisherfolk. However, share of active fisherfolk in fisher population increased from 20.93 per cent during 1980 to 23.28 per cent in 2005. This shows that still more and more people are attracted to active fishing due to increased employment opportunities. The marine fisheries census of CMFRI has estimated coastal population and manpower employed in active fishing and related sectors from time to time. The active fishers in coastal villages in marine fisheries have been increasing over the years at a compound growth rate of 3.13 per cent (Table 4.16.) almost in consonance with population growth (3 per cent).

Table 4.16. Growth of active fishermen in coastal fishing villages (1961-62 to 2005)

State	1961-62	1973-77	1980	2005	CAGR of active fishers (%)	CAGR (population) (%)
Kerala	74241 **(22)**	80898 **(21)**	131101 **(20)**	140222 **(23)**	1.46	1.35
All India	229354 **(24)**	322532 **(22)**	437899 **(23)**	889528 **(25)**	3.13	3

According to marine fisheries census of CMFRI, there are 2,24,606 people employed in marine fishery sector of which 1,40,222 are in active fishing, 71,074 in secondary activities and 13,310 in tertiary sector. The overall dependency ratio is 1:3 which varies from 1:2 in Trivandrum district to 1:4 in Kannur district (Table 4.17).

Table 4.17. Occupational profile of coastal fisherfolk (2005)

Districts	Occupational status				Dependency ratio
	Active fishermen	Secondary sector	Tertiary sector	Total	
Thiruvananthapuram	38,805	25323	2,066	66,194	2
Kollam	8,665	6,515	1,166	16,346	3
Alleppey	25,255	10,740	3,158	39,153	3
Ernakulam	9,713	6,057	1,693	17,463	3
Thrissur	7,054	2,668	288	10,010	3
Malappuram	16,422	5,583	1,153	23,158	3
Kozhikode	20,119	7,787	1,806	29,712	3
Kannur	6,470	2,100	1,070	9,640	4
Kasargod	7,719	4,301	910	12,930	3
Total	140,222	71,074	13,310	224,606	3

Source: Marine Fisheries Census of CMFRI, 2005

The dependency ratio clearly indicates that most fisher people have to involve in one or other activity in the young age itself. This is primarily one of the reasons for drastic decline in educational level beyond secondary education. It may be further seen that the distinct coastal zone of Trivandrum has high

dependency ratio where still non mechanised fishing is prominently prevalent and more family members have to work to eke out for a living.

Fisherfolk from the coastal fishing villages form a part of the total labour employed in marine fisheries. The primary sector workforce in marine fisheries was estimated on the basis of average employment pattern in the fishing crafts in the respective states. For every one person employed in active fishing, 1.2 persons find employment in the secondary sector. There are lots of people in the adjacent coastal transects and interior regions who find employment in fishing related fields. In Kerala, 72 per cent of the workers in primary sector and 30 per cent in secondary sector are inhabitants of coastal fishing villages (Table 4.18).

Table 4.18. Employment pattern in marine fisheries and coastal fishing villages (2005)

State	(A) Total employed in marine fisheries		(B) Inhabitants of coastal fishing villages		Per cent of (B) to (A)	
	Primary	Secondary	Primary	Secondary	Primary	Secondary
Kerala	1,94,816	2,33,779	1,40,222	71,074	72	30
All India	12,47,820	14,97,384	8,89,528	7,56,391	71	51

Source: Marine Fisheries Census of CMFRI, 2005, SEETTD, CMFRI

More than 90 per cent of people from coastal villages are involved in active fishing in the states of Orissa, Andhra Pradesh and Tamil Nadu and rest comes from adjacent villages and even from other states. In states like Karnataka, Goa, Maharashtra and Gujarat less than half of the active fishermen are from fishing villages. Tamilnadu employs maximum people in the primary and secondary sector in marine fisheries. Fishers from Tamilnadu often migrate to Kerala coast for fishing.

4.3.8 Ownership of crafts and gear

In open access marine fisheries, mode of ownership of means of production by fisherfolk is the determining factor to know the socio-economic

status. The ownership of means of production by active fishermen increased from 27 per cent in the eighties to 35 per cent in nineties and then dropped to 20 per cent in 2005. In 1990, increase in ownership to 35 per cent was found because of intensive motorisation of crafts coupled with the existence of old non mechanised units which were replaced in the subsequent phase. The drop in ownership pattern has occurred due to increase in multi day vessels and inboard ring seiners which involves huge capital investment. Further there are indications that people from other than coastal villages also invest and possess substantial number of fishing units.

Marine Fisheries Census of CMFRI, 2005, estimated that 65.9 per cent fisher households in Kerala involved in fishing do not have ownership of crafts and gear. This phenomenon is starkly felt in the districts of Alappuzha (69.38 per cent), Thrissur (68.63 per cent) and Kozhikode (68.02 per cent) (Table. 4.19).

Table.4.19. Fisher households involved in fishing devoid of ownership of craft and gears

Districts	Ownership of neither craft/gear	(Per cent to total)
Thiruvananthapuram	23677	69.38
Kollam	6336	53.25
Alleppey	15975	73.42
Ernakulam	5183	58.39
Thrissur	4528	68.63
Malappuram	6765	64.66
Kozhikode	10922	68.02
Kannur	3703	62.46
Kasargod	2349	49.17
Total	79438	65.93

Source: Marine Fisheries Census of CMFRI, 2005

4.3.9 Women in fisheries

Women play an active role in secondary sector of marine fisheries. In Kerala, almost 50 per cent of the post harvest activities are undertaken by them (Table 4.20).

Table 4.20. Labour participation of women in marine fisheries (2005)

Activities	Number of fisherfolk		
	Male	Female	Total
Marketing	4964	13012	17976
Making/repairing of net	5500	4060	9560
Curing/processing	590	3291	3881
Peeling	416	7641	8057
Labourer	15705	1537	17242
Others	8447	5911	14358
Total	35622	35452	71074

Source: Marine fisheries Census of CMFRI, 2005

Majority of the total population working in secondary sector (25 per cent) are engaged in marketing of fish followed by labourers in secondary activities (24 per cent). While majority of their male counterparts are engaged in labour in secondary activities, women are mostly involved in marketing of fish (37 per cent) followed by peeling workers (22 per cent). Women involvement is highest in activities like marketing of fish (72 per cent), curing/processing (85 per cent) and peeling (95 per cent)

Women employment in the state was highest in Thiruvananthapuram (45per cent) followed by Alleppey (18 per cent) and Kollam (13 per cent) (Table 4.21). In Kannur and Malappuram women involvement in secondary activities were hardly one per cent of the total women in the state. Majority of women undertook marketing of fish as an avocation in Thiruvananthapuram, Kollam, Kannur and Kasargod. While in districts like Ernakulam, Alleppey and Thrissur, most of them were involved in peeling.

Table 4.21. District wise women employment in secondary sector

Districts	Marketing	Making/ Repairing net	Curing/ Processing	Peeling	Labourer	Others	Total	(per cent)
Thiruvananthapuram	8686	3395	1365	102	754	1816	16118	45
Kollam	986	525	302	169	89	2367	4438	13
Alappuzha	256	9	387	4997	193	571	6413	18
Ernakulam	212	61	298	1710	77	246	2604	7
Thrissur	87	4	384	410	17	138	1040	3
Malappuram	14	3	135	10	39	213	414	1
Kozhikode	39	23	365	241	252	350	1270	4
Kannur	273	1	54	0	47	71	446	1
Kasargod	2459	39	1	2	69	139	2709	8
Total	13012	4060	3291	7641	1537	5911	35452	100

Source: Marine Fisheries Census of CMFRI, 2005

Another important observation in marine fisheries census, 2005 is of households in which women alone are involved in fishing allied activities (Table 4.22). Though it is limited upto 5.8 per cent to total considering the whole State, in Kollam district alone 22.5 per cent of fisher households fall in the said category.

Table 4.22. Households in which only women are involved in fishing allied activities

Districts	Number of households	(per cent to total)
Thiruvananthapuram	2268	6.65
Kollam	2677	22.50
Alleppey	455	2.09
Ernakulam	509	5.73
Thrissur	172	2.61
Malappuram	187	1.79
Kozhikode	335	2.09
Kannur	206	3.47
Kasargod	182	3.81
Total	6991	5.80

Source: Marine Fisheries Census of CMFRI, 2005

4.4 Institutional Financing to Fisheries in Kerala

Finance plays a crucial role in accelerating any business activity/economic development and fisheries sector is not an exception. The economic activities of the fishing villages mainly depend upon the availability of credit at reasonable cost to enhance production and income. Credit is vital in all spheres of activities including production, harvesting, preservation, processing, transportation and marketing segments. The credit requirements for fishing activity may be varied depending on the purpose.

- Short term credit: for working capital requirements like repair of vessels or engines and subsistence/emergencies during lean seasons and off seasons, festivals, medical expenses etc
- Medium term credit: for procurement of fishing gear, medical expenses
- Long term credit: for acquisition of vessels, engines, ice plants, cold storages, processing plants, insulated/ refrigerated trucks, farm/ hatcheries/lifecycle events like marriage, education, medical treatment etc

The financial assistance in fisheries sector may be widely classified into two depending upon the source of credit, being non-institutional and institutional agencies.

1. The non-institutional agencies in credit supply encompasses of private moneylenders, traders, commission agents, friends and relatives.
2. Institutional financing structure includes Government agencies, commercial banks, co-operative banks, NCDC, NABARD, SHG's and NGO's

The extent and quantum of indebtedness at a reasonable level of interest sourced out from the organised sector is an indicator of development since availability of finances boost up the economic activity and capital formation in a region. The extent of indebtedness and the average outstanding debt per indebted households are comparatively less among fishermen as per the figures of institutional sources, but the affairs of fisher folk is really grim as they are virtually

gripped in the hands of non-institutional agencies, namely money lenders and traders for which legitimate data sources do not exist. The institutional finances for fisheries sector in India as reported by NABARD is given in the Table 4.23. The ground level credit flow to fisheries sector in 2008-09 stood at Rs. 1281 crore higher than the previous year and recorded almost four times increase compared with 1997-98.

Table 4.23. Ground level credit (GLC) flow to fisheries sector

Year	GLC flow to fisheries sector (In Rs crore)	GLC flow for agriculture (In Rs. Crore)
1997-98	338	31956
1998-99	448	36860
1999-00	405	46268
2000-01	319	52827
2001-02	508	62045
2002-03	539	69560
2003-04	1142	86981
2004-05	1301	125309
2005-06	1019	180486
2006-07	1424	229400
2007-08	1248	254658
2008-09	1281	301908

Source: *NABARD, Annual Reports*

Institutional financing agencies are providing several schemes of assistance to fisher folk under different heads namely, subsidies, developmental schemes, direct loans, refinance assistance, welfare programmes and women empowerment programmes. Some of the major financing agencies which provide financial assistance to fisherfolk has been discussed below.

Banks

Banks finance both capture and culture fisheries. They advance for the purpose of crafts and gears, motorisation of crafts, construction of ponds and hatcheries etc. Fisheries financing are classified under the broad division of

agriculture and allied activities that is classified as priority sector lending. RBI stipulates that the quantum of assistance to the priority sector shall be 40 per cent of the total credit granted by the banks, of which share of agricultural allied activities loans shall be not less than 18 per cent.

NABARD is the institutional agency at the national level which undertakes refinancing all agricultural and allied activities. Banks in India can be categorised as follows:

a) Commercial Banks
   - Public sector
   - Private sector
b) Co-operative Banks
   - State Co-operative Bank
   - District Co-operative Bank
   - Primary Agricultural Credit Societies
   - State Agricultural and Rural Development Banks
   - Primary Agricultural and Rural Development Banks
c) Regional Rural Banks

Types of direct finance

a) Short-term loans: for fishery related activities
b) Medium and long term loans: Development of fisheries in all its aspects from fish catching to stage of export, financing of equipment necessary for deep sea fishing, rehabilitation of tanks (fresh water fishing), fish breeding etc.

Interest rate: The interest rate for the loans from commercial banks range between 11 to 16.5 per cent depending upon the quantum of finance.

Margin money: The contribution of the beneficiary in the project (margin money) ranges from 5-25 per cent of the project cost depending upon the category of the borrowers i.e. 5 per cent for small farmers, 10 per cent for medium farmers, 15 per cent for large farmers and 25 per cent for others.

Security: The loans are provided on the basis of security of movable or immovable properties or on the standing crop.

Repayment period: Repayment period is fixed by assessing the useful life of the asset created and the repaying capacity of the borrower. In fisheries it varies from 4 -10 years.

As per the Marine Fisheries Census of CMFRI, 2005, number of bank branches operating in the maritime districts of Kerala has been enumerated (Table 4.24). The State average shows that 1968 fisherfolk are served by each branch in a fishing village. It is well known that lesser the number of population per branch greater the serviceability of the branch. However this is not comparable to population served per branch office at national or state level, since the scope of fisheries census is limited to fisher families in the fishing villages without considering the other population.

Table 4.24. Fisher population served per branch in a fishing village in Kerala

Districts	Number of Bank branches in fishing villages	Total fishermen population	Fisher population served per bank branch
Thiruvananthapuram	39	143,436	3678
Kollam	31	43,210	1394
Alappuzha	33	101,341	3071
Ernakulam	27	42,069	1558
Thrissur	34	34,078	1002
Malappuram	34	79,858	2349
Kozhikode	51	87,690	1719
Kannur	38	36,686	965
Kasaragod	19	33,866	1782
Total	306	602,234	1968

Source: Marine Fisheries Census of CMFRI

Bank credit to fisheries sector is very meager almost less than 1 per cent of total priority sector advances. There was a slight improvement in position from

0.33 per cent in 2003-04 to 0.61 per cent in 2006-07 (Table 4.25). Similarly in 2006-07 when an overall improvement in position was observed, the share of fisheries sector credit to total agriculture credit increased to 1.54 per cent from 0.98 per cent in 2003-04.

Table 4.25. Supply of bank credit to fisheries sector in Kerala

Year	Fisheries/Total Agriculture Credit (per cent)	Fisheries/Total priority sector (per cent)
2003-04	0.98	0.33
2004-05	0.55	0.20
2005-06	0.50	0.20
2006-07	1.54	0.61

Source: Arunachalam et al, 2008

Refinance assistance by NABARD

NABARD supports the fisheries sector mainly by way of refinancing activities. About 90 per cent of the bank loan for all investments under fisheries sector financed by the banks would be refinanced by NABARD. The eligible agencies for refinancing assistance are

- Commercial Banks
- Regional Rural Banks
- Co-operative Banks
- Co-operative Agricultural and Rural Development Banks
- Primary Urban Co-operative Banks
- Self Help Groups
- Governments

NABARD refinance constitutes 28 per cent of the total ground level credit flow to agriculture and allied activities. During 2008-09, NABARD introduced a product/scheme for supporting small scale Activity Based Groups (ABG) in which capacity building, production/investment credit and market related

support would be extended. The scheme focuses on formation and nurturing of groups engaged in similar economic activities such as farmers, fishermen, handloom weavers etc to improve their efficiency of production and realize better terms from the market through economies of aggregation and scale. The scheme operates both on grant and loan modes, where loans would cover investment activities and working capital needs of groups (NABARD, 2009). The refinance assistance to fisheries sector by NABARD is very meager which accounts for only 0.3 per cent of the total refinance disbursed (Table 4.26). It is observed that fisheries refinance over the years has been fluctuating widely with highest refinance recorded in 2008-09; constituting 0.7 per cent of the total refinance. This pace could not be maintained during 2009-10 where fisheries sector claimed 0.5 per cent share.

Table. 4.26. Refinance assistance to fisheries sector in India

Year	Fisheries sector (Rs. Crore)	Total Refinance (Rs. Crore)
2001-02	36.35 (0.5%)	6682.91
2002-03	34.73 (0.5%)	7418.77
2003-04	23.25 (0.3%)	7605.29
2004-05	25.63 (0.3%)	8577.46
2005-06	38.49 (0.4%)	8622.37
2006-07	38.30 (0.4%)	8795.02
2007-08	25.45 (0.3%)	9046.27
2008-09	77.15 (0.7%)	10535.29
2009-10	54.62 (0.5%)	12009.08

Source: Annual report NABARD various years

Subject to their techno economic feasibility the following activities are covered under NABARD's refinance assistance. In marine fisheries, both capture and culture fisheries are given assistance. In capture fisheries, traditional boats, motorisation of traditional crafts, mechanised fishing vessels and deep-sea fishing are given assistance. In case of culture fisheries,

assistance is provided for mariculture in coastal waters and open sea culture in cages. In inland capture fisheries crafts and gears for fishing in reservoirs/rivers are eligible for refinance. In case of culture fisheries, eligible schemes for refinance are composite fish culture, fish seed hatchery, culture of air breathing fishes, culture of trout, integrated fish culture, sewage fed fisheries, running water fish culture, ornamental fish breeding, fresh water prawn hatchery, monoculture/polyculture of freshwater prawn & fish and tilapia culture. Under brackish water fisheries, shrimp farming in traditions, improved hatchery and culture of other finfishes like pearl oyster, edible oyster and mussels are eligible for refinance assistance. Also assistance is provided to ancillary activities like establishment of ice plants, feed mill, cold storages, and net making units and for processing and value addition. Apart from the schemes mentioned above, activities like mud crab fattening, surimi production, chitosan preparation, paddy cum fish culture and establishment of IQF processing unit are supported by refinance assistance. Refinance assistance is also provided for research and development activities related to fisheries

Refinance under investment credit for fisheries sector in Kerala has shown an increasing trend till 2000-01 (Table 4.27). Thereafter a significant reduction was noticed in refinance in this area which is picking up slowly at the end of 2005-06 after which it was stable. In 2009-10, Rs. 123 lakh was disbursed under investment credit for fisheries sector in Kerala.

Table. 4.27. Refinance under investment credit to fisheries in Kerala

Year	Refinance Rs. Lakh	Total (Rs.lakh)
1987-88	85	5803
1990-91	128	8158
1995-96	209	12695
2000-01	279	23665
2005-06	128	41484
2009-10	123	91364

Source: NABARD Annual reports

In fisheries sector, NABARD provided indirect assistance to 22765 mechanised fishing vessels, 75019 other vessels, financed 5371 ha of brackish water aquaculture and 417000 ha of fresh water aquaculture as on 31st March 2009.

Refinance is provided by NABARD to different financial institutions providing fisheries finance. Among the various institutional service providers providing fisheries finance, commercial banks are the leading players with a refinance assistance from NABARD to the extent of Rs. 3271 lakh. It can be observed that there was four times increase in refinance assistance to commercial banks. Refinance assistance to other agencies also increased, but a decline could be observed in case of State Cooperative Banks.

Table. 4.28. Refinance by NABARD to various agencies for fisheries financing

Rs.lakh

Financing Agency	2007-08	2009-2010
KSCARD Bank Ltd.	753	865
Commercial Banks	812	3271
State Coop. Banks	607	453
Regional Rural Banks	373	873
Total	2545	5462

Co-operatives

Primary societies may be organized at the village level and horizontally or vertically they may be linked up with federated bodies at certain regional or district level federated co-operatives. In India, there are 11847 primary fishermen co-operative societies. The district level co-operatives are further affiliated to the state level federation. There are 108 central societies in the country. Organisation of the marine fishermen co-operative societies, either single purpose or multipurpose are under the following broad classification

a) Fishery Credit and Services Society

b) Producer Co-operatives

- Production Societies for lease of water and fishing rights

- Marketing society
- Preservation and processing society
- Spawn collection society
- Specialized societies under taking activities like net making, boat building etc

c) Distribution societies, transport societies, provision supply societies etc

d) Fisher women societies

The primary/district co-operative societies, in which fisher folk are members/beneficiaries, operate their own schemes formulated for their ultimate benefit.

MATSYAFED

Established in 1984, Matsyafed (Kerala State Co-operative Federation for Fisheries Development Ltd) is the apex federation of primary level cooperative societies in fisheries sector. There are 653 primary level Fishermen Development Welfare Co-operative Societies affiliated to Matsyafed. Matsyafed has a District Office in each of the nine maritime districts and one in the Inland district of Kottayam. Of the 653 primary societies 334 are in the marine sector, 186 in the inland sector and 133 women co-operatives. The total membership in these societies is more than three lakhs. The primary societies are clubbed into 60 clusters for administrative convenience based on geographical area.

Financial support to fisherfolk from Matsyafed

Matsyafed has been implementing schemes with the assistance of National Backward Classes Development & Finance Corporation (NBCFDC) since 1995-96 for fisherfolk to assist them in skill development and self-employment ventures. Persons belonging to any one of the notified backward classes and whose annual family income is below double poverty line (BDPL) are eligible to be assisted under this scheme. Loans are provided for self-employment under the General Loan Scheme, New Swarnima Scheme, Microfinance Scheme and Swayam Saksham Scheme at interest rates ranging between 4-6 per cent. Educational loans are also provided at 4.5 per cent interest.

Since 1997-98, Matsyafed has been implementing schemes with the assistance of National Minorities Development & Finance Corporation (NMDFC) to promote economic and developmental activities for the benefit of minority community. Persons belonging to any one of the notified minority community and whose annual family income is below double poverty line (BDPL) are eligible for assistance under this scheme. For defaulted payments, beneficiaries are liable to pay penal interest @12 per cent. Assistance under NBCFDC and NMDFC schemes by Matsyafed has been beneficial to 13,589 beneficiaries at the end of 2007-08 and an amount of Rs. 1000 lakhs has been disbursed (Table 4.29).

