in this regard to offer low cost credit and thereby save the fisherfolk from permanent debt trap. For mobilized group ventures, several names exist like Micro Finance Institution (MFI), Self Help Group (SHG), Farmer Entrepreneurial Group (FEG), Bharat Kisan Centres (BKC), Swayam Sahayak Sangh (SSS), Ayalkoottam (AK) etc. which perform an appropriate micro-enterprise and microfinance is an essential component ensuring its sustainability. Whatever may be the connotation, the essence is a mobilized group venture with a productive economic activity initiated by thrift deposits and sustained by an appropriate micro-enterprise either independently or by the intervention of an external agency where microfinance is the basis.

Mammoo (2004) in a study on income, indebtedness and savings among fisherfolk of Udayapur and Gopalpur of Odisha under BOBP Programme reported that fishing communities know two distinct credit sources: the traditional/informal and the institutional/formal. Traditional sources include moneylenders, middlemen, fish traders, boat owners, shopkeepers and pawn brokers. Institutional sources are mainly banks and cooperatives. Yunus (1999), the pioneer of microfinance projects in Bangladesh stated that microfinance system enabled thousands of people by offering poor people loans, some fear it could lead to over-indebtedness, but microfinance has benefited the wider economy. A few studies on the impact of microfinance organizations on rural indebtedness in fisheries sector were conducted by Fisheries Co-management Case Study from the Gambia (Njie and Mikkola, 2001). Vipinkumar (2007) reported on dynamics of twelve women's Self Help Groups in Marine fisheries sector of Malabar area of Kerala and developed a strategy for mobilisation of an effective Self Help Group. Sathiadhas (2009) conducted a couple of micro level socio economic studies on indebtedness in selected fishing villages in different maritime states in India. Jayaraman (2005) undertook the performance analysis of fisherwomen Self Help Groups in Tamil Nadu and reported that, women SHGs played a substantial role in alleviating poverty and indebtedness in fisheries sector. NSSO, (2003), Ministry of Finance (2007) and CED (2008) brought out the reports of indebtedness level in the Indian agricultural sector. Kudumbashree (2010) of Kerala state reported that it had spent Rs 121.88 crores for microfinance enterprises for women empowerment. In this context, the micro finance institutions /Self Help Groups of fisherfolk do have a pivotal role in reducing the indebtedness in the marine fisheries sector. In Tamil Nadu, there are 1, 92,697 marine fishermen households with a total population of 8, 02,912 (CMFRI, 2010) and the maximum number of families are in Ramanathapuram district (41,048). Women form 48% of the population with 939 females per 1000 males. There are about 1, 27,245 households below poverty line.

The major objectives of the study were to assess the extent of rural indebtedness and the role of various agencies in providing credit and repayment behaviour in marine fisheries sector in Tamil Nadu, to study the impact of selected Microfinance Institutions/Self Help Groups on rural indebtedness, supply of credit and empowerment and to study the comparative appraisal of perception of fisherfolk on MFIs, Institutional and Non institutional credit sources in terms of selected attributes.