Table. 4.29. Assistance by Matsyafed to fisherfolk under NBCFDC scheme

Year	NBCFDC scheme		NMDFC scheme	
	Total assistance (Rs. in lakhs)	Number of beneficiaries assisted	Total assistance (Rs. in lakhs)	Number of beneficiaries assisted
1998-99	185.14	1426	170.80	690
2000-01	465.63	2423	133.128	593
2006-07	242.05	1342	200.00	671
2007-08	1000.00	13589	400.00	4222
2009-10	1100	NA	650	NA

Source: www.matsyafed.org

SHG Assistance by Matsyafed

Matsyafed has adopted the strategy of formation of Self Help Groups associated with Primary Fishermen Co-operatives. 10162 Self Help Groups (2840 Men Groups and 7322 women groups) with 122434 members (33140 Men and 89294 Women) were organized under the auspicious of Matsyafed. These groups have generated Rs 1207.07 lakh as thrift which is utilized for giving short term loans to the members (Table.4.30). The thrift generated is used by the groups for internal lending to the members at low interest rates. Rs. 9 crores was released as micro finance loan last year to

these SHGs. The beneficiary gets the loan at the interest rate of 6 per cent which is very helpful to the fishermen families who are otherwise forced to borrow from private moneylenders at exorbitant interest rates.

Table. 4.30. Status of SHG based activities by Matsyafed (2009)

Particulars	Assistance
Number of societies	270
Number of Groups	10162
Number of members	122434
Number of groups with grade >100	6469
Number of groups started enterprises	466
Thrift generated (Rs. Lakh)	1207.07
Amount used for internal lending (Rs. Lakh)	662.01
Bank loan availed (Rs. Lakh)	431
Business turnover (Rs. Lakh)	2632
Income generated (Rs. Lakh)	266

Source: www.matsyafed.org

From its genesis, cooperatives have continued to serve the poor population by following the principle 'self help through mutual help'. The spread of cooperatives in fishing villages have offered assistance to fisherfolk in evading moneylenders to an extent. The extent of service delivered by the institution is measured by the population served per office. As revealed by the Marine Fisheries Census of CMFRI, 2005, on an average each cooperative serves 1581members of the fishing community (Table.4.31). This is a highly commendable achievement considering the mainstream segments of the State. Highest number of fishermen cooperatives is seen in Kozhikode district, while the district which is most efficient in coverage is Kannur with 798 persons served per office.

Table 4.31. Fisher population served per branch in a fishing village in Kerala

Districts	Cooperative societies	Total fishermen population	Fisher population served per office
Thiruvananthapuram	53	143,436	2706
Kollam	39	43,210	1108
Alappuzha	39	101,341	2598
Ernakulam	25	42,069	1683
Thrissur	34	34,078	1002
Malappuram	38	79,858	2102
Kozhikode	75	87,690	1169
Kannur	46	36,686	798
Kasaragod	32	33,866	1058
Total	381	602,234	1581

South Indian Federation of Fishermen Societies (SIFFS)

SIFFS originated through the intervention of NGOs in the artisanal fishing sector during 1970s and 1980s at Marianad in Thiruvananthapuram. SIFFS operates through network of societies in Kanyakumari (46 societies), Thiruvananthapuram (20 societies), Kollam (6 societies), Malabar (10 societies) and associate members (18 societies). Credit has been, together with fish marketing and savings, one of the three central themes of the SIFFS model of fishermen societies, right from the time of the first such society. Credit is an essential input for small-scale fisheries for a variety of important needs, and is effectively the lubricant that keeps the sector going. SIFFS initiated the Micro-Credit programme through the network of district federations and primary societies. The credit programme is closely linked with fish marketing and savings. Loan repayment is generally based on a percentage (10-15 per cent depending on the quantum of loan) of fish catches. SIDBI and Canara Bank have been supporting the Micro-Credit programme of SIFFS. SIFFS provides loans for different purposes related to fisheries.

Production loan is provided to owners of artisanal fishing units, motorized and non mechanized segments for the purposes of purchase of fishing equipments like kattumaram, boat, motor, net, ice boxes, other equipment and debt redemption. A minimum of Rs 6,000 and maximum of Rs 50,000 is provided as loan for a term of 36 months at 16 per cent rate of interest. Labour loan is provided to crew of artisanal fishing craft for consumption needs like children's education, medical expenses, and other consumption needs. The minimum amount of such loan is Rs 2,000 and maximum Rs 3,000 for a period of 12 months at 16 per cent rate of interest. Fisherwomen loan is provided to fisherwomen for the purpose of working capital for fish vending as well as other petty trade and income generating activities. The loan amount varies from Rs 2,000 to Rs 10,000 for a period of 12 to 24 months at an interest rate of 18 per cent. Women Seasonal Loan are provided to fisherwomen with proved credit discipline as relatively bigger loans for working capital for seasonal fish vending. The loan amount is in the range of Rs 10,000 to Rs 25,000 with an interest rate of 18 per cent. The repayment shall be done as bullet payment at the end of the season. Shark fishermen loans are provided to fishermen involved in deep sea fishing, especially for the purpose of upgrading craft with navigation equipment, storage facilities, etc. The quantum of assistance ranges between Rs 10,000 to Rs 30,000 at 16 per cent rate of interest for a period of 24 months.

Number of loans outstanding showed a three fold increase from 1309 in 2000 to 3103 in 2004. The extent of loans disbursed by SIFFS in the year 2003-04 was 956 lakh that recorded considerable increase from Rs. 169 lakhs in 2000 (Table.4.32).

Table.4.32. Details of loans disbursed by SIFFS

Year	Number of loans outstanding	Cumulative loan disbursements (Rs. Lakh)	Portfolio growth over the years (Rs. Lakh)
2000	1309	169	98
2001	1845	282	139
2002	2464	467	213
2003	2354	664	258
2004	3103	956	317

www.siffs.org

Of the total amount disbursed 78.3 per cent of the loans were disbursed in the form of production loan. Women loan accounted for 12.5 per cent and labour loan was 8 per cent of the total credit extended by SIFFS. The shark fishermen loan (0.2 per cent) and women's seasonal loan (1 per cent) was negligible.

The above said information on fisheries finances is not an exhaustive list, but enumerates the major institutional initiatives that provide fisheries finances in credit mode inorder to support the lives of the fisherfolk. Number of other agencies is working in the coastal sector with the objective of upliftment of this underserved population.

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Chapter 5

SOCIO ECONOMIC PROFILE OF HOUSEHOLDS

Contents

5.1 Introduction
5.2 Aggregate Household Profile
5.3 Non-membership/membership in SHGs- The Disaggregated Picture

5.1 Introduction

Financial inclusion of marine fisher households and the role of microfinance being the core theme; the study materialized in the marine fishing villages of Kerala by selecting a representative sample from the coastal districts of the State. Accordingly four coastal districts in Kerala were subjected to detailed analysis, namely Thiruvananthapuram, Kollam, Ernakulam and Kozhikode. Sampling was done in such a way to represent the three geographical zones in Kerala, namely the south, central and the north zone. Proportionate to the population, sampling plan was finalized to cover Thiruvananthapuram and Kollam in the southern zone and Ernakulam from the central and Kozhikode from the northern zone. Profile of fishing villages in Kerala including the districts under study has been presented in the earlier chapter.

The primary unit of analysis under study is households. A brief profile of demographic indicators of households surveyed in the study area is discussed in this chapter. It is important to understand the nature of fishing activity by population in coastal fishing villages in each district before we attempt for a detailed analysis. The Marine Fisheries Census of CMFRI, 2005 has estimated the number of fishing crafts in fishery in Kerala. It was found that 49 per cent of the fishing crafts in marine fishery are motorized crafts supporting 62 per cent of the active fishers. 25 per cent of the active fishers work in mechanized units which account for 19 per cent of the crafts in operation (Table 5.1).

Table. 5.1. Distribution of active fishers in marine fishery

Fishing units	Number of units	Active fishermen
Mechanised	5504	34307
Motorised	14151	86811
Non Mechanised	9522	19104
Total	29177	140222

Source: Marine Fisheries Census of CMFRI, 2005

The district wise number of fishing crafts reveals the dependency of fisherfolk on type of fishing (Fig. 5.1). Mechanised fishery is dominant in the districts of Ernakulam, Kollam and Kozhikode. Majority of the motorized fishing crafts were in the districts of Alleppey and Thiruvananthapuram. More than half of the small scale fishery using non mechanized units was in Thiruvananthapuram district.

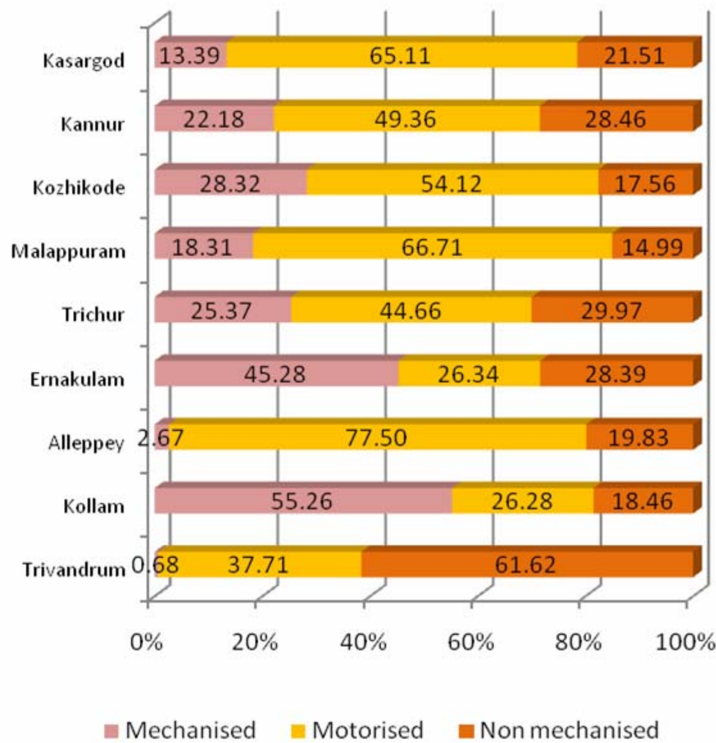

Fig 5.1. District wise distribution of fishing crafts in marine fishery

The number of people depending on mechanised and motorised vessels were higher compared to the artisanal crafts. The dependence ratio (ratio of number of sector specifc active fishers to number of crafts in fisheries) was highest

in mechanised vessels (6.23) followed by motorised crafts (6.13). The dependence on non mechanised crafts were limited to a ratio of two.

5.2 Household Profile

The study has conceived the fishery households in the coastal fishing villages of Kerala as the basic unit of analysis. It is hence appropriate to look into household characteristics of the study area on the basis of information elicited through the primary survey. Geographic location of the selected districts divides them into three zones, namely northern, central and southern zone. Among the sample districts, Thiruvananthapuram had the highest number of fishing villages and Ernakulam, the least. The sample villages formed 10 per cent of the population of fishing villages in each district. Further depending on the households in villages, 10 per cent sample was selected for the study. In total, sample for the study constituted 508 households from the four districts.

Table 5.2. Household indicators by area surveyed

	Northern zone	Central zone	Southern zone		Total
	Kozhikode	Ernakulam	Kollam	Thiruvanan thapuram	
No. of fishing villages	35	21	26	42	124
No. of sample villages	3	2	3	4	12
Population (village)	1391	1115	1120	1442	5068
Sample size	140	112	112	144	508
Mean age	47.95	48.78	45.19	40.49	45.60
Below 30	0.7%	0.9%	4.5%	25.0%	8.5%
31-45	47.1%	31.2%	52.7%	47.9%	45.1%
46-60	47.1%	67.0%	38.4%	20.8%	42.1%
Above 60	5.0%	0.9%	4.5%	6.2%	4.3%
Mean family size	5.56	3.9	4.33	3.71	4.38
MPCE*	716.55	1003	877.91	867.77	866.31
Possession of land (in cents)	2.86	3.63	4.22	1.9	3.15
Living space (in sq.ft)	161.1	266.91	282.54	105.28	203.96

*MPCE: Monthly Per Capita Consumption Expenditure
Source: Survey data

The mean age of respondents was the highest in Ernakulam (48.78) and the lowest in Thiruvananthapuram (40.49)(Table 5.2). It was seen that majority of the respondents were distributed among the age class of 31 to 60. Family size of households was estimated as 4.38. Mean family size was the highest in Kozhikode. Average monthly per capita consumption expenditure incurred by households in selected districts was Rs. 866.31. The MPCE was found the highest in Ernakulam and the lowest in Kozhikode. Land ownership depicts the possession of household assets in terms of land. Mean size of land owned by households was estimated as 3.15 cents which varied from 1.9 cents in Thiruvananthapuram to 4.22 cents in Kollam. The marine fisheries census of CMFRI estimated that 75.37 per cent of the houses in the coastal fishing sector in Kerala belong to pucca category and rest are kutcha houses. In Thiruvananthapuram the share of pucca and kutcha houses in total is 40.18 per cent and 59.82 per cent respectively. In Kollam district, it is 24.1 per cent and 75.86 per cent respectively. In Ernakulam it is 14.52 per cent and 85.48 per cent and Kozhikode it is 8.18 per cent and 91.82 per cent. The survey revealed that average living space was 203.96 square feet which varied according to land possessed by households.

5.3 Membership in SHGs/SHG-MFP linkage

The study includes randomly selected samples from four coastal districts in Kerala. In interpreting the role of microfinance in facilitating households were classified into households of which family members have association with SHG groups, members having SHG- Micro Finance Provider[1] (MFP) linkage and household which do not have any association with SHG groups/non members. Microfinance providers in the coastal belt have been reviewed by literature in the field of fisheries. State wide intervention of ‘Kudumbasree’ has proliferated in fisheries sector also. Also there are multiple agencies, both State sponsored and voluntary agencies working in the field of fisheries adopting the microfinance

1 Number of agencies was found to have providing microfinance based assistance in fisheries sector. This include assistance provided by commercial banks , cooperative banks and RRBs through bank linkage, NGOs working in fisheries, Fisheries cooperatives, Central and State Government departments. Any agency funding SHGs has been termed as MFPs

concept. Fisheries department has been increasingly organising development programmes supporting SHGs in fisheries sector. There are a number of schemes like mussel culture, oyster culture etc. subsidised by the department which are being implemented by SHG groups organized in the sector. Matsyafed has also been organising women in their societies into SHG groups for implementation of income generation activities through developmental finance assistance. SIFFS has also been experimenting with microfinance activities in addition to their ordinary course of business. Agencies like Trivandrum Social Service Society, Quilon Social Service Society, Ernakulam Social Service Society, Jeevana, WinCentre etc are also using the microfinance concept to work in the fisheries sector. Due to multiplicity of agencies concentrating on microfinance activities, multiple memberships in more than one SHG promoted by different parent agencies is common. After tsunami, there has been concentration of developmental assistance in the coastal areas, particularly in tsunami affected regions of Kollam district. Distribution of samples according to the membership/non membership in SHG is given in Table 5.3. The sample pattern revealed that 22.6 per cent of the households belonged to category of non-members and 27.4 per cent were SHG members without any linkage and the rest 50 per cent were members of SHGs having linkage to MFPs like commercial banks, cooperative banks, voluntary agencies etc. The highest proportion of non members was seen in northern zone followed by southern zone.

Table 5.3. Zone wise distribution of households according to non member/ member of SHG

	Non member		SHG		SHG-MFP linkage		Total	
	No.	%	No.	%	No.	%	No.	%
Northern zone*	44	31.4	26	18.6	70	50	140	100
Central zone#	11	9.8	45	40.2	56	50	112	100
Kollam	*14*	*12.5*	*42*	*37.5*	*56*	*50*	*112*	*100*
Thiruvananthapuram	*46*	*31.9*	*26*	*18.1*	*72*	*50*	*144*	*100*
Southern zone	60	23.4	68	26.6	128	50	256	100
Total	115	22.6	139	27.4	254	50	508	100

* Northern Zone: Kozhikode District
\# Central Zone: Ernakulam District

Education

To understand the effect of educational status on access to financial services, the highest education attained by either of the members of sample households has been considered.

Table 5.4. Distribution of sample households according to education (percentage)

	Illiterate	Primary	Below secondary	Secondary	Degree and above	Total
Northern zone*	0.0%	0.7%	22.1%	69.3%	7.9%	100%
Central zone#	0.0%	2.7%	20.5%	60.7%	16.1%	100%
Kollam	*0.0%*	*0.9%*	*50.9%*	*41.1%*	*7.1%*	*100%*
Thiruvananthapuram	*18.1%*	*18.1%*	*25.0%*	*35.4%*	*3.5%*	*100%*
Southern zone	*10.2%*	*10.5%*	*36.3%*	*37.9%*	*5.1%*	100%
Total	5.1%	6.1%	28.9%	51.6%	8.3%	100%

The sample households had 5.1 per cent of illiterates, 6.1 per cent educated till primary level, 28.9 per cent till secondary level and 8.1 per cent above secondary level (Table 5.4). The illiterates seemed to be concentrated in the southern region. In northern and central zone, majority of sample households attained education till secondary level.

Classifying according to non member/member of SHGs, almost half of the sample households (51.6 per cent) attained education till secondary level (Table 5.5). Illiterates were found among the non members (9.6 per cent) and SHG-MFP linkage (3.9 per cent).

Table.5.5. Education wise distribution of sample SHG member/non member households

	Illiterate		Primary		Below secondary		Secondary		Above secondary		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Non member	11	9.6	6	5.2	32	27.8	57	49.6	9	7.8	115	100
SHG	5	3.6	11	7.9	42	30.2	71	51.1	10	7.2	139	100
SHG-MFP linkage	10	3.9	14	5.5	73	28.7	134	52.8	23	9.1	254	100
Total	26	5.1	31	6.1	147	28.9	262	51.6	42	8.3	508	100

Occupational pattern

As discussed earlier, the concentration of fishing crafts in the district determine the type of fishing prevalent in that area, though occasional shifts may occur due to change in fishing grounds. In Thiruvananthapuram district, non mechanized crafts were more prevalent, while in Kollam and Ernakulam it was the mechanised ones. In Kozhikode, the dominant category was motorised segment. Other than the primary activity, secondary and tertiary sector in fisheries exist. The secondary sector comprises post harvest fishery activities, while the tertiary sector classifies the segment that indirectly depends on fishery activities.

Distribution of sample households according to occupation illustrated the following pattern. Households depending upon artisanal fishing dominated in Thiruvananthapuram district in southern zone and were also prominent in central zone. Motorised fishing households dominated in northern zone and in central zone. Kollam district in southern zone was epitomized by households depending on mechanised sector (49.1 per cent) (Table 5.6).

Table.5.6. Occupation wise distribution of sample households (percentage)

District/Occupation	Mechanized fishing	Motorized fishing	Artisanal fishing	Other fishing allied activities	Fish marketing/ trading	Total
Northern zone*	10.7%	43.6%	14.3%	17.9%	13.6%	100%
Central zone#	13.4%	37.5%	33.0%	10.7%	5.4%	100%
Kollam	*49.1%*	*15.2%*	*13.4%*	*7.1%*	*15.2%*	*100%*
Thiruvananthapuram	*10.4%*	*19.4%*	*36.8%*	*27.1%*	*6.2%*	*100%*
Southern zone	27.3%	17.6%	26.6%	18.4%	10.2%	100%
Total	19.7%	29.1%	24.6%	16.5%	10.0%	100%

* Northern Zone: Kozhikode District
# Central Zone: Ernakulam District

Occupation wise distribution of households according to non-membership/membership in SHG showed that high incidence of non members (42.4 per cent) was found among the artisanal fishers (Table 5.7). This could be partly due to lack of financial literacy among this group coupled with a host of other factors. Majority of households in all categories except in artisanal fishing belonged to SHG-MFP linkage.

Table.5.7. Occupation wise distribution of sample households according to membership in SHG

Occupation/ Membership in SHG	Non member		SHG		SHG–MFP linkage		Total	
	No.	%	No.	%	No.	%	No.	%
Mechanized fishing	11	11.0	26	26.0	63	63.0	100	100
Motorised fishing	18	12.2	42	28.4	88	59.5	148	100
Artisanal fishing	53	42.4	30	24.0	42	33.6	125	100
Other fishing allied activities	20	23.8	24	28.6	40	47.6	84	100
Fish marketing	13	25.5	17	33.3	21	41.2	51	100
Total	115	22.6	139	27.4	254	50.0	508	100

Asset Classification

Zone wise distribution of sample households according to asset class revealed that majority of the households belonged to the lower asset class in the northern and southern region. However in the central region, majority of households were distributed among two asset classes, i.e. below Rs. 75000 and between Rs. 75,001 and Rs. 150000 (Table 5.8). One reason that may be attributed to this phenomenon can be the increase in asset value in central region, especially in Ernakulam, where lot of investments has led to a boom in real estate prices. Average land possessed by fisher households in Ernakulam district has been estimated as 3.63 cents. The land value has risen by thrice or even by four times, than owning a small piece of land could bring the holder a fortune.

Table. 5.8. Distribution of sample households according to asset class (percentage)

	Below Rs. 75000	Rs. 75001-Rs. 150000	Above Rs. 150000	Total
Northern zone*	99.3%	0.7%	0.0%	100%
Central zone#	53.6%	42.0%	4.5%	100%
Kollam	*42.9%*	*43.8%*	*13.4%*	*100%*
Thiruvananthapuram	*98.6%*	*1.4%*	*0.0%*	*100%*
Southern zone	74.2%	19.9%	5.9%	100%
Total	76.6%	19.5%	3.9%	100%

* Northern Zone: Kozhikode District
# Central Zone: Ernakulam District

Asset class wise distribution of households according to SHG member/non-member households revealed that among the non members and members, majority of them belonged to lowest asset class of below Rs. 75000 (Table 5.9). However, a decrease in percentage of households was belonging to the lowest asset class was observed while there was a shift from non member to member of SHG. One of the reasons behind members of SHGs graduating to a higher asset class can be attributed to the financial support given by microfinance in term of mobilizing thrift and offering credit and leading overall increase in income by offering credit for income generating activities.

Table. 5.9. Asset class wise distribution of sample SHG member/non member households

	Below Rs. 75000		Rs. 75001-Rs. 150000		Above Rs. 150000		Total	
	No.	%	No.	%	No.	%	No.	%
Non member	101	87.8	12	10.4	2	1.7	115	100
SHG	87	62.6	42	30.2	10	7.2	139	100
SHG- MFP linkage	201	79.1	45	17.7	8	3.1	254	100
Total	389	76.6	99	19.5	20	3.9	508	100

Household Expenditure

Monthly expenditure of sample households was estimated according to non member/ membership in SHGs. It was found that a slight variation occurred

between mean monthly expenditure of fishing households between different classes of membership. The overall mean monthly expenditure of households was estimated as Rs. 3605.49 (Table 5.10).

Table.5.10 Mean monthly expenditure of SHG member/non member households

	Mean Monthly Expenses (Rs.)	N	Std. Deviation
Non member	3449.30	115	1231.413
SHG	3573.42	139	1129.050
SHG–MFP linkage	3693.76	254	1176.040
Total	3605.49	508	1178.060

Distribution of households according to the monthly expenditure of households revealed that 48.6 per cent of the households belonged to the expense class which spread between Rs. 3001- Rs. 4500/month, while 27.8 per cent belonged the expense class which spread between Rs. 1500- Rs.3000 and 20.5 per cent belonged to class that spread above Rs. 4501 (Table 5.11).

Table.5.11. Monthly expenditure wise distribution of sample SHG member/ non member households

	Below Rs. 1500		Rs. 1501- Rs. 3000		Rs. 3001- Rs. 4500		Above Rs. 4501		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
Non member	6	5.2	38	33.0	49	42.6	22	19.1	115	100
SHG	3	2.2	41	29.5	67	48.2	28	20.1	139	100
SHG- MFP linkage	7	2.8	62	24.4	131	51.6	54	21.3	254	100
Total	16	3.1	141	27.8	247	48.6	104	20.5	508	100

Zone wise mean monthly expenditure revealed that in the northern and central zones, it was above Rs. 3800, while there was a marked difference in the southern zone which was as low as Rs. 3367.07(Table 5.12). Southern region comprised the districts of Thiruvananthapuram and Kollam, where there was concentration of small scale fishing and mechanised fishing respectively. Hence

earning pattern in Thiruvananthapuram was lower than that of other coastal districts, accounting for corresponding lower expenditure pattern.

Table 5.12. Zone wise mean monthly expenditure of sample households

District	Mean	N	Std. Deviation
Northern zone*	3855.19	140	1161.934
Central zone#	3838.35	112	1167.660
Kollam	*3790.31*	*112*	*1096.662*
Thiruvananthapuram	*3037.88*	*144*	*1077.767*
Southern zone	3367.07	256	1146.641
Total	3605.49	508	1178.060

* Northern Zone: Kozhikode District
# Central Zone: Ernakulam District

Distribution of sample households according to zones revealed that majority of households in all zones fell in the category of Rs. 3001- Rs. 4500 per month. Only a small portion of the sample households, mainly single or two member households had expenditure below Rs. 1500 per month (Table. 5.13).

Table 5.13. Zone wise distribution of sample households according to monthly expense

	Below Rs. 1500		Rs. 1501- Rs. 3000		Rs. 3001- Rs. 4500		Above Rs. 4501		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
Northern zone*	0	0.0	37	26.4	66	47.1	37	26.4	140	100
Central zone#	4	3.6	22	19.6	55	49.1	31	27.7	112	100
Kollam	*0*	*0.0*	*22*	*19.6*	*65*	*58.0*	*25*	*22.3*	*112*	*100*
Thiruvananthapuram	*12*	*8.3*	*60*	*41.7*	*61*	*42.4*	*11*	*7.6*	*144*	*100*
Southern zone	12	4.7	82	32.0	126	49.2	36	14.1	256	100
Total	16	3.1	141	27.8	247	48.6	104	20.5	508	100

* Northern Zone: Kozhikode District
# Central Zone: Ernakulam District

Summary

Sampling as representative of marine fishing households was not an easy task due to the heterogeneous nature of fishery and dependence of households. The study has opted for random sampling from the population which was categorized to analyse and obtain meaningful results. The southern zone in Kerala was found to support majority of fishing households in Kerala. Accordingly sampling pattern has assigned due weightage to this zone.

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Chapter 6

FINANCIAL INCLUSION OF FISHER HOUSEHOLDS AND ROLE OF MICROFINANCE

Contents

6.1	Status of Financial Inclusion
6.2	Financial Access Dimensions
6.3	Financial Inclusion Index (FI Index)
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6.5	Socio economic variables and Financial Inclusion
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6.7	References

6.1 Status of Financial Inclusion

Level of financial inclusion has been seen with strategic importance by the planners and policy makers and macro level country studies to estimate financial inclusion index as an indicator for assessing the level of financial inclusion has been attempted by authors including Sharma, 2008, Swiston, 2008, Arora, 2010, Kendall et al, 2010). The level of access to finance from the formal sources and other financial services measured using primary data sources has been sparingly attempted by researchers except a few notable studies like that of Rangappa et.al, 2008 and Delvin, 2009). The primary level assessment calls for the individual household level estimation of access to finance. For this purpose households' access to formal financial service providers has been quantified using usage dimension variables representing transaction banking, credit services, deposit services and access to insurance.

6.2 Financial Access Dimensions

6.2.1 Transaction Banking

There is a wide presumption among the poor that financial institutions are agencies solely catering to credit needs of the poor. This view has been reiterated

by findings of the study. It has been observed that indicators of transaction banking like usage of cheque/ DD for financial transactions, granting social security payments through banks, usage of ATMs for withdrawal of money or using it as debit card for payments purposes could not make any effect on the fisherfolk. Cheques or Demand Drafts (DDs) or any other mode of money transmission is used by 11.2 per cent of the households (Table 6.1). Need for using cheque/DD can be attributed to young generations' needs of education and other requirements. Otherwise it was seen that fishermen-households veer away from banks except for accessing credit supply. Prima facie the factors behind such occurrence can be traced out to irregular income pattern from fishing and financial illiteracy. The irregular income limits the propensity to save. Another factor that limits savings is perpetual indebtedness, where income is often used for high cost debt servicing. Financial illiteracy underscores ignorance of procedures of banking. Financial transactions through banks are less preferred due to lesser distribution of service outlets in rural areas. For example one may have to travel to the bank branch or even further to operate an ATM. Only 3.3 per cent of the households used this facility, where there are earning members in public/private sector. Further, poor banking habit prevail in the fishing villages similar to other rural transects where cash remains the preferred mode of payment. Financial institutions are still perceived as glass houses where common man restricts his passage.

Table 6.1. Usage of transaction banking

Indicators	Status	Frequency	Per cent
Usage of cheques	Non users	451	88.8
	Users	57	11.2
	Total	508	100
Social security payments through bank accounts	Non users	497	97.8
	Users	11	2.2
	Total	508	100
ATM usage	Non users	491	96.7
	Users	17	3.3
	Total	508	100

Awareness and Usage of Financial Services

Financial Inclusion envisages access to usage of other financial services in addition to credit and deposit services. This includes usage of financial services facilitating transaction banking like use of cheques, demand draft, mail transfer, ATM, debit/credit cards, bill payments etc. Further this can also include access to alternative investment options other than bank deposits including post office savings account/recurring deposit account, insurance, share investments and mutual fund investments.

Financial literacy level also tends to affect the savings pattern of fisher households. Thus the knowledge level of respondents regarding investment avenues is presented in Table. 6.2. Majority of the households were found to be conversant with ordinary financial services like remittance and savings facilities with banks, insurance and post office while their preference for usage of new financial services was very low except in case of post office savings. While the new financial services like credit card (whether it be ordinary credit card or the GCC or KCC), payment of bills through banks, e-banking, m-banking and new instruments of investment like shares, mutual funds etc were not at all preferred by the households due to lack of knowledge of such products coupled with apprehensions of using technology enabled devices for financial transactions.

Table 6.2 Knowledge level of respondents (per cent of households)

Financial services	Don't know	Know, but no need	Know and like to use
	1	2	3
Remittance and savings facilities with banks	25.39	59.25	15.35
Insurance	14.17	58.46	27.36
Post office	15.35	41.93	42.72
Credit card (GCC/KCC)	90.94	8.86	0.20
Payment of bills through banks	97.64	2.36	0.00
E-banking & M-banking	98.82	1.18	0.00
New instruments of investment	99.80	0.20	0.00

Source: Survey

There is possibility that the respondents are aware of the services and are still not able to use it due to varied reasons. Financial literacy drives have enabled the respondents to know about different services, however the accessibility have been restricted. Such situations facilitate both voluntary and involuntary financial exclusion. Voluntary exclusion arises out of the attitude of the respondents, restricting access to financial transactions from service providers. Involuntary exclusion arises out of the reasons including lack of proximity of service providers, fear for approaching the glass house of the banks etc. Further, a category of respondents revert from usage of financial services due to lack of financial literacy. This category of respondents neither uses the services nor knows about it. Majority of households in the fishing villages are unaware of the new trends in transaction banking and own an account for the sake of having it for facilitating credit flow.

6.2.2 Access to credit

Access to credit remains one of the important indicators of financial inclusion. The state of poverty is characterized by low income distribution among the impoverished. Finance requirements for the poor also occur at times of emergencies due to hospitalization or occurrence of unforeseen incidents and during lean seasons. Marine fishery is characterized by uncertainty in earning pattern. Often they are devoid of a regular income to sustain their livelihoods and this income-expenditure mis-match requires them to borrow. The credit accessibility was found to be significantly high due to penetration of cooperative banks/societies in fishing villages. This has been accentuated by proliferation of micro finance. Not being strictly formal, micro finance has been treated as a semi formal source (Basu, 2006). Also, the linkage banking through SHGs particularly by SHG bank linkage has been described as one of the largest microfinance intervention in the world (Christen, 2006). Formal credit off take by households has shown considerable improvement from 2007 to 2009 from Table. 6.3. This may be partly due to the reporting error on the part of the respondents, when they fail to recall instances from a distant past than the recent ones. While 26.2 per cent of the respondents were indebted to formal sources in 2007, there was a marked increase to 53.1 per cent in 2008 and 65 per cent in 2009.

Table 6.3. Credit usage by households from Institutional sources of finance

Indicators	Status	Frequency	Per cent
Credit from institutional sources and through SHG MFP linkage in 2007	Non users	375	73.8
	Users	133	26.2
	Total	508	100
Credit from institutional sources and through SHG MFP linkage in 2008	Non users	238	46.9
	Users	270	53.1
	Total	508	100
Credit from institutional sources and through SHG MFP linkage in 2009	Non users	178	35.0
	Users	330	65.0
	Total	508	100

Impact assessment of microfinance done by SIDBI reiterated the view that microfinance in general contributed to overall improvement in access of loans and not other services (SIDBI, 2008). Though loans were granted to members out of the savings, it could not be used freely at times of distress as loans are usually provided on the basis of turns. Further if one had availed loan previously; fresh loan could be availed only on repayment of previous loan.

6.2.3 Access to Deposit and Insurance

Savings/thrift is dependent on people's attitude rather than accessibility to formal fold of financial institutions. This attitude can be defined as an interest to save for the lean seasons/ emergencies when there is sufficient disposable income. However this seems to be an unworkable phenomenon among fishing community.

Almost 80 per cent of the households seemed to use savings bank account provided by cooperative/commercial banks/SHG bank linkage corpus or through post office savings bank. Though having an Savings Bank account counts in financial inclusion, the questionable fact is that whether this leads to serving finance requirements of fishing households. While deposit services like Fixed Deposit or Recurring Deposit remained low among the respondents (13 per cent)

as they voluntarily opted out of such services. A study by FAO/UNTRS on enhancing financial services flow to small scale marine fisheries sector (Arunachalam, 2008) found that fisherfolk actually save, but through typical mechanisms. The savings accounts with banks and postal savings account that were actually operated or used by the fisherfolk were very few.

Voluntary exclusion can be induced by drivers of financial illiteracy. However, a lone exception may be observed among SHG members where credit facilities are always linked to savings corpus requiring compulsory savings (Table 6.4). This is applicable in case of SHG bank linkage also where the bank allows credit to the group on the basis of savings corpus deposited in the bank.

Deposit access usually occurs complementarily with access to credit. However, there is an element of involuntary attitude to savings in fishing villages. Consumerism in villages has peaked in addition to alcohol consumption that one can hardly find any habit of thrift in the fishing households. Hence deposit exclusion can be more or less treated as voluntary, emerging out of lack of savings habit among the fisherfolk.

Table 6.4. Deposits by households with Institutional sources and access to insurance

Indicators	Status	Frequency	Per cent
Savings Bank and/or Current Deposits with Commercial banks/cooperatives/RRBs	Non users	104	20.5
	Users	404	79.5
	Total	508	100
Fixed Deposits and/or Recurring Deposits with Commercial banks/cooperatives/RRBs	Non users	442	87.0
	Users	66	13.0
	Total	508	100
Deposits with SHG groups with or without bank linkage	Non users	115	22.6
	Users	393	77.4
	Total	508	100
Life/General Insurance with any of insurance service providers	Non users	368	72.4
	Users	140	27.6
	Total	508	100

Insurance is much more popular among the fishing communities as agencies involved in development of the fishing sector insure the lives of sea faring fishermen. However, this cannot be viewed in an investment angle as in the case of ordinary life insurance as no money could be claimed if accidents in sea did not occur. Only 27.6 per cent of the households were covered under the insurance. This can be viewed with importance as the insurance companies operating in India have an agenda of penetrating deeper into the uncovered rural segments to augment their business (Table 6.4). Arunachalam (2008) noted that there were strong negative perceptions with regard to insurance among the fisherfolk, because of the bad experiences with agents and fly by night operators.

Micro savings and financial inclusion

The purview of microfinance covers broader aspects than micro credit including micro savings which benefits the population with a regular pattern of savings. It can be observed that data pertaining to savings accounts of individuals do not actually reflect the motivation to save. Savings accounts of fisher households are actually opened either as loan facilitating account or 'no frills' account (Table.6.5). This is reflected in the number of FD/RD accounts by households which indicate their actual motivation to save. Some of their earnings are routed to investment in gold which often serves as collateral for borrowing money for essentials.

Table.6.5 Comparison of savings of households with different institutional agencies

	Per cent of User households
Savings Bank and/or Current Deposits with Commercial banks/cooperatives/RRBs	79.5
Fixed Deposits and/or Recurring Deposits with Commercial banks/cooperatives/RRBs	13.0
Deposits with SHG groups with or without bank linkage	77.4

Thrift facility offered by SHG groups offers compulsory savings. The savings by groups were usually Rs. 10 per week which is not a burden for the members. However, this savings had an inbuilt inflexibility. The reasons for preference of savings scheme include maintaining an account at their door steps, small regular savings which is not possible in any formal institution and creation of emergency fund to protect against the odds. (Arunachalam, 2008) found that financial services such as mutual funds, small savings schemes (postal, recurring or fixed deposits) were not popular among the fishers. While there is need and potential to tap savings among the coastal community, the capacity and willingness to save appears to depend on the specific product and distribution mechanism, which must appeal to the fishers and be channeled through appropriate intermediaries.

6.3 Financial Inclusion Index

Financial inclusion envisages including the vast majority of poor into the fold of formal financial service providers so that they can access financial services at a nominal cost. The financial inclusion index measuring access to financial services by households has been computed as part of the study.

While constructing an index, it was decided to go for a single composite (consisting of a conglomerative index) than attempting for the complementary composite (includes a conglometarive as well as deprivational index). The conglomerative index measures the overall well being of the society which has been adopted by the UNDP in calculating the Human Development Index (HDI) (Salzman, 2003). Building of FI Index (Financial Inclusion Index) also can be categorized as a conglomerative index as this attempts to measure the well being of the population in terms of access to financial services. The issue of directionality does not arise because the variables selected correspond to increase in well being.

6.3.1 Selection of Variables and Assigning Weights

Financial service usage dimension has been employed to build Financial Inclusion Index. The types of financial services that have been used by the

respondents for a recall period of past one year (Calendar year of 2009) with an exception to credit availed (assessed for the past 3 years) have been extracted by means of survey (survey was conducted during the months of January 2010 to May 2010 in the selected locations). Access to following services provided by formal financial service providers has been evaluated in the study.

Transaction banking: Financial inclusion essentially promotes efficient payment mechanism which strengthens the resource base of the economy (Chakrabarty, 2009). The study probes into households' usage of money transmission mechanism with the formal financial service providers. Usage of transactions like cheque or Demand Draft or Money Transfer or Telegraphic Transfer or obtaining social security payments through accounts or usage of ATM/Debit card for withdrawal of money has been looked into. The Financial Access Survey, 2010 has also probed the usage of other banking services in addition to deposit or credit (Kendall, et al, 2010).

Credit: Credit has been accorded prime importance in the concept of Financial Inclusion. The Committee on Financial Inclusion, (GoI, 2008) observes in the working definition that financial inclusion entails access to timely and adequate credit at an affordable cost to weaker sections and low income groups in particular. Hence credit accessed by household to any formal sources of finances including SHG bank linkage in three preceding years have been accounted in the study by recall method.

Deposit: Deposit with a formal financial service provider determines the basic access to financial services. Financial Inclusion promotes thrift and develops the culture of savings among the poor(Chakrabarty, 2009), This has been the thrust area in the Financial Inclusion programme of the RBI since 2005, with the initiative of starting 'No Frills Savings Bank account'. The study looks into household access to Savings Bank accounts of banks/post office savings as also of having fixed deposit as well as recurring deposit accounts. Further, savings with SHGs are also being considered for measuring the level of financial inclusion even

though it can be accounted as group savings compared to other individual based accounts.

Insurance: Insurance has been penetrating to lower transect of the society in the emerging phase of competition. In fisheries sector, accidents at sea can cause risk to life of active fishers. The State welfare scheme has been operating to cover this necessitating premium payment. Apart from this, insurance can be also used as an investment option in addition to covering the risk of loss of life which makes it attractive.

Variables selected were put to response in the survey. Index was calculated by aggregating responses in each variable. Using Principal Component Analysis (PCA) to derive the weights from the first eigenvector of the covariance matrix was found dubious in social sciences context. Hence calculation of index has been based on the mathematical concept of weighted average index numbers. The variables were selected based on extensive literature available on the subject and were assigned appropriate weights by using judgement method. The weightage distribution was evaluated by a panel of 30 judges who were experts in the field of banking, academicians and researchers. An acceptable weightage distribution was arrived by incorporating different weighing schemes using arithmetic average. Standardisation of the variables was not required as they were rated on the same scale.

The values assigned to each variable are either 1 or 0. Value 'one' implies respondent having association with the source of finance and value 'zero' implies having no association with the specified source of finance. The index is calculated as follows

$$\sum_{1-n} X = \sum(a1*5)(b*5)(c*5)(d*30)(e*10)(f*10)(g*10)(h*10)(i*5)(j*10)$$

Table 6.6. Financial Inclusion Index- construction and weightage distribution of Usage Dimension

Indicator		Sub components (Source of finance)	Weight	Sub total
Inclusion Indicators				
Transaction banking	a	Usage of Cheque/DD	5	15
	b	Social security pension payments through banks/cooperatives	5	
	c	Usage of ATM	5	
Formal Credit	d	From institutional sources or through SHG bank/MFP linkage during 2009	30	50
	e	From institutional sources or through SHG bank/MFP linkage during 2008	10	
	f	From institutional sources or through SHG bank/MFP linkage during 2007	10	
Savings	g	Savings account with institutional sources (commercial bank, cooperative bank or post office or SHG bank linkage)	10	25
	h	Fixed Deposit or Recurring Deposit account with institutional agencies	10	
	i	Informal savings in an SHG	5	
Insurance	j	Any source/type of insurance	10	10
Total			100	100

The index varies between ‘0 and 100’. Value ‘100’ implies full Financial Inclusion and value ‘0’ implies complete Financial Exclusion. Value of ‘1-29’ implies low financial inclusion, value of ‘30-60’ implies medium financial inclusion and 61 and above implies high level financial inclusion (Table 6.6).

6.4 Distribution of Financial Inclusion Index with selected variables

6.4.1 District wise Financial Inclusion Index (FI Index)

Out of the sample, 9.3 per cent were totally financially excluded with no dealings with financial service providers for the past three years (Table 6.7). While 21.9 per cent of the households lie below FI Index of 30 per cent, 48.4 per cent of them fall in the range of 31 to 60 per cent. A higher level of financial inclusion was

found for a few lying in the top quintile of 76-100 per cent. The results fall in line with the published statistics of RBI that, Kerala has one of the largest percentage of population with bank accounts (89 per cent).

Table 6.7. District wise distribution of Financial Inclusion Index

District	Financially excluded		1-29		30-60		61 & above		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
Kozhikode	18	12.9	33	23.6	44	31.4	45	32.1	140	100
Ernakulam	0	0.0	9	8.0	86	76.8	17	15.2	112	100
Kollam	1	0.9	30	26.8	51	45.5	30	26.8	112	100
Thiruvananthapuram	28	19.4	39	27.1	65	45.1	12	8.3	144	100
Total	47	9.3	111	21.9	246	48.4	104	20.5	508	100

FI Index in districts also showed variability as revealed in Table. 6.8. Financial Exclusion was starkly felt in the districts of Kozhikode and Thiruvanathapuram where 12.9 per cent and 19.4 per cent of the respondents had no access to formal financial services. This may be due to the fact that, inspite of having separate ration cards, families tend to live in a single house with no or minimal partitions and with or without separate kitchens. The survey has treated such families separately and hence this result. However, dealings with financial service providers are bundled in some of such cases; even in case of participation in SHG activities. Total financial inclusion (denoted by 100 per cent financial inclusion index) was found rare among households explicitly because of non usage of transaction banking in day to day life.