Material and methods

For primary data collection, *R*amanathapuram, Nagapattinam and Tuticorin districts were selected, since the coastal length, number of fishing village and fishing activities are more compared to other coastal districts in Tamil Nadu. Among the 184 villages in Ramanathapuram district, four villages namely Mandapam, Pamban, Victoria Nagar and Ervadi, were selected for fishing activities dominated by mechanized boats. Similarly three villages namely Nambuthalai, Vedalai, Susaiyaparpattinam were selected for fishing activities dominated by motorized sector and two villages namely Olaikuda, and Thirupalaikudi north were selected for fishing activities dominated traditional boats (catamaran). In comparison to other fishing villages, the above-mentioned villages were selected since the numbers of mechanized, motorized and traditional boats (catamaran) were more in the respective villages. Among the 56 villages in Nagapattinam district, two villages namely Nagoorupattinachery and Arcottuthurai were selected for fishing activities dominated by mechanized boats. Similarly three villages namely Tharangambadi, Chandirapady and Vanagiri were selected for fishing activities dominated by motorized and two villages namely Poompuhar and Arcottuthurai were selected for fishing activities dominated traditional boats (catamaran). Similarly in Tuticorin district also, 3 locations such as Tharvaikulam, Tuticorin and Punnakkayal areas have been identified. From the above mentioned villages, the respondents for secondary and tertiary sector were selected. Proportionate random sampling was employed in selecting respondents from mechanized, motorized and traditional fisherfolk (primary sector), secondary sector and tertiary sector respectively from the selected villages. The secondary sector respondents are indirectly related fishing and their livelihood depends on fish and fish related activities and this category includes auctioneers at landing centres, traders, whole salers / retailers, sorters, peeling shed owners / workers, supplier of ice / diesel, people involved in curing and drying, loading and unloading workers etc. The tertiary sector respondents don't have direct connection with fish but they earn their livelihood indirectly on fish related activities and this category includes petty shop owners of landing centres / harbours / fish markets, suppliers of fish / auxiliary items, worker of net factory / boat yards etc.

The map showing the locale of the study in Tamil Nadu is presented in figure 1.

Data were also collected from members of MFIs identified in these locations. Hence, the total sample covered the respondents of four MFIs selected from each of the three districts comprising a total of 12 MFIs. Any mobilized group venture with a productive economic activity initiated by thrift deposits and sustained by an appropriate micro-enterprise
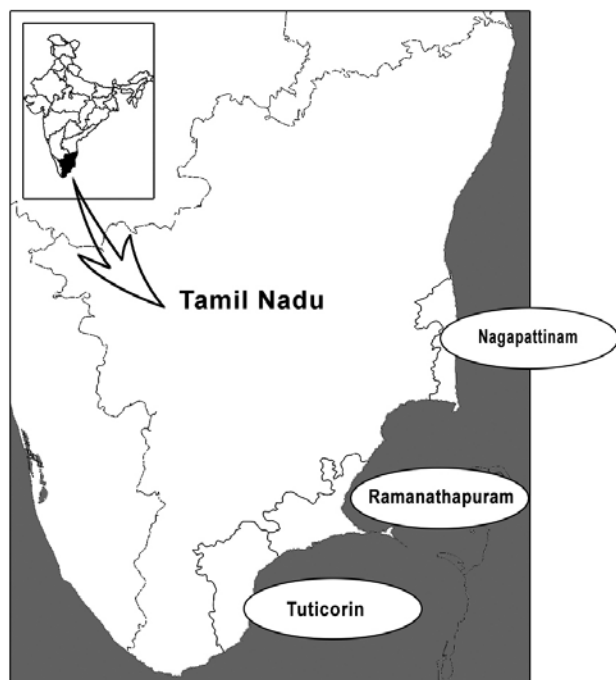

Fig.1 Map showing the study area in Tamil Nadu

either independently or by the intervention of an external agency is considered an MFI for the study. This included SHGs also which finished the gestation period of 36 months with an economic activity initiated through thrift deposits and sustained by an appropriate micro-enterprise promoted by micro-finance either independently or by the intervention of an external agency like NGOs, private micro financial firms, banks etc. In total, the data were collected from the selected 600 respondents consisting of 180 members of MFIs and 420 nonmembers in Tamil Nadu state. Situational analysis was done through PLA in the selected potential maritime locations in the above mentioned zones and the marine fisherfolk from the various strata such as mechanized, motorized and traditional sectors were taken as representative samples. Study was made through personal interview of the fisherfolk to assess the extent of coastal rural indebtedness, supply of credit and empowerment and other parameters with a pretested and standardized data collecting protocol. Success cases of MFIs on entrepreneurial capacity building were

documented which significantly played the role in the debt redemption and poverty alleviation.