Table 6.8. District wise mean Financial Inclusion Index of households

District	Mean	N	Std. Deviation
Kozhikode	42.79	140	26.507
Ernakulam	49.51	112	15.319
Kollam	48.75	112	20.218
Thiruvananthapuram	31.84	144	22.777
Total	42.48	508	23.057

District wise mean financial inclusion index of households was highest in Ernakulam, closely followed by Kollam district and was least in Thiruvananthapuram district. To test the hypothesis that there is no difference in financial inclusion index among the districts, one way ANOVA was employed (Table 6.9).

Table 6.9. Hypothesis test for difference of means (one way ANOVA)

Hypothesis
H_0: There is no variation in FI Index among coastal districts
H_1: There is significant variation in FI Index among coastal districts

	Df	F	Sig.
Between Groups	3	18.128	.000*
Within Groups	504		
Total	507		

The result was significant at 1per cent level of significance, rejecting the null hypothesis. The districts covered under the study considerably differed regarding the level of financial inclusion indicated by FI index. Hence an in-depth lookout into status and indicators of financial inclusion with respect to each district in detail is warranted which happens to be beyond the scope of the study.

6.4.2 Financial Inclusion and Informal finances

The most pertinent question in financial inclusion is the influence on informal borrowings by households, though the definition does not explicitly bring about abolishing informal financing. The definition provides the cue that once poor are provided with easy and cheaper credit, they tend to move away from informal finances. This has been established by analyzing levels of financial inclusion and incidence of informal financing. Also, agricultural credit in developing countries is characterized by dualism, that is, the co-existence of institutional (formal) and non institutional (informal) credit agencies (Singh et al, 2001). The Table 6.10 below depicts the different classes of FI index and incidence of borrowings from informal agencies. Informal borrowings decreased from 72.3per cent among the excluded

to 43.3per cent among those having the highest level of index (above 60). It can be observed that there is clear trend of decreasing share of informal borrowings with increase in index. This can be attributed to alternative agencies that support the poor to borrow. A study by Suran and Narayana, 2009 found that all fisher households in the study had accessed money from moneylenders or relatives. In the present study, majority of the households (57per cent) had associated with moneylenders/traders for finance.

Table 6.10. Financial Inclusion and informal finances

Status of Financial Inclusion	No informal borrowings	%	Borrowed from informal sources	%	Total
Financially Excluded	13	27.7	34	72.3	47
1-29	34	30.6	77	69.4	111
31-60	113	45.9	133	54.1	246
61 & Above	59	56.7	45	43.3	104
Total	219	43.1	289	56.9	508

The hypothesis that there is no difference among different classes of FI index with respect to incidence of informal borrowings was tested using chi square test of significance. The incidence of informal borrowings was measured as a categorical variable taking two values; ‘0’ for no borrowings and ‘1’ for incidence of borrowings. Hence chi square test, which can also be used as a non parametric test was used to make inference (Table 6.11).

Table 6.11. Results of Chi-Square Test of significance

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	20.291[a]	3	.000
Likelihood Ratio	20.666	3	.000
Linear-by-Linear Association	19.233	1	.000
N of Valid Cases	508		

The chi square test was found significant at 1per cent level of significance. Hence, null hypothesis, H_0, stating that there is no association between FII and informal finances does not hold good. Instead, alternative hypothesis can be accepted which observes decrease in informal borrowings associated with higher level of financial inclusion.

The analysis was continued to find the incidence of informal borrowings of households depending on membership category. It was hypothesized that informal borrowings reduced with membership in SHGs. The chi square test of significance found that, in first two instances, ie in case of non member households and SHG member households without MFP linkage, failed to reject the null hypothesis (Table 6.12). Hence it was concluded that irrespective of the class of financial inclusion, the non members and even SHG members without linkage to MFPs accessed informal financing. While the results were found to be significant at 1 per cent level for SHG member households with MFP linkage it could be concluded that there was decrease in access to informal borrowings with increasing levels of financial inclusion.

Table 6.12. Results of Chi-Square Test of significance at disaggregated level (according to membership in SHG/SHG with MFP linkage)

		Value	**df**	**Asymp. Sig. (2-sided)**
Non member	Pearson Chi-Square	.342[a]	3	.952
	Likelihood Ratio	.492	3	.921
	Linear-by-Linear Association	.262	1	.609
	N of Valid Cases	115		
SHG	Pearson Chi-Square	3.946[b]	2	.139
	Likelihood Ratio	4.393	2	.111
	Linear-by-Linear Association	2.849	1	.091
	N of Valid Cases	139		
SHG with bank linkage	Pearson Chi-Square	10.072[c]	2	.006
	Likelihood Ratio	10.740	2	.005
	Linear-by-Linear Association	10.028	1	.002
	N of Valid Cases	254		

6.4.3 Financial Inclusion Index and SHG Bank/MFP Linkage

Another important relation to be analysed is the interaction between financial inclusion and SHG Bank/MFP linkage. Variation of FI index along with the household characteristic of membership in a SHG with bank linkage (SHG-MFP) is depicted in Table.6.13 It is inferred that there is a clear association with higher levels of FI Index and SHG membership. Almost 65per cent of the SHG-MFP members attained FI Index of more than 30 per cent. Reportedly, total exclusion was observed in case of 40.9 per cent of non members and 47 per cent of them could attain low level of financial inclusion. It was also observed that being an SHG member with or without MFP linkage could promote medium level of financial inclusion. This is a clear depiction that being a member of SHG could improve levels of financial inclusion than a non member. The microfinance concept rests on the principle of forming a group by collecting thrift that would support the group as a revolving fund to provide internal loans to members. This activity is further extended to linking with a microfinance provider, usually an external agency or a bank that would provide subsidised credit to the group for initiating an earnings option to support their livelihoods. However, transaction banking or insurance are seldom taken care of by the microfinance providers as they do not fall in the mainstream category of formal financial service providers. Hence SHGs cannot be considered as agencies that provide comprehensive access to financial services.

Table 6.13. Distribution of Financial Inclusion Index according to members of SHG/non members

Financial Inclusion Index	Non member	%	SHG member	%	SHG-MFP linkage	%	Total	%
Financially Excluded	47	40.9	0	0.0	0	0.0	47	9.3
1 – 30 (Low)	43	37.4	63	45.3	5	2.0	155	21.9
31 – 60 (Medium)	22	19.1	74	53.2	150	59.1	244	48.4
Above 60 (High)	3	2.6	2	1.4	99	39.0	62	20.5
Total	115	100	139	100	254	100	508	100

To find out the influence by SHGs on financial inclusion, difference between groups with regard to level of ascertained financial inclusion index was assessed in Table. 6.14. The mean financial inclusion index of different categories showed that the non members had the lowest financial inclusion index, while SHG members had higher index and those having a linkage with MFPs achieved even higher index.

Table 6.14. Mean Financial Inclusion Index of members of SHG/non members

Category of households	Mean	N	Std. Deviation
Non member	15.78	115	18.598
SHG member	35.40	139	15.049
Member of SHG with MFP linkage	58.44	254	13.360
Total	42.48	508	23.057

Inorder to confirm that there is difference in levels of financial inclusion among the SHG members, SHG- MFP linkage and non members, one way ANOVA was conducted (Table 6.15). The result was found significant at 1 per cent level. Hence the null hypothesis that members of SHGs/SHG-MFP linkage does not differ in level of financial inclusion can be rejected. Alternative hypothesis is accepted that financial inclusion index increases if the household has membership with SHGs.

Table 6.15. Hypothesis test for difference of means (one way ANOVA)

	Df	F	Sig.
Between Groups	2	269.277	.000*
Within Groups	505		

Since the analysis was taken up for interaction between three groups as a whole, it was found necessary to find the interactions between groups. Once it has been determined that differences exist among the means, post hoc range tests and pairwise multiple comparisons can determine which means differ. To find whether the non members differed from SHG and SHG-MFP linkage, post hoc test

was employed. Range tests identify homogeneous subsets of means that are not different from each other. Tukey's test was done and it was found that all the three groups significantly differed from each other. The result reiterated the finding of a study by NABARD (Kropp and Suran, 2002) that the SHG banking was demand oriented. The poor people's most urgent needs were to find opportunities for depositing their small savings and access to additional external funds for loans to meet emergencies and for micro-investments (partly consumption needs). Forming an own financial SHG was the key to access financial services by the rural poor (who have been outside the fold of the formal financial system).

6.5 Socio Economic Variables and Financial Inclusion

Owing to several dimensions of financial inclusion/exclusion, several potential antecedents and causes could be used as explanatory variables. Economic, socio-cultural and demographic trends cause financial exclusion per se. These include the group of individuals left behind in the economic growth cycle, increasingly referred to as the 'underclass' the income distribution inequality creating low income mobility among the lowest income groups (Delvin, 2009)

The review of literature conceptualizes relation between poverty, social exclusion and financial exclusion. It is hence necessary to relate the level of financial inclusion/exclusion to the economic factors that would have caused it; notwithstanding the issue of intertwining of social and economic factors and difficulty to untangle the causes and effects.

As indicated earlier, financial inclusion studies have largely used macro economic indicators except in case of a published few using disaggregated level of information. Alternatively Delvin, 2009 has attempted to workout the relation between total financial exclusion and the underlying factors in United Kingdom including gender, social class, age, marital status, household income, ethnicity, region, educational attainment, employment status, housing tenure and number of members in households.

Though the financial inclusion index does not measure the vulnerability of fisherfolk to non formal sources directly, the effect of financial exclusion can cause vulnerability and induce dependence on non formal sources. Hence it is considered necessary to analyse such variables to identify the vulnerability of fisherfolk to non formal sources of finance which in turn creates repercussions on the level of financial inclusion (Rajashekhar and Suchitra, 2009). The relation of financial inclusion index with socio economic variables has been discussed below.

6.5.1 Occupational Category and Financial Inclusion

Among the financially excluded, majority (16 per cent) were households engaged in artisanal fishing followed by households engaged in other fishing allied activities (13.1 per cent)(Table.6.16). Similar pattern was observed in case of marginal level of inclusion. Medium level of inclusion (Index of 30-60) was observed for households engaged in active fishing. High level of inclusion was found for households engaged in motorized and mechanized fishing (31 per cent of the respondents). The chi square test found that the association between financial inclusion index and occupational category is significant, implying that there is significant variability in financial inclusion index according to occupational category.

Table. 6.16 Distribution of Financial Inclusion Index of households according to occupation

Category of occupation	Financially excluded		1-29		30-60		61 & above		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
Mechanized fishing	4	4.0	16	16.0	49	49.0	31	31.0	100	100
Motorized fishing	7	4.7	29	19.6	66	44.6	46	31.1	148	100
Artisanal fishing	20	16.0	35	28.0	66	52.8	4	3.2	125	100
Other fishing allied activities	11	13.1	19	22.6	40	47.6	14	16.7	84	100
Fish marketing	5	9.8	12	23.5	25	49.0	9	17.6	51	100
Total	47	9.3	111	21.9	246	48.4	104	20.5	508	100

P value = .000
Chi square test: significant at 1per cent level

Studies have revealed that non mechanized sector (the traditional artisanal sector) is still in subsistence, impinged by the unlimited capital penetration in mechanized sector, straddling stocks and over exploitation. Small scale fishery has not been able to pick up momentum unlike other sectors, seemingly reflected in the grim state of financial inclusion index of households which depend on artisanal fishery for their livelihood. The mean financial inclusion index of occupational groups shows the variation of financial inclusion index. Artisanal fishing was found to be having the least level of financial inclusion index (31.60) and the highest was for the mechanized category (52.05) which can be attributed to reasons cited above (Table 6.17).

Table 6.17. Mean Financial Inclusion Index of households according to occupation

Occupational group	Mean	N	Std. Deviation
Mechanised fishing	52.05	100	21.522
Motorised fishing	48.61	148	21.960
Artisanal fishing	31.60	125	19.915
Other fishing allied activities	37.38	84	23.688
Fish marketing	40.98	51	22.450
Total	42.48	508	23.057

6.5.2 Age of Head of Households

Experience in the main occupation has been taken into account by considering a proxy variable, namely the age of main income earner of the family. A study by Hogarthand O' Donnel, 1997, 2000 identified age as a decisive variable in determining the level of financial inclusion. Distribution of financial inclusion index according to age class of respondents of sample households showed that there is no significant association between the two. Age class could be considered as a proxy for fishing experience and increased experience in fishing contributed to better financial access.

Table 6.18. Distribution of Financial Inclusion Index of households according to age class

Age class	Financially excluded		1-29		30-60		61 & above		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
Below 30	5	11.6	14	32.6	19	44.2	5	11.6	43	100
30-45	29	12.7	50	21.8	104	45.4	46	20.1	229	100
46-60	11	5.1	41	19.2	113	52.8	49	22.9	214	100
Above 60	2	9.1	6	27.3	10	45.5	4	18.2	22	100
Total	47	9.3	111	21.9	246	48.4	104	20.5	508	100

P value = .118
Chi square test: not significant

Exclusion was noted among the less experienced compared to those having more experience (Table. 6.18). However, majority of the respondents in all age classes fell in medium level of inclusion. High level of inclusion was experienced by one fifth of each category except for the least experienced. With more number of years of experience in their respective avocations, they gain insights into pattern of income and coping strategies including tapping the available sources of finance.

Table. 6.19. Mean Financial Inclusion Index of households according to age class

Age Classification	Mean	N	Std. Deviation
Below 30	33.26	43	21.682
30-45	40.59	229	23.942
46-60	46.85	214	21.597
Above 60	37.73	22	22.558
Total	42.48	508	23.057

The mean financial inclusion index according to age class revealed that there was increase in the mean index along with increase in the age class of respondents (Table.6.19). However, the index decreased among those above the age of 60.

6.5.3 Asset Holding

Household asset is another important variable having a bearing on financial inclusion since asset backing enables a household to be eligible for a loan from any of the formal financial service providers. Possession of land and other movable assets like gold can entail the household to access formal credit (Rajashekhar and Suchitra, 2009). The asset position of the household determines the way in which they are able to diversify their income earning opportunities. The greater the value of assets, higher the creditworthiness and less exploitative lenders are likely to be. Household assets were estimated as the sum of movable and immovable possessions of households including fishing assets which can serve as collateral for formal finance.

Further credit is considered to be the single most important element of comprehensive financial inclusion. FI index according to asset holding wise classification of households is presented in Table. 6.20. Majority of the households irrespective of asset class were found to have medium to high levels of inclusion.

Table 6.20. Distribution of Financial Inclusion Index according to asset holding

Asset Class	Financially excluded		1-29		30-60		61 & above		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
Below 75000	47	12.1	89	22.9	168	43.2	85	21.9	389	100
75001-150000	0	0.0	17	17.2	65	65.7	17	17.2	99	100
Above 150000	0	0.0	5	25.0	13	65.0	2	10.0	20	100
Total	46	9.1	111	21.9	246	48.5	104	20.5	508	100

P value = .000
Chi square test significant at 1 per cent level

To explain the above mentioned phenomenon, it was considered worthwhile to examine the households at the disaggregated level on the basis of membership in SHG/SHG-MFP linkage.

As per Table 6.21, majority of non members who belonged to the lowest asset class tended to be financially excluded or marginalised. However, a few

could find access to main stream formal financial service providers from this class also. A few households, who belonged to higher asset class, had comfortable levels of financial inclusion. The situation differed in case of SHG members, where 47 per cent of the lower asset category was financially included. This was still improved in case of SHG MFP linkage where almost all of them were in comfortable levels of financial inclusion.

Table 6.21. Distribution of Financial Inclusion Index according to asset holding and SHG membership

Membership	FI Index	BELOW Rs. 75000	%	Rs. 75001- Rs. 150000	%	ABOVE Rs. 150000	%	Total	%
NSHG	FE*	47	46.53	0	0.00	0	0	47	40.87
	1-29	39	38.61	4	33.33	0	0	43	37.39
	30-60	14	13.86	7	58.33	1	50.00	22	19.13
	61 & above	1	0.99	1	8.33	1	50.00	3	2.61
	Total	101	100	12	100	2	100	115	100
SHG	FE*	--	--	--	--	--	--	--	--
	1-29	46	52.87	12	28.57	5	50.00	63	45.32
	30-60	40	45.98	29	69.05	5	50.00	74	53.24
	61 & above	1	1.15	1	2.38	0	0	2	1.44
	Total	87	100	42	100	10	100	139	100
SHG-MFP	FE*	--	--	--	--	--	--	--	--
	1-29	4	1.99	1	2.22	0	0	5	2.00
	30-60	114	56.72	29	64.44	7	87.50	150	59.10
	61 & above	83	41.29	15	33.33	1	12.50	99	39.00
	Total	201	100	45	100	8	100	254	100

*FE: Financially Excluded

Inorder to test the hypothesis that there is no association between asset possession and financial inclusion for SHG and SHG MFP linkage, chi square test

was done at disaggregated levels (Table 6.22). The following hypotheses were proved/disproved using the test

a) Hypothesis that there is association between asset class and financial inclusion index among non members is accepted at 1 per cent level of significance.

b) Hypothesis that there is no association between asset class and financial inclusion index among SHG members is proved. Hence it is assumed that SHGs are capable of rendering poor households access to financial services though they do not possess adequate asset backing.

c) Hypothesis that there is no association between asset class and financial inclusion index among SHG-MFP members is proved. As in case of SHG members, households having MFP linkage could access financial services irrespective of asset holding. SHGs work on the principle of mobilizing savings from members and lending among themselves, while a bank linkage could be sought by the group on the basis of savings corpus deposited with a bank along with other criteria of qualification.

Table 6.22. Hypothesis testing using chi square test

		Value	df	Asymp. Sig. (2-sided)
Non member	Pearson Chi-Square	39.199[a]	6	.000
	Likelihood Ratio	28.593	6	.000
	N of Valid Cases	115		
SHG	Pearson Chi-Square	7.050[d]	4	.133
	Likelihood Ratio	7.366	4	.118
	N of Valid Cases	139		
SHG- MFP linkage	Pearson Chi-Square	3.760[f]	4	.440
	Likelihood Ratio	4.306	4	.366
	N of Valid Cases	254		

To establish the above said facts, analysis of mean financial inclusion index was done. It was found that in the asset class below Rs. 75000, FI Index was least for non members, while it increased to 32.93 for SHG members and still increased to 58.03 for SHG-MFP linkage (Table 6.23). This also supports the above analysis that irrespective of asset class, membership in SHG or SHG-MFP linkage has promoted financial inclusion among households. In case of non members, asset possession clearly acts as a significant variable determining the level of financial inclusion. The non member households in the lowest asset class had FI Index of 12.67, while it increased to 35 for asset class between Rs. 75001 and Rs. 150000 and to 57.50 for asset class above Rs. 150000. In case of SHG/SHG-MFP members, the asset possession was not significant in determining level of financial inclusion.

Table 6.23. Mean Financial Inclusion Index of households according to asset class and membership

Asset classification	Membership	Mean	N	Std. Deviation
Below Rs. 75000	Non member	12.67	101	16.211
	SHG member	32.93	87	14.776
	SHG -MFP linkage	58.03	201	13.964
	Total	40.64	389	24.296
Rs.75001-Rs.150000	Non member	35.00	12	19.424
	SHG member	41.19	42	14.047
	SHG -MFP linkage	60.33	45	11.352
	Total	49.14	99	17.084
Above Rs.150000	Non member	57.50	2	10.607
	SHG member	32.50	10	16.202
	SHG -MFP linkage	58.12	8	6.512
	Total	45.25	20	17.806
Total	Non member	15.78	115	18.598
	SHG member	35.40	139	15.049
	SHG -MFP linkage	58.44	254	13.360
	Total	42.48	508	23.057

From the above analysis, it was observed that membership in SHG was found to influence level of financial inclusion particularly in accessing credit from formal sources of finance. Working of SHGs promotes credit access without having to pledge or mortgage movable or immovable assets. Hence, asset position of households have been influential for non- member households.

6.5.4 Educational Status

Education is yet another factor bearing on level of financial inclusion. It has been proven beyond doubt that financial literacy levels are determined by levels of education. Hence the survey has analysed the possibility of highest education attained by member of households to be an influential factor affecting access to financial services. Now-a-days, educational level of the young generation has improved and educational requirements force families to use financial service provider's assistance. For example educational expense requirement may be met by pledging gold with a bank or use of remittance facilities for payment of fees etc. A clear pattern could not be detected from the relation between education and level of financial inclusion. Though not very significant, increasing levels of financial inclusion was observed with achievement of higher education of member of households (Table 7.24).

Table. 6.24 Distribution of Financial Inclusion Index of households according to highest education attained by any of the family members

Educational class	Financially excluded		1-29		30-60		61 & above		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
Illiterate	7	14.9	8	7.2	10	4.1	1	1.0	26	5.1
Primary	4	8.5	9	8.1	14	5.7	4	3.8	31	6.1
Below Secondary	14	29.8	34	30.6	63	25.6	36	34.6	147	28.9
Secondary	22	46.8	53	47.7	135	54.9	52	50.0	262	51.6
Above secondary	0	0.0	7	6.3	24	9.8	11	10.6	42	8.3
Total	47	100	111	100	246	100	104	100	508	100

P value = .015
Chi square test significant at 5per cent level

Association between education and FI Index was found significant by Chi square test of association. This could be made explicit from analysis of mean FI Indices of households belonging to different levels of education (Table 6.25). Very clearly mean indices of households observed increase with highest level of education obtained by any member of the household. The illiterate class possessed the least index while households with members having education above higher secondary level had highest mean index (48.33).

Table 6.25. Mean Financial Inclusion Index of households according to highest education attained by any of the family members

Educational Classification	Mean	N	Std. Deviation
Illiterate	26.54	26	22.573
Primary	37.26	31	23.124
Below Secondary	42.99	147	23.912
Secondary	43.45	262	22.442
Above Secondary	48.33	42	20.142
Total	42.48	508	23.057

6.5.5 Social Expenditure

Social expenditure seems inevitable in coastal rural settlements in Kerala. Available literature has made mention towards the social expenditure of households in terms of expenses incurred for religious matters, life cycle events and other leisure activities. This has also promoted social cohesion among households especially at times of life cycle events like marriage, death and birth ceremonies, where contributions accumulate to afford expenses of the event with or without additional dependence on informal lenders. Social cohesion in terms of security nets build up by the society is important that could be decisive factor in necessitating inclusion as these nets back fishing families during life cycle events like marriages, birth and death. This has been accounted from the expenditure that a family incurs on socializing (contributions to ceremonies in the community –in marriages often called '*kurikkalyanam*').

Table 6.26. Distribution of Financial Inclusion Index of households according to social expense class of households

Social expense class	Financially excluded		1-29		30-60		61 & above		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
Below 250	5	1.8	46	16.7	152	55.1	73	26.4	276	100
251-500	33	19.8	58	34.7	58	34.7	18	10.8	167	100
501-750	9	33.3	2	7.4	11	40.7	5	18.5	27	100
Above 751	0	0.0	5	13.2	25	65.8	8	21.1	38	100
Total	47	9.3	111	21.9	246	48.4	104	20.5	508	100

P value= .000
Significant at 1 per cent level

Distribution of Financial inclusion index across households according to social expense class revealed that households belonging to higher expense class tend to be classified as having access to lesser financial services (Table 6.26). The chi square test of significance reiterated the association between social expenses and financial inclusion. This has been proved explicitly from the following analysis.

Table 6.27. Mean Financial Inclusion Index of households according to social expense class of households

Social expense class	Mean	N	Std. Deviation	Per cent of Total
Below 250	50.33	276	19.318	64.4
251-500	30.54	167	23.369	23.6
501-750	30.93	27	26.784	3.9
Above 751	46.18	38	18.506	8.1
Total	42.48	508	23.057	100

Most of the households fell in the category below Rs. 250. Social expenditure is not a monthly phenomenon; however the survey collected annual social expenses incurred by households for the past one year and then divided into monthly figures for calculation purposes. It is clear from Table 6.27 that mean

financial inclusion index tends to be lesser with increasing social expenditure of households. It can be hence inferred that there is negative association between social expense class and financial inclusion index.

6.5.6 Expenditure Class

Financial exclusion or marginalization is invariably experienced by poorer members of society. Income pattern of fisherfolk is of significance to studies on livelihoods of coastal settlements. However estimating income from fishing has been considered very difficult due to various factors like uncertainty in earning pattern, seasonal variations, multiplicity of stakeholders and multi species- multi gear fishing activities. There is high level of uncertainty in income of fishing households with level of dependence on fishing activity alone. It is difficult to estimate the monthly income in a multi task uncertain earning environment. Hence it was decided to proxy the income level by monthly expenditure by households.

Studies concentrating on socio economic behaviour have attempted deriving income pattern from various type of fishing crafts by observing cost and earnings of operations of types of crafts according to make and gear. However the scope of the present study is limited to assessment of income of the household and its effect on access to financial services. With limited time and resources and extended geographical coverage, the financial diary approach (used in Suran and Narayana, 2009) which could throw light into financial use pattern on the basis of diary maintained by selected households could not be used. In lieu of estimating monthly income of households, monthly expenditure for household consumption and necessities were used as proxy variable.

The distribution of households in various expenditure classes according to financial inclusion index reveals that higher financial inclusion is associated with higher expenditure (Table 6.28). The explanation for this phenomenon can be the requirement of finances to meet the expenditure of household when earnings does no match the expenditure pattern coupled with a host of other factors including unexpected emergencies. The chi square test of association revealed the

association between expenditure of households and financial inclusion index is significant at 5 per cent level of significance.

Table 6.28. Distribution of Financial Inclusion Index of households according to expenditure (income proxy)

Expenditure class	Financially excluded		1-29		30-60		61 & above		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
Below 1500	5	31.2	3	18.8	6	37.5	2	12.5	16	100
1501-3000	15	10.6	31	22.0	73	51.8	22	15.6	141	100
3001-4500	24	9.7	52	21.1	112	45.3	59	23.9	247	100
Above 4501	3	2.9	25	24.0	55	52.9	21	20.2	104	100
Total	47	9.3	111	21.9	246	48.4	104	20.5	508	100

P value =.027
Chi square significant at 5 per cent level

Inorder to find the explicit relation between expenditure of households and financial inclusion mean financial inclusion index of households was analysed. This revealed that level of financial inclusion increased with increasing expenditure class. The index increased from 32.19 for expenditure class below Rs. 1500 to 45.24 for expenditure class above Rs. 4501(Table. 6.29). The results corroborated the findings of Dayson and Dawson (2004) and Carbo et al, 2010 that families with lower incomes are most likely to be financially excluded.

Table 6.29. Mean Financial Inclusion Index of households according to expenditure

Proxy for income distribution	Mean	N	Std. Deviation	Per cent of Total
Below 1500	32.19	16	27.747	2.4
1501-3000	39.68	141	22.569	25.9
3001-4500	43.58	247	23.418	49.9
Above 4501	45.24	104	21.558	21.8
Total	42.48	508	23.057	100

6.5.7 Family size

Family size was recognized as another variable affecting financial inclusion status of households. Models have recognized the importance of family size in determining the financial inclusion status of households. Larger families tend to have higher expenditure and lack of proportionate income induces dependence on sources of finance including formal sources of finance and thus boosting up level of financial inclusion (Table 6.30).

Table 6.30. Distribution of Financial Inclusion Index of households according to family size

Family size	Financially excluded		1-29		30-60		61 & above		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
Below five members	31	10.7	53	18.3	146	50.5	59	20.4	289	100
Five or more members	16	7.3	58	26.5	100	45.7	45	20.5	219	100
Total	47	9.3	111	21.9	246	48.4	104	20.5	508	100

P=.113
Chi square test not significant

Analysis of distribution of households according to family size could not establish any particular pattern to explain the classification of levels of financial inclusion. The Chi square test also was not significant reiterating that there was no significant association between family size and level of financial inclusion.

6.6 Summary

Given the results of analysis, influential variables including experience in occupation, possession of assets and educational level were found to have positive influence on households to be classified as financially included. While the increase in social cohesion and informal borrowings could instigate a negative influence on the households increasing the probability of households being classified as excluded/marginalized. This result points out to the strategic action required to increase inclusion among fisher households. Credit being the ultimate panacea for income smoothening in fisheries sector, financial inclusion would

require formal financial service providers to design financial products that suit the needs of the poor. However risk adverse lending policies of institutional agencies continue to restrict lending towards the poor. This is reflected in the model also. It was found that households with more asset base tend to be financially included compared to those with a lower asset base. Similarly social cohesion tends to reduce dependence on formal financing agencies. This points out to the fact that an ultimate solution to bring forth households to envisaged level of inclusion requires a strategic initiative that would imbibe the positive aspects while trying to avoid the negative aspects. Microfinance offers optimal solutions in this perspective, since the SHGs combine the twin advantage of giving credit without an asset base as well as increasing social cohesion with simultaneous inclusion and restricting informal borrowing at least to certain extent. Also, microcredit is expected to improve the asset base of the members with income generation activities resulting in consequent increase in bankability of the poor.

There is multiplicity of agencies in the field of microfinance. Government agencies, banks and other developmental agencies including NGOs have increasingly turned into developmental activities through SHG groups to ensure participation and effectiveness. The target group being the same, households tend to have multiple memberships with groups affiliated to different agencies. This has enabled households to avail finance from wherever sources possible avoiding informal agencies.

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Chapter 7

VULNERABILITY TO INFORMAL SOURCES OF FINANCE AND ROLE OF MICROCREDIT

Contents

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7.2	Long term sources of finance
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7.1 Indebtedness of households

As easy and low cost credit is the single most important element of financial inclusion, indebtedness of households need close examination. The financial inclusion drive in the country has insisted upon opening of 'no frills' savings account by banks with the impetus on provision of low cost and easier access to credit. However this has been crippled by various factors including procedural formalities, time lag in sanction and disbursal of loan, terms of loan like collateral security requirements etc. Thus 'no frills' account opened by the poor remains inoperative, serving to add to the country's macro scan of number of accounts opened by the population. It was considered worthwhile to look into the pattern of indebtedness to understand the demand for credit and proportionate contribution of sources of finance before looking into household preferences for sources of finance. The study broadly divides sources of finance into formal, semi formal and non formal sources. The formal financial institutions include Commercial banks, RRBs, Cooperative banks, Primary

Agricultural Credit Societies, and State Government Agencies. Microfinance Institutions are considered to be semi formal institutions as they act as mediator between formal agencies and the public. Inorder to find the dependence on non formal sources and to estimate credit gap, purpose wise borrowings of households were enquired. Another demarcation made was in case of period of loans; the emergency requirements of finance and long term borrowings were estimated separately to understand the dependence on non formal borrowings.

7.2 Long Term Sources of Finance

Long term borrowings in the current study encompass borrowings made by households for a time period of more than one year. Number of households indebted for various purposes is given in Table 7.1. It can be observed that majority of the households availed loans for purchasing of fishing related assets and for the requirement of life cycle events. This can be attributed to the role of SHG bank linkage which links SHG group to banks for a loan on the basis of the savings corpus mobilized and deposited with the bank. Loan for obtaining fishing related assets and for life cycle events was obtained by 183 and 179 households respectively, specifying its importance as two of the most important purposes of borrowing. Loans were also taken for miscellaneous activities including educational needs, purchase of household articles etc. Per capita loan per borrower was the highest for the purpose of borrowing for life cycle events followed by loan for fishing related assets. The sample included households of which at least one member was involved in fishing and notably non-operating owners of fishing vessels did not form part of the survey. Borrowings for purchase of fishing crafts is limited to non mechanized and motorised crafts which has a lesser market value compared to mechanized ones and hence the result. It is notable that the average amount per borrower is very meager (Rs 4995.44) for an IG (Income Generating) loan.

Table 7.1. Long term borrowings of households according to purpose

Particulars	Housing	Life cycle events	Fishing related assets	Other purposes	IG loan	Total
Number of households borrowed	55	179	183	210	106	733
Percentage of households	10.83	35.24	36.02	41.34	20.87	--
Per capita availability of loans per borrower	14572.7	67108.94	49934.4	5020	4995.44	32108.8
Per capita loan (all households, N=508)	1577.76	23646.65	17988.2	2075.20	1042.36	46330.2
Sum	801500	12012500	9138000	1054200	529517	23535717

Source: Survey, 2010

Household's long term borrowing from formal sources was for purchase of fishing related assets followed by loans for life cycle events (Table 7.2). Long term loans from SHGs, from groups linked to banks were for the purpose of income generating activities (IGA). All other loans supplied by SHGs are short term, usable for consumption purposes. Friends and relatives were depended upon by 31 households for life cycle events, while loans for other purposes topped the priority. Informal borrowings from money lenders and traders were taken by a majority of 84 households for purchase of fishing related assets while 70 households used this source for borrowing for life cycle events.

Table 7.2. Source wise long term borrowings of households

Purpose of borrowing	Formal sources	SHG	Friends & Relatives	Moneylender & Traders
Housing	39	--	5	11
Life cycle events	78	--	31	70
Fishing related assets	96	--	3	84
Other purposes	74	4	72	60
IGA loan	--	102	4	--
	287	106	115	225

Borrowings from formal sources were mainly for life cycle events, 44.47 per cent of the loans for life cycle events and 44.60 per cent for purchase of fishing assets (Table 7.3).

Table 7.3. Source wise percentage share of amount of borrowings for different purposes

Purpose of borrowing	Formal sources	SHG	Friends & Relatives	Moneylender & Traders	Total
Housing	6.55	--	4.31	1.28	3.41
Life cycle events	44.47	--	70.08	55.46	51.04
Fishing related assets	44.60	--	2.22	40.75	38.83
Other purposes	4.38	2.62	22.71	2.50	4.48
IGA loan	0.00	97.38	0.67	--	2.25
Total	100	100	100	100	100

Similar pattern was observed for moneylenders, where 96 per cent of the loans were availed for life cycle events and purchase of fishing assets. Long term borrowing from SHGs was for income generating activities (97.38 per cent) and borrowing from friends and relatives was mainly for life cycle events (70.08 per cent). Out of the total borrowings, almost 90 per cent was availed for life cycle events and fishing related assets.

Cross sectional analysis of purpose wise loans was done to analyse sources from which loans were availed by households. Out of the loans availed for housing related purposes, highest contribution (71.55 per cent) was from formal sources (Table 7.4). Borrowing from non formal sources was highest for life cycle events and fishing related assets. IGA loans were almost exclusively distributed by SHGs.

Table.7.4. Purpose wise percentage share of amount of loans from different sources

Purpose of borrowing	Formal sources	SHG	Friends & Relatives	Moneylende r & Traders	Total
Housing	71.55	--	7.99	20.46	100
Life cycle events	32.41	--	8.66	58.93	100
Fishing related assets	42.72	--	0.36	56.92	100
Other purposes	36.38	1.33	31.97	30.33	100
IGA loan	--	98.11	1.89	--	100
Total	37.19	2.27	6.31	54.23	100

From the above analysis, inferences were drawn about the total amount demanded by sample households and the contribution of formal and non formal sources. It was found worthwhile to estimate the total credit gap experienced by sample households and draw valid conclusions for the population. Out of the total credit demanded, 39.5 per cent has been supplied by formal and semiformal sources (Table 7.5). The credit gap thus identified is 60.5 per cent. Credit gap was found the highest for the purpose of life cycle events (67.59 per cent) while it remained high for purpose of acquiring fishing related purposes (57.28 per cent). This result was reiterated by the finding of the FAO/UNTARS study on enhancing financial services flow to small scale marine fisheries sector (Arunachalam, 2008). The study found that traditional microfinance interventions appear unsuitable for addressing the demand of finance for fish harvesting activities. This is important from the perspective of financial inclusion of men in fisheries. The traditional microfinance approaches are applicable more to the post harvest fishery where women play an active role. Institutional sources of finance should prioritise their credit polices to supply this portion of underserved population to serve the objectives of financial inclusion in addition to looking into the needs of the unbanked. From a detailed overview of purpose wise credit gap, loans for purposes of servicing life cycle events, fishing related assets and other purposes were to be concentrated by the formal financing agencies.

Table 7.5. Estimated long term demand for finance and credit gap

In Rs. '000

Demand for loan	Formal and Semi Formal financing	% of Total demand	Estimated credit gap	% of Total demand
Housing	573.50	71.55	228.00	28.45
Life cycle events	3893.00	32.41	8119.50	67.59
Fishing related assets	3134.00	42.72	5234.00	57.28
Other purposes	397.50	37.71	656.70	62.29
IGA loan	519.52	98.11	10.00	1.89
Total	8517.52	39.46	14248.20	60.54

Interest rates and security requirements of loan products of financing agencies are of concern as they tend to be a factor determining the choice of source of loan. Though the interest rates charged by formal sources range from 7 per cent for the agricultural gold loan to a higher level of 15 per cent for a personal loan, the lowest compared to other sources, the security requirements are stringent that they insist for collateral like gold or land which cannot be supplied by the poor in fisheries sector (Table 7.6). Contrasting observation was noted in case of moneylenders and traders where there is no insistence on collateral security but for a written agreement or right to sell, but the interest rate prevailing ranges from 60 per cent to 120 per cent.

Table 7.6. Interest rate charged by different sources and security requirements

Source	Interest Rate	Security furnished
Formal sources	7% to 15%	Gold, Land, mortgaging Fishing assets, other collaterals and/or personal surety
SHGs	24% to 36%	No security
SHGs with bank/MFI linkage	24%	Savings corpus
Moneylenders	60% to 120%	Written agreement
Traders	60% to 96%	Sale agreement

However, the SHG loans are free of security, apart from the terms of being a member of the group and abiding by its bye laws with an affordable interest rate though higher when compared to the main stream formal financial institutions. SHG with bank/MFI-bank linkage are supplied loans from the formal finance providers on the basis of savings corpus mobilized by the group and deposited with the financial institution. Repeat loans are provided only if the group succeeds in paying off the loans.

7.3 Emergency borrowings of households

Emergency borrowings of household often determine the dependence on informal lending. It is quite evident that none of the formal sources provide

immediate provision of finances as the informal lender does, even if the cost of such finance is exorbitant. To identify the demand for such immediate finances it is required to map the household's emergency expenditure for one year recall period. The limitation of under reporting some of the emergencies due to non recording of such finances as also over reporting to attract funds for assistance holds well in this situation. Keeping in view the above said reporting bias, analysis of purpose wise emergency requirements of finance along with the sources utilised has been discussed below. Three major items under which short term borrowings was observed was in the events of medical, consumption needs and other requirements which include working capital financing for fishing, associated expenses with life cycle events etc.

Table 7.7. Source wise emergency demand for borrowings of households

Particulars	Medical	Consumption loan	Other purposes	Total
Number of households borrowed	291	341	168	800
Percentage of households	57.28	67.13	33.07	**
Per capita availability of loans per borrower	2449.83	3441.06	7056.85	3839.81
Per capita loan (all respondents, N=508)	1403.35	2309.84	2333.76	6046.95
Total amount borrowed	712900	1173400	1185550	3071850

It was observed that consumption loan tops the list of emergency requirements of finance of fisher households (67.13 per cent) followed by medical expenses (Table.7.7). Per capita availability of loans per borrower was the highest in case of other loans for working capital and socialization and life cycle events. Total amount borrowed was highest for other purposes and the least in case of medical expenses.

Table 7.8. Emergency borrowings of households according source and purpose

	Medical		Consumption loan		Other	
	N	%	N	%	N	%
Formal sources	36	12.37	13	3.81	34	20.24
SHG	29	9.97	122	35.78	35	20.83
Friends & Relatives	79	27.15	59	17.30	45	26.79
ML & trader	147	50.52	147	43.11	54	32.14
Total	291	100	341	100	168	100

Major sources of emergency borrowings for the purpose of medical emergencies were money lenders and traders (32.14 per cent), followed by friends and relatives (26.79 per cent) and formal sources (20.24 per cent)(Table.7.8). Consumption loan was mainly financed by the informal lenders including the money lenders and traders (43.11 per cent) followed by the SHGs (35.78 per cent). Money lender and traders and friends and relations financed 69 per cent of the other requirements like working capital financing and life cycle events.

Table 7.9. Source wise percentage share of amount of borrowings for different purposes

	Medical requirements	Consumption loan	Other requirements
Formal sources	24.69	6.48	16.15
SHG	11.04	33.27	13.54
Friends & Relation	25.14	19.38	34.13
ML& Trader	39.13	40.88	36.18
Total	100	100	100

Purpose wise analysis revealed that loans availed from formal sources was for other requirements followed by requirement for financing medical expenses (Table.7.9). It can be observed that formal sources do not stress upon provision of consumption loans to the fisherfolk which is one of their foremost requirements. However, it can be seen that the SHGs fill this gap providing more of consumption loans (62 per cent). Borrowing from friends and relations has been mainly for other

requirements (49.87 per cent) and moneylender and trader were mainly depended upon for the fisherfolk's requirement for consumption loan.

Table.7.10. Purpose wise percentage share of amount of loans from different sources

	Medical requirements	Consumption loan	Other requirements	Total
Formal sources	39.68	17.14	43.18	100
SHG	12.50	62.00	25.49	100
Friends & Relation	22.10	28.03	49.87	100
Money lender & Trader	23.49	40.39	36.12	100
Total	23.21	38.20	38.59	100

After analysing the emergency requirements of finance and the sources utilised by the fisher households, it was considered appropriate to assess the existing credit gap left out by the institutional agencies of finance. From the analysis it was estimated that majority of the emergency finance requirements were financed by the informal financing agencies (65.92 per cent) (Table.7.11). This finding was reiterated by the study by FAO/UNTRS on enhancing financial services flow to small scale marine fisheries sector (Arunachalam, 2008) in the Southern States in India including Tamilnadu and Kerala. The study found that small scale fish workers who cannot access formal institutional credit except through intermediary peoples organizations like SIFFS, Cooperatives, NGOs, MFIs and SHGs and are forced to rely upon moneylenders, financiers, chit funds and borrowings from friends and relatives. In many cases it was found that they depended upon traders, merchants and moneylenders for financing production purposes.

The credit gap was found the highest in case of medical finance requirements and the least in case of consumption loans. Lesser credit gap with consumption loans can be associated with the upcoming of SHGs as an intermediate semi formal financing agency. A study on linkage banking by SHGs by Kropp and Suran, (2002) found that SHG system worked like an informal

insurance that allows managing risks and income gaps effectively. They also found that with SHG banking, a highly flexible financial service has been made available to poor households, which allowed them to stabilize their income in most cases. The SHG system allows members to maintain a more regular flow in support of the family and of the microenterprise operated by the family.