Similarly to study the comparative appraisal of perception of fisherfolk on MFIs, Institutional and Non institutional credit sources in terms of selected attributes, respondents were asked to assign ranks to each of the attributes to make comparison. The data obtained from the respondents were systematically tabulated. Garrett's Ranking Technique (Garret and Woodworth, 1969) was used to identify and rank the attributes on the functioning of MFIs. This technique provides the change of orders into numerical scores and the prime advantage of this technique over simple frequency distribution is that the reasons and factors are arranged based on their importance from the point of view of respondents. The per cent position of each rank was converted into scores referring to the Table given by Garret's formula for converting ranks into percent as given below:

Percent position $= 100 * (R_{ij}-0.5) / N_j$

Where,

$R_{ij}=$ Rank given for ith factor by jth individual
$N_j=$ Number of factors ranked by jth individual

For each factor, the scores of individual respondents were added together and divided by the total number of the respondents for whom scores were added. The mean scores for all the factors were arranged in descending order, ranks were given and the most important factors or reasons were identified. Thereby the comparative appraisal of MFIs, Institutional and Non Institutional credit agencies was made.

Results and discussion

In the impact assessment study on indebtedness as the personal and socio-psychological characteristics of the respondents like age particulars and educational status play a significant role as independent variables, a brief description of those basic parameters are given.

Age particulars

The age distribution of the respondent households is furnished in Table 1. The age of the respondents were categorized into sub groups. Fishing was mostly done by fisherfolk in the age group of 20-50 which constitutes about 83.50 per cent of the respondents. The distribution also indicated the representation of age group 20-30 constituting to 21 per cent. Majority (34.5 %) of the fisherfolk are in the age category of 30-40 years. The fisherfolk with age more than 50 were found to be 16.5

per cent and were represented least. It was important to note that fishing appears as a viable option for livelihood among the age group of less than 40 years in Tamil Nadu.

Educational status

The educational status includes the level of education as indicated by primary, middle, high school and above. The primary level indicated schooling till fifth grade, middle level indicated by schooling till eighth grade, high school schooling till tenth grade and above denoted by secondary and vocational education, collegiate and professional education. The results are presented in Table 2. The results indicate that

a substantial difference in the level of indebtedness across the non-member and member fisherfolk of MFIs on account of their higher repayment capacity, less risk involvement and easiness in availing credit.

Distribution of respondents based on repayment of loan
The repayment of loan by non members and MFI members was studied and the results are presented in Table 4 and 5. The study found that 26 per cent of SHG/ MFI members were able to repay 81-100 per cent of the loan which they borrowed. It is interesting to note that 43.5 per cent of respondents as individual were not able to repay their loan which they borrowed, whereas under MFIs only 19 per cent

Table 1. Distribution of respondents based on age

Category	Mechanized (n=120)		Motorized (n=120)		Traditional (n=120)		Secondary (n=120)		Tertiary (n=120)		Total (n = 600)	
	No	%	No	%	No	%	No	%	No	%	No	%
20-30	24	20.0	27	22.5	15	12.5	30	25.0	30	25.0	126	21
30-40	54	45.0	27	22.5	39	32.5	48	40.0	39	32.5	207	34.5
40-50	33	27.5	33	27.5	42	35.0	27	22.5	33	27.5	168	28
50-60	09	7.5	24	20.0	18	15.0	09	7.5	18	15.0	78	13
60-70	-	-	09	7.5	06	5.0	06	5.0	-	-	21	3.5

Table 2. Distribution of respondents based on educational status

Category	Mechanized (n=120)		Motorized (n=120)		Traditional (n=120)		Secondary (n=120)		Tertiary (n=120)		Total (N = (n=600)	
	No	%	No	%	No	%	No	%	No	%	No	%
Illiterate	36	30.0	45	37.5	30	25.0	39	32.5	36	30.0	186	31
Primary	33	27.5	57	47.5	54	45.0	54	45.0	33	27.5	231	38.5
Middle School	42	35.0	09	7.5	21	17.5	15	12.5	27	22.5	114	19
High School & Above	09	7.5	09	7.5	15	12.5	12	10.0	24	20.0	69	11.5

among the literates 38.5 per cent had primary education, 19 percent had middle education and 11.5 per cent had high school and above level of education. It was found that 31 per cent of respondents were illiterates.