Table 7.11. Estimated demand for finance and credit gap

Purpose of loans	Emergency finance requirements	Formal + semi formal finance	% of [2 w.r.to 1]	Estimated credit gap	% of [4 w.r.to 1]
	[1]	[2]	[3]	[4]	[5]
Medical requirements	712.9	254.7	32.80	458.2	67.20
Consumption loan	1173.4	466.35	39.74	707.05	60.26
Other requirements	1185.55	352	29.69	859.75	70.31
Total	3071.85	1073.05	34.08	2025	65.92

7.4 Incidence of Informal Borrowings: Influence of microcredit

Borrowing from informal sources, namely the moneylenders and traders has been always observed as an imperfection in the rural credit markets, where such borrowing indulges the poor borrower into the perpetual 'debt bondage' due to servicing of debt for long periods of time (Ramachandran and Swaminathan, 2004; Rajashekhar and Suchitra, 2009). Though it is accepted that in the absence of formal financial institutions to cater to the needs of the poor, ultimate source of funds are the so called exploitative money lenders or traders who provide 'easy' finance, the poor are not left with an alternative to fall back in an emergency. In such situation, an alternative agency which would combine the traits of lending of both formal and informal financing has been envisaged by the policy makers. Microfinance is one such option that would combine the advantages of formal and informal lending. People, who are members of joint liability groups, start compulsory savings on weekly basis to form a corpus, which is used for internal lending for consumption and short term production needs. Access to consumption credit is expected to reduce the

dependence on informal borrowings. Further finances for IGAs are expected to increase the income levels that would reduce vulnerability to informal borrowings (Rajasekhar, 2004).

The informal borrowings by the households with or without membership in SHG groups have been closely examined to understand the influence of microfinance in reducing informal borrowing (Table.7.12). Surprisingly, it was seen that though there was a marginal reduction in informal borrowings by the households who are members of SHG/SHG bank/MFP linkage, majority of the households tend to borrow from the informal lenders due to some or other reasons. While a marginal two per cent reduction was noted with the SHG members compared to non members, there was 15 per cent reduction in informal borrowings in case of members of SHGs with MFP linkage. This can be attributed to the inflexibility of SHGs in responding to emergency needs of the fisher households. SHGs operate revolving credit which is extended to the members on the basis of turns. Repeat loan is not sanctioned unless the current loan is repaid. Emergency needs of finance cannot be serviced in such situations. This entails the households to borrow from the informal sources for coping with the emergency hopeful to service the debt once his/ her turn for loan in the SHG has arisen.

Table 7.12. Incidence of informal borrowings of households

Status of households	No borrowings from informal sources		Borrowings from informal sources	
	Number	%	Number	%
Non member	32	27.8	83	72.2
SHG member	51	36.7	88	63.3
SHG-MFP linkage	136	53.5	118	46.5
Total	219	43.1	289	56.9

Hypothesis testing

To test whether there is any difference between the households who are non members of SHGs and members of SHGs/SHG-MFP linkage; chi square test has

been employed. Result of Chi square test was found to be significant at 1 per cent level of significance (Table 7.13). Hence the hypothesis that there is no difference between members and non members in informal borrowings is rejected. Alternative hypothesis which assumes lesser informal borrowings for SHG members compared to non members holds good.

Table 7.13. Chi-Square Test of significance

H0: Informal borrowings is the same for SHG member households and non-member households

H1: Lesser informal borrowings is resorted to by SHG member households compared to non-members

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	24.563[a]	2	.000
Likelihood Ratio	24.993	2	.000
Linear-by-Linear Association	23.887	1	.000

Having found that there is reduction in borrowal from informal lenders by member households, it was considered appropriate to find the quantitative relation between these two variables in conjunction with other factors. Here dependent variable is incidence of borrowing from informal sources. The detail of model fitting is described below.

7.5 Model Fitting

The major contributing factors that determine the incidence of informal borrowings among households include the following factors.

- Emergency needs of households

  Emergency finance requirements of households, the sources utilized and amount availed has been collected through the survey. This is subject to the reporting bias of the respondent, where they tend to over report (for assuming write offs or subsidies) and under report (failure to recall the number of finances during past one year).

- Income level of households: Income level of the households has been estimated using proxy variable, the expenditure level of households. However this is subjected to severe limitation that expenditure of a household reflect only the consuming part without due regard to savings.
- Occupational diversification: occupational diversification was accounted by taking into consideration the dependence of the household on fishing activity. The household being exclusively dependent on fishing was assigned value of zero, and diversification would be assigned one.
- Membership in an SHG/SHG-bank/MFP linkage

The response variable of incidence of informal borrowings among households is dichotomous. With the above identified variables, the best fitting model in this situation is the binary logistic regression model. According to Hair et al, 1998 logit analysis is an ideal complement to multiple regression due to its ability to utilize a binary independent variable. As all the variables in the model are categorical variables, they were modeled using the first mentioned category in each case as the reference category. This model basically looks into the probability of responding to the explanatory variables. The probability could be modeled using a linear function of explanatory variables using the logit transformation, leading to the logistic regression model

$$\text{Log}\ (p/1-p) = \beta_0+\beta_1X_1+\beta_2X_2+\ldots\ldots\ldots\ldots+\beta_nX_n$$

Where 'p' is the expected value of the response variable, which in this model is coded as '1' for borrowing from informal sources and '0' for borrowing from informal sources. In other words, 'p' is the probability of responding to the explanatory variables. The regression coefficients can be estimated using the method of maximum likelihood.

The risk of the household being poor may therefore be said to be dependent on these characteristics and this is specified in the following logistic model.

$$\text{Log}(p/1-p) = \beta_0 + \beta_1 D_1 + \beta_2 D_2 + \beta_3 D_3 + \beta_4 D_4 + \beta_5 X_5,$$

where β represents the estimated parameters.

The model was found to be significant in explaining the influence of the independent variables. The Nagelkerke R square is considered to be equivalent with the R square in linear regression. A value of 20 per cent to 40 per cent is usually acceptable in binary logistic regression. As the model quantifies cross sectional data, value of R square is likely to be low. Further R square values are seldom considered important for analysis of qualitative variables. The model correctly classified 67.3 per cent of the cases. Correlation between the explanatory variables was examined to check for multicollinearity. Higher correlation between independent variables is an indicator of multicollinearity. The statistical significance of the estimated coefficients for each explanatory variable was tested using Wald statistic, the standard for a logistic regression.

Omnibus Tests of Model Coefficients

		Chi-square	df	Sig.
Step 1	Step	85.500	11	.000
	Block	85.500	11	.000
	Model	85.500	11	.000

Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	609.061[a]	.155	.208

Table. 7.14. Coefficients and odds ratio: result of binary logistic regression

	B	S.E.	Wald	df	Sig.	Exp(B) Odds Ratio
Constant	1.592	.276	33.304	1	.000	4.914
Membership in SHG/SHG-Bank/MFP linkage	**-1.059**	**.251**	**17.820**	**1**	**.000**	**.347**
Occupational diversification	**-.677**	**.222**	**9.300**	**1**	**.002**	**.508**
Number of emergencies 1			**48.984**	**2**	**.000**	
2	**1.115**	**.217**	**26.441**	**1**	**.000**	**3.048**
3 or more	**1.758**	**.279**	**39.753**	**1**	**.000**	**5.801**
Proxy for household Income			.842	3	.840	
	-.304	.623	.238	1	.625	.738
	-.425	.611	.484	1	.486	.654
	-.269	.634	.180	1	.672	.764

The results of the logistic regression reveal the following. Members of SHGs or SHG-bank/MFP linkage are found to have lesser probability of incidence of informal borrowings (by 2.9 times) compared to the reference category of non members (Table 7.14). Occupational diversification was found significant and the probability of borrowing from informal sources was lesser by 2 times compared to reference category. Number of emergency finance requirements was significant in determining the incidence of informal borrowings. Two emergencies could increase the probability of informal borrowings by 3 times and more than two emergencies would increase the probability of informal borrowings by 5.8 times. The household income that could have effect on the borrowing pattern of households failed to have significant influence. One reason could be that income of households has been accounted by taking the proxy variable of expenditure.

7.6 Role of SHGs: A Critique

To exactly chalk out the role of microfinance in serving the credit needs of the poor, it is worthwhile to examine the extent of financing and its share in existing demand for finance. It was found that in the existing long term demand for

finance, share of SHG in total number of loans financed was 28.44 per cent while the share in total amount of loan demanded was only 2.34 per cent (Table 7.15). Similarly, share of SHG in total formal and semi formal loans was 46 per cent while it was 6.26 per cent in total amount of loan supplied by formal and semiformal agencies. This is a clear indication of spread of microfinance promoting financial inclusion, but failing to provide financial deepening.

Table 7.15. Demand for finance and share of microcredit

Demand for finance	Share (%) of SHG in			
	Total number of loans demanded	Number of formal and semi-formal loans	Total amount of loans demanded	Amount of formal and semi-formal loans
Housing	0	0	0	0
Life cycle events	0	0	0	0
Fishing related assets	0	0	0	0
Other purposes	1.92	5.13	1.33	3.52
IGA loan	98.39	100	98.11	100
Total long term requirements	**28.44**	**46.00**	**2.34**	**6.26**
Medical requirements	8.19	34.12	11.04	30.90
Consumption loan	35.78	90.37	33.27	83.70
Other requirements	20.83	50.72	13.54	45.60
Total emergency requirements	**21.55**	**64.36**	**20.49**	**58.67**

Regarding emergency/short term requirements of finance, 21.55 per cent of the total existing emergency requirements were financed by the SHGs, while this formed 20.49 per cent of the total amount. Share of SHGs in the number of emergency formal and semiformal loans was 64.36 per cent, and its corresponding share in amount was 58.67 per cent. Hence it can be inferred that SHGs could not make significant impact in servicing long term demand for finance among fisher households, while there is considerable impact on short term/emergency finances. This finding has been corroborated by several research and policy papers dealing with the issues involved in microfinance. The total

disbursement of credit through SHGs is limited. For 2005-06, the average loan per member was less than Rs. 4000. It is argued that SHGs need to graduate into promoting enterprises and factor in livelihood diversification. They also need to increase their access to the supply chain and to the capital market and to appropriate production and processing technologies (Rangarajan, 2006, Thorat, 2006, Jones et al, 2007)

Pattern of usage of SHG loans

Pattern of usage of micro credit provides an idea of actual utilisation of the borrowal from SHGs. While consumption credit is granted to SHGs, usage of loans is spread among a number of reasons including repayment of debts, consumption, gold purchase and medical expenses (Table 7.16). Repayment of debts assumes importance because of the inbuilt inflexibility of SHG lending, where the savings corpus limits the number of borrowers at a particular time. Micro credit serves limited members credit needs at a point of time and repeat borrowings are allowed only when the first loan is being repaid. This inflexibility causes members to depend on informal sources at the point of need in view of repaying it when his/her turn appears to be eligible for credit from the group.

Table 7.16 Usage of micro credit

Purposes for which loans are used	Number of households	Per cent
Consumption	56	14.31
For servicing life cycle events	29	7.32
Purchase of gold	43	11.06
To repay debts	77	19.59
Maintenance of house	47	11.95
Education	21	5.37
Medical	52	13.25
Social expenditure	12	3.09
Other purposes	55	14.07
Total	393	100

7.7 Analysis of borrower preferences

Given the role of formal, semi formal and informal financing in serving as sources of finance for the coastal settlements, there exist reasons that promote preference of particular source of finance. Given the attributes of each source of lending, there are positive and negative traits that attract/keep away borrowers. Apart from the socio economic factors, these supply side traits are equally influential in determining the borrowing pattern of households. It goes without saying that socio economic factors decide the suitability of borrower to terms and conditions of the supplier of finance. For example, the household with lesser assets seldom approaches a formal source of finance for getting the loan. Informal lenders fill this gap. Similarly, microcredit bridges the gap between demand for credit and formal finances giving the households advantage of not having to own assets to serve as security for the loan. However micro credit is crippled by insufficiency of loan amount.

Different sources of finance were evaluated by household's to identify their preferences. Ten variables characterizing each of the sources of finance, namely formal, informal and semi-formal sources of finance were evaluated on a five point scale. These variables were subject to factor analysis to identify the underlying commonality behind the preference for sources of finance. Even though when formal finance is more desirable, not everybody can borrow as also there are people who could not borrow to satisfy their demands in full. As there is considerable difference between the mode of operation and terms and conditions of loans supplied by formal, semi formal and non formal sources of finance, it was decided to undertake factor analysis separately for each. Before attempting factor analysis, respondent's scores assigned to each of the variables for the sources of finance has been analysed below.

Table 7.17. Households evaluation of sources of formal finance (Percentage)

Formal financing	SD	D	NO	A	SA	Mean score	Std. Deviation
Timeliness	33.66	37.20	25.20	2.76	1.18	2.01	.898
Adequacy	14.96	34.06	38.58	11.42	0.98	2.49	.916
Procedural hassles	24.61	48.03	21.85	4.33	1.18	2.09	.858
Suitability to needs	18.90	28.35	37.80	10.04	4.92	2.54	1.061
Supply of consumption loans	40.55	34.84	19.88	4.33	0.39	1.89	.896
Need for collateral	44.09	32.68	21.85	1.38	0.00	1.81	.823
Proximity	11.81	39.96	44.69	3.15	0.39	2.40	.751
Terms of repayment	3.94	28.35	36.81	26.77	4.13	2.99	.936
Penalty for non payment	19.49	41.73	34.25	3.35	1.18	2.25	.846
Rate of interest	2.17	4.13	24.21	26.18	43.31	4.04	1.018

SD: Strongly disagree, D:Disagree, NO: No Opinion, A: Agree, SA; Strongly Agree

Features like interest rate and terms of repayment of credit from formal sources of finance were preferred by majority of the households while all other variables including timeliness in providing loan, adequacy, procedural hassles, suitability to needs, supply of consumption loans, need for collateral security, proximity, suitability to needs and supply of consumption loans were under rated by majority of the respondents (Table.7.17). This implies that even though the terms of loan like interest and repayment mode are suitable to borrowers, the procedural formalities and other quality indicators associated with formal credit is not suitable to the households. A study by Ngunen (2007) revealed that most people had chosen formal financial sources as their first priority for getting loans and when such attempt becomes unsuccessful they approach other informal sources of finance.

Table 7.18. Households evaluation of sources of semiformal finance (Percentage)

Semi formal financing	SD	D	NO	A	SA	Mean score	Std. Deviation
Timeliness	1.18	11.42	32.28	44.49	10.63	3.52	.873
Adequacy	3.74	14.96	32.68	39.76	8.86	3.35	.964
Procedural hassles	0.59	5.12	21.26	37.01	36.02	4.03	.912
Suitability to needs	7.48	9.84	31.69	32.68	18.31	3.44	1.123
Supply of consumption loans	10.24	10.04	33.66	28.74	17.32	3.33	1.177
Need for collateral	2.17	8.86	21.65	40.16	27.17	3.81	1.002
Proximity	0.98	3.54	25.98	38.78	30.71	3.95	.892
Terms of repayment	2.56	7.87	33.66	22.64	33.27	3.76	1.077
Penalty for non payment	6.89	29.53	33.27	25.20	5.12	2.92	1.012
Rate of interest	2.56	3.15	50.00	28.35	15.94	3.52	.887

SD: Strongly disagree, D:Disagree, NO: No Opinion, A: Agree, SA; Strongly Agree

Semiformal financing by SHGs were preferred by majority of the borrowers due to timeliness in supply of loan with no procedural hassles, the suitability to their needs, supply of consumption loans, no collateral security required, proximity, terms of repayment and interest rates (Table.7.18). However the penalty for non payment and inadequacy of loan was found unsuitable by some of the respondents.

Table 7.19. Households evaluation of sources of informal finance (Percentage)

Informal sources	SD	D	NO	A	SA	Mean	Std. Deviation
Timeliness	3.35	5.91	11.02	40.55	39.17	4.06	1.019
Adequacy	4.33	11.02	19.88	30.12	34.65	3.80	1.157
Procedural hassles	4.53	7.28	17.32	16.34	54.53	4.09	1.188
Suitability to needs	10.83	13.39	20.28	29.33	26.18	3.47	1.301
Supply of consumption loans	8.27	8.66	28.94	33.07	21.06	3.50	1.159
Need for collateral	0.98	6.89	13.58	31.89	46.65	4.16	.970
Proximity	6.89	9.84	21.26	26.57	35.43	3.74	1.231
Terms of repayment	8.46	35.43	29.92	17.52	8.66	2.82	1.089
Penalty for non payment	25.20	33.46	25.59	12.80	2.95	2.35	1.080
Rate of interest	39.37	25.39	12.40	13.39	9.45	2.28	1.352

SD: Strongly disagree, D:Disagree, NO: No Opinion, A: Agree, SA; Strongly Agree

Evaluation of credit from informal borrowers revealed that preference factors behind utilizing this source of finance is timeliness, adequacy, procedural hassles, suitability to needs, supply of consumption loans and need for collateral and proximity(Table 7.19). Rate of interest and terms of repayment and penalty for payment are seen as shortcomings of the informal lenders.

What if the money lenders are abolished?

Given that moneylenders are a group with vested interests that they advance money at exorbitant rates of interest naturally puts the question “Is there a possibility to totally ban or illegalize money lending business that would save the poor from their trap”. However a detailed investigation into such possibilities leads to a negative opinion. In the absence of the moneylender who will serve the small needs of finance of the poor? In the existing scenario, the moneylender cannot be completely abolished as the alternatives to supply finance to the poor are not sufficient. Though microfinance revolution has taken over all the nook and corners of the villages, it can be observed that the moneylender’s role has not been replaced. SHG borrowings incidentally involve some formality, compared to the nextdoor private financiers, such as waiting for the turn to get the loan. This can be substantiated by assessing the pattern of usage of loans availed from the SHGs. Interestingly, it was observed that the loans availed from SHGs, whatsoever was used primarily for releasing the debt bondage with informal lenders. However, repayment of loans of SHGs are often stringent and inflexible that they again tend to borrow from moneylenders or alternative sources of finance indicating perpetual debt.

Fig. 7.1 presents the comparative assessment of sources of finance by fisher households. As regards rate of interest, formal sources of finance were preferred by the borrowers as they charge the lowest rate of interest. Penalty for non payment was seen as problematic for all sources, including that of semi formal agencies. Terms of repayment were preferable in case of semiformal sources. Proximity criterion was served mostly by the informal and semi formal lenders. Need for serving collateral security declined the households access to formal financing agencies, while the same attracted them to informal and semi formal

sources of finance. Similar result was observed in case of supply of consumption loans. Adequate, timely loans devoid of procedural hassles were supplied by the informal lenders followed by semi formal sources. All these factors were weakened in case of formal sources of finance. Tailor made loan products suitable to borrowers needs are the specialty of the informal lenders.

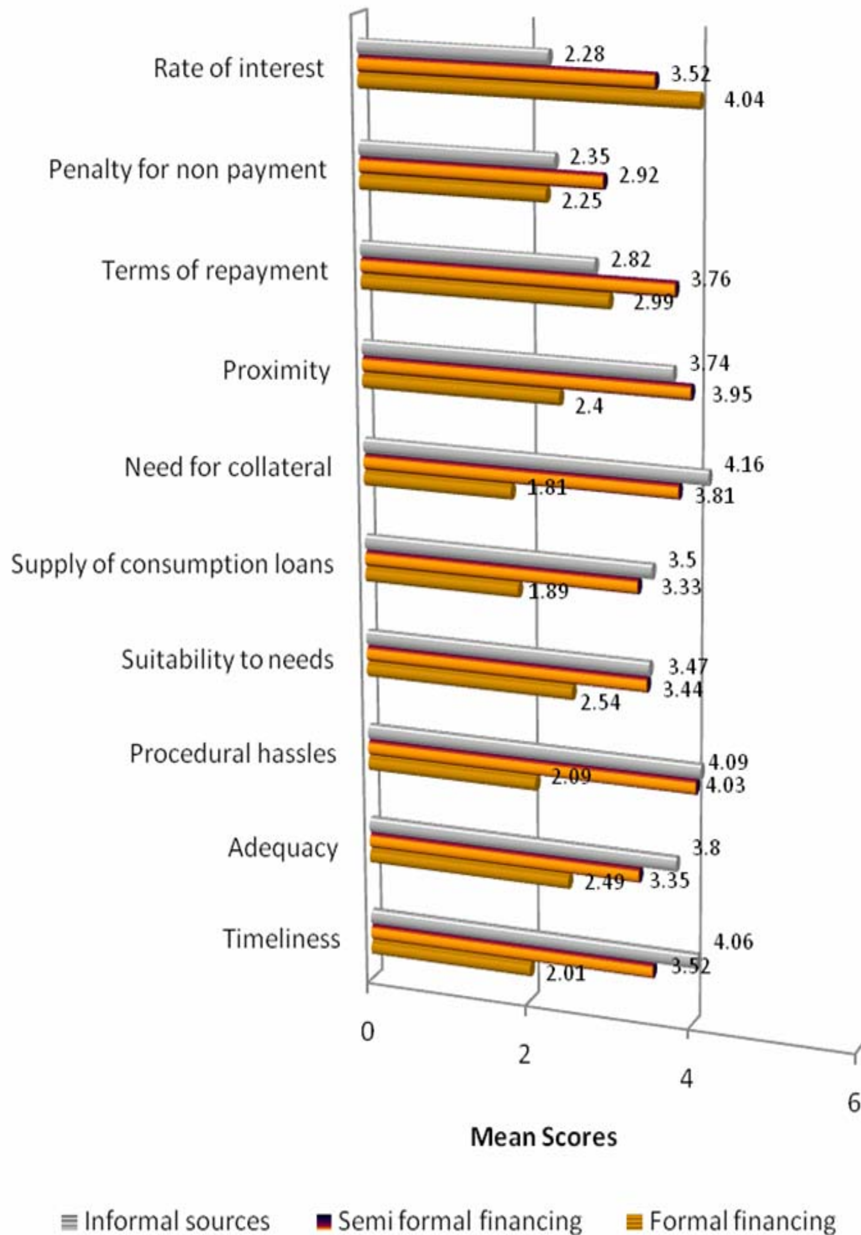

Fig. 7.1. Preference for sources of finance

Fishing families all along the coast are indebted and they seem to be locked in the state of indebtedness mainly to informal sources as they do not value this as an unhealthy indicator. This occurs mainly due to the following reasons.

Attitude: The fisherfolk do not have the attitude to save. They are spendthrift people who eventually concentrate on consumption with available resources without having any concern for tomorrow. This can be also attributed to spending of Government and other agencies concentrating the coastal belt.

Lethargy waiting for donor's funds: Tsunami has been a blessing in disguise with these marginalized segments benefited by grants from different sources which otherwise would not have reached them. The grants include housing with all amenities, fishing equipments and number of outreach programmes by various agencies to ensure livelihoods of this marginalized section. One effect of these programmes is that; people have turned lethargic waiting for agencies to provide grant for their development than for eking out living for themselves. In line with their expectation, the Fisheries department of the State has come up with large number of development projects which would subsidise their participative endeavours. There are even 100 per cent subsidised programmes offered by agencies, which cost nothing to the fishing families but transfers all benefits. However, these programmes are found to be non sustainable, that people tend to back once the agency has withdrawn from the scene.

Consumption culture: One important aspect that needs to be studied is their consumption culture. Compared to their earlier generation they live in a better position supported by a host of agencies targeted at their development. However, their pattern of consumption is very careless, that they follow a happy go lucky way of life. Example may be sited from experiences associated with an SHG group receiving assistance from the State agency. The group was involved in an activity of aquaculture of mussel/oyster in the brackish water sites. The initial expenses had to be borne by the groups which would be subsidised at a later stage. The members found the seed capital by pledging their ornaments with a local moneylender. Official in charge provided them with their eligible finance at a later

stage so that they could release their assets under pledge. However they did not bother to take the gold instead purchased new dresses for the family.

Expense for lifecycle events: Marriages in fishing families are an extravaganza which is a major reason for their indebtedness. A marriage is conducted with a lot of pomp and show without bothering on their status of living. This turns out to be a wasteful expenditure on life cycle events.

Social Cohesion: social cohesion is very high among the fisherfolk. If the fishing family faces any trouble, no matter how distant the relation could be, they are willing to offer financial as well as physical help. This is a plus point which helps the fisher families; however, the financial help is often mobilized out of an informal borrowing on the part of donor.

The new class of money lenders: The new class of money lenders is quite different from the old professional moneylender who is a villager, having knowledge of the whereabouts of the borrower. The new moneylender is often one among themselves, not necessarily professional, often a trader or commission agent involved in the fish trade. Otherwise there are groups particularly the Non Banking Financial Companies (NBFCs)which have a network of branches all over the area, operated through the disbursement and collection agents. The interest rates of such borrowing are often high ranging from about 60 to 180 per cent. The penalty for delinquency is not easy to comply with and often the collection agents unravel reign of terror for the borrowing parties.

Factor Analysis

Factor analysis of household preference factors for formal, semi formal and informal sources of finance were done using ten identified variables. These variables describe the different aspects involved in sanctioning of the loan and suitability to the borrower. It was found that there was a high correlation between the variables and this was found to be statistically significant. Bartlett's Test of Sphericity and Kaiser-Meyer-Olkin measure of sampling adequacy was conducted to analyse the applicability of factor analysis to the 10 variables (Hair et al, 1998).

The Bartlett's statistics tests the hypothesis that the correlation matrix of chosen variables is an identity matrix. This hypothesis may be rejected if the chi square values are high. Similarly MSA value of KMO test indicates the proportion of variance in the variables which is common variance that might be caused by underlying factors. Value less than 0.50 indicates that factor analysis cannot make any valid conclusions. Rules of thumb were only those factors were to be retained, which when sorted in descending order in terms of variation explained, cover cumulative 60 per cent of the total variation in the original variables. Second, only those factors to be retained which have eigen values greater than 1. Once the number of factors is known, the variables could be grouped into any of these factors so that the characteristic of the underlying factor may be determined. Towards this, rotated component matrices were calculated that gave factor loadings for each of the variables. Factor loadings show the correlation between factors and the variables. Large absolute values indicate that a variable and a factor are closely related. On the basis of commonality among the variables that have large loadings for a particular factor, the underlying dimensions were identified.

Factor Analysis of household preference for formal sources of finance

The result of factor analysis was found significant at 1 per cent level and KMO Measure of sampling adequacy exceeded 0.5 which is considered as acceptable.

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.647
Bartlett's Test of Sphericity	Approx. Chi-Square	516.585
	df	45
	Sig.	.000

Results show that eigen values exceeded one in case of four components. Component 1 explains 21.43 per cent of the variance, component 2 accounts for 15.16 per cent, component 3 explains 13.17 per cent and

component 4 explains 10.43 per cent. On this basis, the factors behind preference of formal sources of finance were identified as loan quality indicators, security requirement, loan product suitability and cost, ease of access and repayment terms. The loan quality indicators include variables of timeliness in providing the loan, adequacy of loan amount, procedural hassles in applying for the loan and penalty at times of non payment of dues. Security requirement for sanction of loans is a single important factor that affects preferences which accounts for 15.16 per cent of the variance. Rest of the variables was identified under the loan product suitability and cost of credit and ease of access and repayment terms.

Table 7.20. Results of Factor analysis of formal sources of finance

Rotated Component Matrix[a]					
Underlying factors	**Variables**	**Component**			
		1	**2**	**3**	**4**
Loan Quality indicators	Timeliness	**.700**	-.075	-.039	.231
	Adequacy	**.558**	-.086	.263	.004
	Procedural hassles	**.643**	.230	-.117	.370
	Penalty for non payment	**.677**	.053	.139	-.255
Security requirement	Need for collateral security	.084	-.032	-.003	**.797**
Loan product suitability and cost of credit	Suitability of loan product	-.083	**.663**	.181	.416
	Supply of cons loans	.226	**.770**	-.151	-.084
	Rate of interest	-.351	**.559**	.181	-.287
Ease of access and repayment terms	Proximity	.219	-.084	**.753**	.287
	Terms of repayment	-.004	.140	**.785**	-.243

Factor Analysis of household preference for semi formal sources of finance

The result of factor analysis was found significant at 1 per cent level and KMO Measure of sampling adequacy was 0.820 which is considered as acceptable.

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.820
df	45
Sig.	.000

Results show that eigen values exceeded one in case of two components. Component one explains 37.15 per cent and component two explains 14.66 per cent of the variances. On this basis, the factors behind preference of semi formal sources of finance were identified as conditionalities for loan and other loan product features. Component one was found to have significant influence on preference for source of finance which can be collectively termed as the conditionalities of the availing the loan. This includes terms and conditions of availing loans, mainly procedural hassles, security requirements, rate of interest, terms of repayment, supply of consumption loans and proximity to the lender. Semi formal loans are loans from SHG groups which provide loans to consumers keeping in mind the above mentioned factors. The second component could be termed as loan product features where the variables are adequacy, suitability, timeliness and penalty for repayment.

Table 7.21. Results of Factor analysis of semi formal sources of finance

Factor loadings of Rotated Component Matrix[a]			
		Component	
	Variables	**1**	**2**
Conditionalities of the loan	Terms of repayment	**.843**	
	Proximity to lender	**.835**	
	Security requirements	**.821**	
	Procedural hassles	**.783**	
	Supply of consumption loans	**.665**	.361
	Rate of interest	**.578**	.452
Loan product features	Adequacy		**.707**
	Suitability of the product		**.657**
	Timeliness in supplying loan		**-.406**
	Penalty for non repayment		**.388**

Factor Analysis of household preference for informal sources of finance

The result of factor analysis showed significance at 1 per cent level. Measure of sampling adequacy resulted in value of 0.824 which was also found to be highly acceptable.

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.824
	df	45
	Sig.	.000

Results show that eigen values exceeded one in case of three components. Component one explains 42.71 per cent of the variances while component two explains 14.44 per cent of the variations and component three explains 12.86 per cent of the variations. On this basis, the factors behind preference of informal sources of finance were identified as loan product quality indicators, terms of the loan and proximity to source and conditions of the loan.

Table 7.22. Results of Factor analysis of informal sources of finance

Rotated Component Matrix[a]				
		Component		
		1	2	3
Loan Product quality indicators	Timeliness	**.549**	.278	.082
	Adequacy	**.866**	.084	.026
	Procedural hassles	**.648**	.553	.129
	Suitability of the loan product	**.865**	.155	.008
	Supply of consumption loans	**.780**	.050	.259
Terms of the loan	Rate of interest	-.094	**-.871**	-.033
	Need to furnish collateral security	.305	**.789**	.092
Proximity to source and Conditions of loan	Proximity	.435	.462	**.618**
	Terms of repayment	-.069	.299	**.765**
	Penalty for non payment	.213	-.365	**.727**

Results indicate significant influence of component one, namely the loan product quality indicators in borrower preference for informal sources of finance. This factor includes variables like timeliness of loan, adequacy, procedural hassles, suitability of the loan product and supply of consumption loans. It is very clear that informal sources provide timely and adequate loan according to the demand of the borrowers. Further there is no insistence for furnishing collateral for availing loan. Another attraction to informal sources is that they are able to provide tailor made products including consumption loans suitable to borrower's requirements. Component two and three are not that influential in determining preferences as their combined effect is almost equal to half the influence of component one. While component two includes variables specifying the terms of loan, component three specifies proximity to source and conditions of the loan.

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Chapter 8

SUMMARY AND CONCLUSION

Contents

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8.1 Summary

Access to affordable financial services, especially credit opens up livelihood opportunities by empowering the poor. The extent and quantum of indebtedness at a reasonable level of interest sourced out from the organised sector is an indicator of development since availability of finances boost up the economic activity and capital formation in a region. Financial inclusion has been accorded priority in the planner's agenda recognizing the importance of finance led development and economic growth. Financial inclusion strategies are derived from inclusive economic growth models that envisage upliftment of the poor through access to better way of living. Recognizing the need for finance as a critical input for development, RBI has promoted the financial inclusion drive in the country to include vast majority of unbanked masses into banking fold. Microfinance led inclusion has been recognized as one of the elements of the multipronged strategy that promotes financial inclusion.

Financial inclusion denotes delivery of financial services at an affordable cost to vast sections of the disadvantaged and low income groups (GOI, 2008). With reference to provision of credit to rural poor there is still dominant hold by informal agencies who charge exorbitant rates of interest. This points to the fact that inspite of significant achievements in spreading bank branches over the country, the services that reach the poor and marginalised segments of the community are less. Banks remain unapproachable and credit terms are often not

suitable to poor borrowers. Marine fishery is one of the sectors which is often associated with socio economic backwardness and poverty incidence. The seasonality and uncertainty in earning pattern in marine fisheries sector is primarily responsible for their lower socio economic profile coupled with a host of internal and external factors. Fluctuating earnings often necessitate them to borrow. However in the event of lack of institutional agencies to supply need based finance, they move towards informal agencies who supply immediate finance at a higher cost. This leads to the situation that any further earnings are subject to debt servicing, necessitating additional borrowings, entangling them in the debt trap. The study was conducted in the marine fishing villages in Kerala, where more than 3.5 lakh people depend on marine fishery. Indebtedness in marine fisheries has been a part of several studies focusing on socio economic milieu of fisherfolk in addition to focused inquiries. In general, all these studies have pointed out the grim state of affairs of fisherfolk with seasonality and uncertainty in earning pattern, over dependence on informal lending inspite of considerable penetration of formal financing institutions in the State.

Micro financing offers optimal solutions for extending reach of financial inclusion into the coastal hamlets. In this background it was considered appropriate to take up a study in the maritime districts in Kerala probing the prospect of micro financing in supporting financial inclusion of coastal fisherfolk with objectives of

a) To estimate the status of financial inclusion among fish worker's households in Kerala

b) To study the factors determining level of financial exclusion/inclusion with a view to understand the role of microfinance

c) To estimate factors influencing informal borrowings of households

d) To estimate the existing demand for credit and analyse the role of microfinance in serving the credit gap

Fishing villages all along the Indian coast are comparatively backward, synchronized with underdevelopment. Marine fishery sector in Kerala exhibits disparities, both inter-sectoral and intra-sectoral, while existing within the most acclaimed "Kerala Model of Development" with high human development comparable to developed countries not compromising to low per capita income (Kurien, 2000 and Sathiadhas, 2006). Lack of permeation of development efforts to fishing community is tacit inspite of State's overall advancement. Literacy rate in marine fishing villages in Kerala is 73 per cent, far lower than State literacy rate of 90.86 per cent. A paradoxical picture of low level of human development in fisheries sector is underscored by lower sex ratio of coastal fishing villages (979) compared to the State average of 1058.

The extent and quantum of indebtedness at a reasonable level of interest sourced out from the organised sector is an indicator of development since availability of finances boost up the economic activity and capital formation in a region. The extent of indebtedness and the average outstanding debt per indebted households were comparatively less among fishermen as per the figures of institutional sources, but the affairs of fisher folk is really grim as they are virtually gripped in the hands of non-institutional agencies, namely money lenders and traders for which legitimate data sources do not exist. The ground level credit flow to fisheries sector in 2008-09 stood at Rs. 1281 crore higher than the previous year and recorded almost four times increase compared with 1997-98. However, this constitutes 0.004 per cent of the ground level credit flow to agriculture.

The study area covered 12 coastal fishing villages from four coastal districts in Kerala selected by multistage sampling. In the first stage districts were divided into three strata based on the geographic division. Samples were selected depending on the proportion of number of fishing families. Accordingly the sample comprised Thiruvananthapuram and Kollam from the southern zone, Ernakulam from the central zone and Kozhikode from the northern zone. Twelve fishing villages were selected from the sample districts (10 per cent of the number of villages). Further, sample households were selected randomly (10 per cent of the population) from the selected coastal villages. Total sample size for the study was 508 households.

The mean age of respondents was highest in Ernakulam (48.78) and least at Thiruvananthapuram (40.49). It was seen that majority of the respondents were distributed among the age class of 31 to 60. Family size of households was estimated as 4.38. Mean family size was highest in Kozhikode. Monthly per capita consumption expenditure incurred was estimated as on an average Rs. 866.31 in selected districts. The MPCE was found the highest in Ernakulam and lowest in Kozhikode. Land ownership depicts the possession of household assets in terms of land. Mean size of land owned by households was estimated as 3.15 cents which varied from 1.9 cents in Thiruvananthapuram to 4.22 cents in Kollam.

The study included randomly selected samples from four coastal districts in Kerala. In interpreting the role of microfinance in facilitating financial inclusion samples were classified into members from SHG groups, members having micro finance provider (MFP) linkage and non members. Distribution of samples according to the membership/non membership in SHG revealed that 22.6 per cent of the households belonged to category of non-members and 27.4 per cent were SHG members without any linkage and rest 50 per cent were members of SHGs having linkage to MFPs like commercial banks, cooperative banks, voluntary agencies etc. The sample households comprised 5.1 per cent of illiterates, 6.1 per cent educated till primary level, 28.9 per cent till secondary level and 8.1 per cent above secondary level. Households depending upon artisanal fishing dominated in Thiruvananthapuram district in southern zone and in the central zone. Motorised fishing households dominated in northern zone and in central zone. Kollam district in southern zone was epitomized by households depending on mechanised sector (49.1 per cent). Zone wise distribution of sample households according to asset class revealed that majority of the households belonged to the lower asset class in the northern and southern region. However in the central region, majority of households were distributed among two asset classes, i.e. below Rs. 75000 and between Rs. 75,001 and Rs. 150000.

The term financial inclusion can take two dimensions, one: the access to financial services and second: the dependence on informal financial services. The

present study has attempted to assess the level of financial inclusion with respect to these two dimensions.

Estimation of level of financial inclusion was effected by adopting the method of weighted average index numbers. Indicators of usage of financial services were used by assigning appropriate weights to arrive at an index of financial inclusion. The findings of the study reiterated the wide presumption among the poor that financial institutions are agencies solely catering to credit needs. Indicators of transaction banking like usage of cheque/ DD for financial transactions, granting social security payments through banks, usage of ATMs for withdrawal of money or using it as debit card for payments purposes could not make any effect on the fisherfolk. Further, poor banking habit prevail in the fishing villages similar to other rural transects where cash remains the preferred mode of payment.

Financial inclusion is expected to spur economic growth and this often epithets supply of credit to the poor. Credit supply is the most important element of financial inclusion. The credit accessibility was found to be significantly high due to penetration of cooperative banks/societies and the proliferation of micro finance.

Savings/thrift is dependent on people's attitude rather than accessibility to formal fold of financial institutions. This attitude can be defined as an interest to save for the lean seasons/ emergencies when there is sufficient disposable income. However this seems to be unworkable phenomenon among fishing community. Almost 80 per cent of the households seemed to have access to savings bank account provided by cooperative/commercial banks/SHG bank linkage or through post office savings bank. Though having an SB account counts in financial inclusion, the questionable fact is that whether this leads to serving finance requirements of fishing households. Deposit services like Fixed Deposit or Recurring Deposit remained low among the respondents (13 per cent) as they voluntarily opted out of such services. Voluntary exclusion can be induced by drivers of financial illiteracy and factors. However a lone exception may be observed among SHG members that credit facilities are always linked to savings corpus requiring compulsory savings. This is applicable in case of SHG bank linkage also, where the bank allows credit to

the group on the basis of savings. However SHGs do not grow beyond collecting the compulsory amount of savings, usually Rs 10 per week and is also characterized by inbuilt inflexibility.

Insurance was much more popular among the fishing communities as agencies involved in development of the fishing sector insure the lives of sea faring fishermen. However, this cannot be viewed in an investment angle as in the case of ordinary life insurance as no money could be claimed if accidents in sea did not occur.

Single composite (conglomerative index) measuring the well being in terms of access to financial services was constructed for measuring the level of inclusion taking into consideration the above said dimensions. The calculation of index has been based on the mathematical concept of weighted average index numbers. The variables were selected based on extensive literature available on the subject and were assigned appropriate weights by using judgement method. The weightage distribution was evaluated by a panel of 30 judges who were experts in the field of banking, academia and researchers. An acceptable weightage distribution was arrived by incorporating different weighing schemes using arithmetic average.

The calculated FI Index revealed that out of the sample, 9.3 per cent were totally financially excluded with no dealings with financial service providers for the past three years. While 21.9 per cent of the households lie below FI Index of 30 per cent, 48.4 per cent of them fall in the range of 31 to 60 per cent and the rest falling in the top quintile of above 61 per cent.

Next step was to find the association of estimated financial inclusion index with variables of membership in SHGs and informal borrowings. It is inferred that there is a clear association with higher levels of FI Index and SHG membership. Almost 65 per cent of the SHG-MFP members attained FI Index of more than 30 per cent. Reportedly, total exclusion was observed in case of 40.9 per cent of non members and 47 per cent of them were found to be marginally included. It was also observed that being an SHG member with or without bank linkage could promote medium level of financial inclusion as their main areas of support are

savings and credit. Though transaction banking is encouraged at least for members who operate the account for the groups, they tend to operate only the withdrawal and payment mechanisms associated with the deposit account of the group and hence cannot be treated separately. The mean financial inclusion index of different categories showed that the non members had the lowest financial inclusion index (15.78), while SHG members had higher index (35.40) and those having a linkage with MFPs achieved even higher index (58.44). Inorder to confirm that there is difference in levels of financial inclusion among the SHG members, SHG-MFP linkage and non members, one way ANOVA was done. The result was found significant at one per cent level. Hence the hypothesis is accepted that households which are members of SHG's enjoy higher levels of financial inclusion.

Effectiveness of financial inclusion can be alternatively measured through the level of informal borrowings of households as it goes without saying that if cheap and easier terms of financing are available, they tend to move away from informal finances. It was seen that informal borrowings decreased from 72.3 per cent among the excluded to 43.3 per cent among those having the highest level of index (61 & above).

The interaction of socio economic variables on financial inclusion was observed to find the influence of such variables. Among the financially excluded, majority (16 per cent) were households engaged in artisanal fishing followed by households engaged in other fishing allied activities (13.1 per cent). Small scale fishery has not been able to pick up momentum unlike other sectors, seemingly reflected in the grim state of financial inclusion index of households which depend on artisanal fishery for their livelihood. Age class could be considered as a proxy for fishing experience and increased experience in fishing contributed to better financial access. However, distribution of financial inclusion index according to age class of respondents of sample households showed that there is no significant association between the two. The asset position of the household determines the way in which they are able to diversify their income earning opportunities. The greater the value of assets, higher the creditworthiness and less exploitative lenders are likely to

be. Analysis of level of financial inclusion of households at the disaggregated on the basis of membership in SHG/SHG-MFP linkage revealed that majority of non members who belonged to the lowest asset class tended to be financially excluded or marginalised. However a few could find access to main stream formal financial service providers from this class also. A few households, who belonged to higher asset class, had comfortable levels of financial inclusion. The situation differed in case of SHG members, where 47 per cent of the lower asset category was financially included. This was still improved in case of SHG MFP linkage where almost all of them were in comfortable levels of financial inclusion. The Chi square test proved that there is association between asset class and financial inclusion among the non members, while there is no such association in case of members of SHG/SHG-MFP linkage. Hence it is can be concluded that SHGs are capable of rendering poor households access to financial services though they do not possess adequate asset backing. Association between education and FI Index was found significant by Chi square test of association.

The study probed the possibility of the highest education attained by member of households to be an influential factor affecting access to financial services. Very clearly mean indices of households observed increase with highest level of education obtained by any member of the household. The illiterate class possessed the least index while households with members having education above higher secondary level had the highest mean index (48.33).

Social cohesion in terms of security nets build up by the society is important that could be decisive factor in necessitating inclusion as these nets back fishing families during life cycle events like marriages, birth and death. Distribution of Financial inclusion index across households according to social expense class revealed that households belonging to higher expense class tend to be classified as having access to lesser financial services. It could be inferred that there is negative association between social expense class and financial inclusion index.

Inorder to find the explicit relation between expenditure of households and financial inclusion mean financial inclusion index of households was analysed. The distribution of households in various expenditure classes according to financial inclusion index reveals that higher financial inclusion is associated with higher expenditure. The index increased from 32.19 for expenditure class below Rs. 1500 to 45.24 for expenditure class above Rs. 4501. Distribution of households according to family size could not establish any particular pattern to explain the classification of levels of financial inclusion.

The informal borrowings by the households with or without membership in SHG groups have been closely examined to understand the influence of microfinance in reducing informal borrowing. Surprisingly, it was seen that though there was a marginal reduction in informal borrowings by the households who are members of SHG/SHG bank/MFP linkage. A marginal two per cent reduction in informal borrowings was noted with the SHG members compared to non members, there was 15 per cent reduction in informal borrowings in case of members of SHGs with MFP linkage. This can be attributed to the inflexibility of SHGs in responding to emergency needs of the fisher households. SHGs operate revolving credit which is extended to the members on the basis of turns. Repeat loan is not sanctioned unless the current loan is repaid. Emergency needs of finance cannot be serviced in such situations. This entails the households to borrow from the informal sources for coping with the emergency hopeful to service the debt once his/ her turn for loan in the SHG has arisen. To test whether there is any difference between the households who are non members of SHGs and members of SHGs/SHG-MFP linkage; chi square test has been employed. Result of Chi square test was found to be significant at 1 per cent level of significance. Hence the hypothesis which assumes lesser informal borrowings for SHG members compared to non members holds good.

Having found that that there is reduction in borrowal from informal lenders by member households, it was considered appropriate to find the quantitative relation between these two variables in conjunction with other factors. Here dependent variable is incidence of borrowing from informal sources. The response variable of

incidence of informal borrowings among households was dichotomous. With the above identified variables, the best fitting model in this situation was the binary logistic regression model. The results of the logistic regression reveal the following. Members of SHGs or SHG-bank/MFP linkage were found to have lesser probability of incidence of informal borrowings (by 2.9 times) compared to the reference category of non members. Occupational diversification was found significant and the probability of borrowing from informal sources was lesser by two times compared to reference category. Emergency expenditure failed to have any significance on informal borrowings. Inspite of this, number of emergency finance requirements was significant in determining the incidence of informal borrowings. Two emergencies could increase the probability of informal borrowings by three times and more than two emergencies would increase the probability of informal borrowings by 5.8 times. The household income that could have effect on the borrowing pattern of households failed to have significant influence. One reason could be that income of households has been accounted by taking the proxy variable of expenditure.

As easy and low cost credit is the single most important element of financial inclusion, indebtedness of households need close examination. The financial inclusion drive in the country has insisted upon opening of 'no frills' savings account by banks with the impetus on provision of low cost and easier access to credit. However this has been crippled by various factors including procedural formalities, time lag in sanction and disbursal of loan, terms of loan like collateral security requirements etc. Thus 'no frills' account opened by the poor remains inoperative, serving to add to the country's macro scan of number of accounts opened by the population. Level of financial inclusion speaks about numbers and it is required to further the analysis of level of indebtedness of households with a view to identify the credit gap.

Total amount demanded by sample households and the contribution of formal and non formal sources were worked out. It was found worthwhile to estimate the total credit gap experienced by sample households and draw valid conclusions for the population. Out of the total demanded long term credit, 39.5 per cent has been

supplied by formal and semiformal sources. The credit gap thus identified is 60.5 per cent. Institutional sources of finance should prioritise their credit polices to supply this portion of underserved population to serve the objectives of financial inclusion in addition to looking into the needs of the unbanked. From a detailed overview of purpose wise credit gap, loans for purposes of servicing life cycle events, fishing related assets and other purposes need more concentration by formal financing agencies. Further, it was estimated that majority of the emergency finance requirements were financed by the informal financing agencies (65.92 per cent). The credit gap was found highest in case of medical finance requirements and least in case of consumption loans. Lesser credit gap with consumption loans can be associated with the upcoming of SHGs as an intermediate semi formal financing agency.

Given the role of formal, semi formal and informal financing in serving as sources of finance for the coastal settlements, there exist reasons that promote preference of particular source of finance. Given the attributes of each source of lending, there are positive and negative traits credit providers that attract/keep away borrowers. Different sources of finance were evaluated by household's to identify their preferences. As regards rate of interest, formal sources of finance were preferred by the borrowers as they charge the lowest rate of interest. Penalty for non payment was seen as problematic for all sources, including that of semi formal agencies. Terms of repayment were preferable in case of semiformal sources. Proximity criterion was served mostly by the informal and semi formal lenders. Need for serving collateral security declined the households access to formal financing agencies, while the same attracted them to informal and semi formal sources of finance. Similar result was observed in case of supply of consumption loans. Adequate, timely loans devoid of procedural hassles were supplied by the informal lenders followed by semi formal sources. All these factors were weakened in case of formal sources of finance. Tailor made loan products suitable to borrowers needs are the specialty of the informal lenders. Factor analysis helped to identify the underlying dimensions behind preference for sources of finance and the factors behind preference of formal sources of finance

were identified as loan quality indicators, security requirement, loan product suitability and cost, ease of access and repayment terms. Factors behind preference of semi formal sources of finance were identified as conditionalities for loan and other loan product features. Factors behind preference of informal sources of finance were identified as loan product quality indicators, terms of the loan and proximity to source and conditions of the loan.

8.2 Significant Findings

a) Level of financial inclusion epitomized by Financial Inclusion Index revealed that, 9.3 per cent were totally financially excluded with no dealings with financial service providers for the past three years. While 21.9 per cent of the households lie below Financial Inclusion Index of 30 per cent, 48.4 per cent of them fall in the range of 31 to 60 per cent and the rest falling in the top quintile.

b) It is inferred that there is a clear association with higher levels of Financial Inclusion Index and SHG membership. The mean financial inclusion index of different categories showed that the non members had the lowest financial inclusion index (15.78), while SHG members had higher index (35.40) and those having a linkage with MFPs achieved even higher index (58.44).

c) Difference in levels of financial inclusion among the SHG members, SHG-MFP linkage and non members, was found significant at one per cent level confirming the hypothesis that households which are members of SHG's enjoy higher levels of financial inclusion.

d) The influence of socio economic variables on financial inclusion was analysed by studying the individual interactions between the variables and the index. Those engaged in artisanal fishing and fishing allied activities were the majority to be financially excluded or marginally included. High level of inclusion was found for households engaged in motorized and mechanized fishing (31 per cent of the households).

e) In case of non members, asset possession clearly acts as a significant variable determining the level of financial inclusion. The non member households in the lowest asset class had Financial Inclusion Index of 12.67, while it increased to 35 for asset class between Rs. 75001 and Rs. 150000 and to 57.50 for asset class above Rs. 150000. In case of SHG/SHG-MFP members, the asset possession was not significant in determining level of financial inclusion. The following hypothesis with regard to asset position of households was analysed

f) Hypothesis that there is association between asset class and financial inclusion index among non members is accepted at 1per cent level of significance.

g) Hypothesis that there is no association between asset class and financial inclusion index among SHG members is proved. Hence it is assumed that SHGs are capable of rendering poor households access to financial services though they do not possess adequate asset backing.

h) Hypothesis that there is no association between asset class and financial inclusion index among SHG-MFP members is proved.

i) Association between education and Financial Inclusion Index was found significant by Chi square test of association. The illiterate class possessed the least index while households with members having education above higher secondary level had highest mean index (48.33).

j) Mean financial inclusion index tends to be lesser with increasing social expenditure of households. It can be hence inferred that there is negative association between social expense class and financial inclusion index.

k) The distribution of households in various expenditure classes according to financial inclusion index reveals that higher financial inclusion is associated with higher expenditure. The chi square test of association revealed the association between expenditure of

households and financial inclusion index is significant at 5 per cent level of significance. The index increased from 32.19 for expenditure class below Rs. 1500 to 45.24 for expenditure class above Rs. 4501

l) Result of Chi square test was found to be significant at one per cent level while testing the hypothesis which assumes lesser informal borrowings for SHG member households compared to non member households.

m) Having found that that there is reduction in borrowal from informal lenders by member households, it was considered appropriate to find the quantitative relation using binary logistic regression model. Members of SHGs or SHG-bank/MFP linkage are found to have lesser probability of incidence of informal borrowings (by 2.9 times) compared to the reference category of non members. Occupational diversification was found significant and the probability of borrowing from informal sources was lesser by two times compared to reference category. Number of emergency finance requirements was significant in determining the incidence of informal borrowings. Two emergencies could increase the probability of informal borrowings by three times and more than two emergencies would increase the probability of informal borrowings by 5.8 times.

n) Out of the total demanded long term credit, 39.5 per cent has been supplied by formal and semiformal sources. The credit gap thus identified was 60.5 per cent. Institutional sources of finance should prioritise their credit polices to supply this portion of underserved population to serve the objectives of financial inclusion in addition to looking into the needs of the unbanked.

o) It was estimated that majority of the emergency finance requirements were financed by the informal financing agencies (65.92 per cent). The credit gap was found highest in case of medical finance requirements and least in case of consumption loans. Lesser credit gap with

consumption loans can be associated with the upcoming of SHGs as an intermediate semi formal financing agency.

p) It was found that in the existing long term demand for finance, share of SHG in total number of loans financed was 28.44 per cent while the share in total amount of loan demanded was only 2.34 per cent. Similarly, share of SHG in total formal and semi formal loans was 46 per cent while it was 6.26 per cent in total amount of loan supplied by formal and semiformal agencies. This is a clear indication of spread of microfinance promoting financial inclusion, but failing to provide financial deepening.

q) Regarding emergency/short term requirements of finance, 21.55 per cent of the total existing emergency requirements were financed by the SHGs, while this formed 20.49 per cent of the total amount. Share of SHGs in the number of emergency formal and semiformal loans was 64.36 per cent, and its corresponding share in the amount was 58.67 per cent. Hence it can be inferred that SHGs could not make significant impact in servicing long term demand for finance among fisher households, while there is considerable impact on short term/emergency finances.

r) Formal sources of finance were preferred by the borrowers as they charge the lowest rate of interest. Penalty for non payment was seen as problematic for all sources, including that of semi formal agencies. Terms of repayment were preferable in case of semiformal sources. Proximity criterion was served mostly by informal and semi formal lenders. Need for serving collateral security declined the households access to formal financing agencies, while the same attracted them to informal and semi formal sources of finance. Similar result was observed in case of supply of consumption loans. Adequate, timely loans devoid of procedural hassles were supplied by the informal lenders followed by semi formal sources. All these factors were weakened in case of formal sources of finance. Tailor made loan products suitable to borrowers needs are the specialty of the informal lenders.

8.3 Conclusion

While assessing the status of financial inclusion, it was found that one third of the households in marine fisheries sector are still marginalised with limited or no access to basic financial services including that of microfinance. Microfinance has played an important role in financial inclusion of fisher households in coastal Kerala, with higher levels of financial inclusion being associated with SHG membership. Informal borrowings were found to be lower with increasing level of financial inclusion and with having access to microfinance. However the incidence of informal borrowings with SHG membership could be observed in the case of SHGs without MFP linkage owing to limited fund mobilization and inflexibility associated with lending. Socio economic variables including occupational pattern, social cohesion, asset base, expenditure and education were found to have influence on financial inclusion. It was observed that asset possession remains an important criterion in determining the level of financial inclusion of households in case of non members. It was found that SHG/SHG-MFP members were not influenced by asset possession as criteria in determining access to financial services including deposit and credit. While informal borrowings continue to exist, it was found to be influenced by the membership in SHG, number of emergencies and occupational diversification of households.

Microcredit assumed significance in emergency requirements of finance; while an existing credit gap in long term financing was identified that was sparingly serviced. The credit gap is presently serviced by informal lenders who charge exploitative interest rates. While microfinance serves the purpose of financial inclusion, it is required to broaden its ambit to encompass the objective of financial deepening. Microfinance was found to promote compulsory savings with built-in inflexibility. It is suggested that microfinance operators should give more stress on thrift aspect so that savings on individual basis should be promoted with a view to reduce the inflexibility associated with present form of microcredit.

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ANNEXURE

Annexure I

RESULTS OF FACTOR ANALYSIS
Eigen values of formal sources of finance

Component	Initial Eigen values		
	Total	% of Variance	Cumulative %
1	2.143	21.430	21.430
2	1.516	15.164	36.594
3	1.317	13.169	49.763
4	1.043	10.429	60.192
5	.793	7.933	68.125
6	.762	7.619	75.744
7	.671	6.713	82.458
8	.652	6.522	88.980
9	.575	5.748	94.727
10	.527	5.273	100.000

Eigen values of semi-formal sources of finance

Component	Initial Eigen values		
	Eigen values	% of Variance	Cumulative %
1	3.715	37.146	37.146
2	1.466	14.659	51.805
3	.984	9.844	61.648
4	.905	9.054	70.703
5	.852	8.521	79.223
6	.656	6.559	85.783
7	.427	4.271	90.054
8	.377	3.768	93.822
9	.339	3.394	97.217
10	.278	2.783	100.000

Eigen values of informal sources of finance

Component	Initial Eigen values		
	Total	% of Variance	Cumulative %
1	4.271	42.709	42.709
2	1.444	14.437	57.146
3	1.286	12.864	70.010
4	.783	7.831	77.841
5	.604	6.044	83.885
6	.436	4.364	88.249
7	.359	3.591	91.840
8	.300	2.997	94.837
9	.291	2.913	97.750
10	.225	2.250	100.000

Annexure II

Financial Inclusion of Marine Fishing Communities in Coastal Kerala

Name of Fishing Village…………… Ward. No…………… District……………..

SHG member/SHG Non member

I Socio Economic Profile

1. Name of respondent: ……………………………..
2. Community……………………………………….
3. Number of members in the family: ………………………………..
4. Number of Adults: ……………….. Children: …………………
5. Whether APL or BPL…………….
6. Education, occupation and income of members of the family

Relation	Age	Sex	Education	Occupation	Average Monthly income	No of earning days/month	Whether having bank a/c
Self							

7. Ownership of assets

Physical Assets	Present Value
1. Land owned…………..cents	
2.Type of house (Kutcha/semi pucca/pucca) 3. Living space: ……………sq. ft	
4. Vehicles owned: Cycles/scooters/auto/four-wheeler	
5. Fishing crafts owned	
6. Fishing gears owned	
Financial assets	**Present Value**
7. Gold	
8. Bank balance	
9. Investments	

8. Consumer durables possessed: (Tick the appropriate box and give approximate value)

Fridge	TV	Cooking Gas	Cycle	Two-wheeler
Cots-Specify No...	Chairs	Tables	Almirahs:	

9. How do you assess the following basic facilities available to you?

Access to safe drinking water	Adequate/Inadequate
Proper sanitation facilities	Adequate/Inadequate
Access to healthcare facilities	Adequate/Inadequate

10. Do you have telephone/ mobile phone? Yes/no

11. What is the average monthly bill of using telephone……

Income and Expenditure pattern

11. What was the average daily income of the family in the last year?
    a. From fishing activity ……………….No of employment days………
    b. From Non-fishing activities………… No of employment days………

12. Expenditure pattern (Average monthly expense)

Food	Medicine	Housing	Electricity	Water	Clothing	Education	Social Functions	Total

13. Are you affected by the trawl ban? Yes/No
    a. If yes, are you involved in any economic activity during the period?

14. Average monthly income during trawl ban period

15. Emergency requirements of money at any time during the past three years?

Emergency requirement	Number of occurrences per year	Amount	Source of finance
Medical hospitalization expenses			
Natural hazards-rain/flood/tsunami etc			
Loss of assets-accidents at sea			
Desertion/divorce			
If any other, please specify			

16. Do you borrow from institutional sources to meet the monthly expenses during trawl ban period/lean seasons? Yes/No
    a. If no, what are the reasons? (Tick from the following) (Agree/Disagree/No Opinion)

Reasons	
Security cannot be given	
I don't know the procedures	
Bank does not provide such type of loans	
It takes more time while applying to banks, which is easily got from other agencies	
Available finance from formal sources are insufficient	
Informal sources are available nearby	
Easy (timely) finance from informal sources	
No need for security	
Any other, please specify	

17. What are the activities for which you borrowed in the last three years?
(F-formal- commercial banks, cooperatives, RRBs etc
IF-informal-money lenders, friends and relatives, traders, commission agents-chitty)

Purpose	**Source (specify)**	**Interest**	**security**	**Amount borrowed**	**Time period**	**Amount outstanding**	**Specify Purpose used**
Construction and maintenance of house	F						
	IF						
Marriage	F						
	IF						
Education	F						
	IF						
Medical expenses	F						
	IF						
Consumption (in lean seasons)	F						
	IF						
Purchase of household articles	F						
	IF						
Festivals	F						
	IF						
Purchase of fishing crafts/gears/fishing equipments	F						
	IF						
Any other please specify	F						
	IF						

18. Please summarise the frequency, average borrowings from each sources of finance during one year period

	Formal sources	Friends& relations	Moneylender	SHG
Number of times borrowed				
Average amount of debt				

19. How do you rate the different sources of finance?

	Commercial banks	cooperatives	SHGs	SHGs (LwB)	Money lender	Traders
(Very Poor=1, Poor=2, Fair=3, Very Good=4, Excellent=5)						
Timeliness of credit supply						
Adequacy of loan						
Procedural hassles for sanction of loan						
Supply of production loans						
Supply of consumption loans						
	Commercial banks	**cooperatives**	**SHGs**	**SHGs (LwB)**	**Money lender**	**Traders**
(Highly unaffordable=1, unaffordable=2, Fair=3, affordable=4, Highly affordable=5)						
Need to furnish collateral security						
Proximity						
Terms of repayment						
Penalty for non payment of installments						
Rate of interest						

20. What are the other sources of finances/grants that your family has received from various sources and the amount in the last 3 years?

Source	Tick if applicable	Amount (Rs)
State Government sources (BFFDA,ADAK, FFDA)		
Central Government sources		
Matsyafed		
MPEDA		
NGO's		
Other sources		

II. Financial Information

Account Information

21. Do you have an account with any of the formal financial institutions Yes/No………………If yes, answer the following

22. Type of accounts maintained (Tick the appropriate column)

	Insurance	Loan				
			FD	SB	Current	RD
Commercial bank						
Cooperative bank						
SHG with linkage to banks						
SHG without linkage to banks						
Post Office						
Chit funds (private)						

23. If you are having a savings account, specify the type?
    No frills account (zero balance) /normal a/c

24. When did you have the last transaction with the bank…………………………..

25. Other than the usual functions of the bank, are you aware of the following facilities offered by the bank

Facilities	Aware of it	Used it
Cheque/DD		
Social security pensions through banks/cooperatives		
ATM		
Credit card/debit card/Kissan Credit Card		
Payment of bills (electricity/telephone)		

26. Are you aware of any other investment opportunities other than bank deposits?

Facilities	Aware of it but no access	Having access but no usage	Used it
Insurance policy			
Post office savings			
Share markets			
Mutual funds			
Fishermen's welfare schemes			
SHG's			

Involvement in SHG Groups

26. Do you have membership in any of the SHG's .Yes/No
27. If Yes, specify the organization to which the group has been affiliated

Group code	Institutional setup	Tick wherever applicable	Period of membership	Thrift & credit /Micro-enterprise	SHG with linkage to banks
A	State Govt- Kudumbasree				
B	SGSY (DRDA/				
C	Matsyafed (Cooperative)				
D	NGO's-specify				
E	NABARD				
F	Others specify				

28. What is your weekly savings?
29. Total fund (savings) of the SHG as on date
30. Have you taken loan from the internal funds? Yes/No
    If defaulted, what is the penalty?

31. Please provide the information of loans taken from the internal funds of groups in the previous year

Group code	No of turns obtained	Total loan amount	Interest rate per month	Repayment period	Monthly installment	Whether defaulted (Yes/No)	Penalty paid for default
A							
B							
C							

32. Whether your group has been linked to the bank? Yes/no

Group code	Loan amount sanctioned to group	Interest rate per month	Repayment period	Amount disbursed /member	Interest rate to members	Whether defaulted (Yes/No)	Penalty paid for default
A							
B							
C							

33. For paying the monthly installment of SHGs, have you resorted to non institutional sources? Yes/no

34. If yes, what was the interest rate of such borrowing?
What are the activities for which you have used the loan from SHG?

Purposes	Rank in the order of preference
Construction and maintenance of house	
Marriage	
Education	
Medical expenses	
Consumption (in lean seasons)	
Purchase of household articles	
Purchase of gold	
For repaying old debts (debt servicing)	
Festivals	
Any other please specify	

35. Do you think that more financial discipline is possible by working in groups? Yes/No
36. Are you provided loans in times of emergencies even if your turn has not reached or turn is already over? Yes/No
37. If Yes, any additional interest rate is charged for such loans
38. What are the problems faced by you while taking loans from groups?
40. What are the inherent problems in the functioning of groups that affects the member's interests?

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