Level of indebtedness of MFI members and nonmembers

Out of the 420 non MFI members selected, 366 were indebted and out of 180 members of 12 MFIs selected, 155 were indebted and the level of respondents was 521 out of 600 i,e 87 % and the per household indebtedness was found to be 1.03 lakhs. The level of indebtedness observed in the present study is also in agreement with the findings of the report on assessment of literacy, income and health status of fishers in India (CMFRI, 2012). The level of indebtedness of MFI members and non members from the representative samples drawn from three districts is presented in Table 3. There was

Table 3. Level of indebtedness across the sectors

Sector	Indebtedness in Rupees lakhs	
	Non members	MFI members
Mechanised	1.09	0.85
Motorised	0.89	0.54
Traditional	0.71	0.50
Secondary sector	1.84	1.50
Tertiary sector	1.39	1.00

were not able to repay. Microfinance institution/self help group significantly reduced the dependence of fisherfolk on private moneylenders and considerably reduced the indebtedness level and increased their repayment capacity. It assisted the fisherfolk in meeting their expenditure on purchasing of nets, repairing boats and for buying other accessories to a commendable extent.

Distribution of respondents based on source of indebtedness

The distribution of respondents based on source of indebtedness was studied and presented in Table 6.

Panikkar (1980) found that 87 per cent of fishermen are indebted to money lender followed by boat owners (6.9 %). The present study found that 30.86 per cent of marine fisherfolk are indebted to banks, followed by 30.26 per cent indebted to private money lenders. Apart from these, a good proportion of them (23.45 %) have borrowed money from their respective microfinance institution/ self help group. Though the majority of the respondents are indebted to banks, MFIs were also found to possess a significant position in providing cheap credit to a considerable extent in Tamil Nadu, eventhough the magnitude of the loan provided through MFIs was less compared to banks. Throughout the coastal belts of India, the same feature was noticed in the study of Vipinkumar et al (2013) as banks are the major source of loan. The fisherfolk are bound to sell their catch to fish traders from whom they borrowed the money. Instead of taking interest for the borrowed money, fish traders buy at two to ten rupees less than the actual price for each kilogram of their

Table 4. Distribution of respondents based on repayment of loan (non MFI members)

S.No	Category (in %)	Mechanized (n=78)		Motorized (n=82)		Traditional (n=65)		Secondary (n=70)		Tertiary (n=72)		Total (n = 366)	
		No	%	No	%	No	%	No	%	No	%	No	%
1	0	29	37.5	50	60.0	34	52.5	32	45.0	16	22.5	161	43.5
2	1-20	8	10.0	12	15.0	15	22.5	7	10.0	14	20.0	56	15.5
3	21-40	20	25.0	8	10.0	5	7.5	16	22.5	18	25.0	66	18
4	41-60	12	15.0	4	5.0	3	5.0	7	10.0	9	12.5	35	9.5
5	61-80	3	5.0	4	5.0	1	2.5	3	5.0	4	5.0	15	4.5
6	81-100	6	7.5	4	5.0	7	10.0	5	7.5	11	15.0	33	9.0

Table 5. Distribution of respondents based on repayment of loan (MFI members)

S.No	Category (in %)	Mechanized (n=23)		Motorized (n=28)		Traditional (n=40)		Secondary (n=38)		Tertiary (n=26)		Total (n = 155)	
		No	%	No	%	No	%	No	%	No	%	No	%
1	0	1	5.0	7	25.0	11	27.5	7	17.5	5	19.23	31	19
2	1-20	5	20.0	3	10.0	4	10.0	1	5.0	3	11.54	16	11
3	21-40	3	15.0	3	10.0	4	10.0	10	25.0	3	11.54	23	14.5
4	41-60	7	30.0	3	12.5	11	27.5	6	15.0	7	26.92	34	22
5	61-80	1	5.0	4	15.0	2	5.0	3	7.5	2	7.70	12	7.5
6	81-100	6	25.0	8	27.5	8	20.0	11	30.0	6	23.08	39	26

Table 6. Distribution of respondents based on source of indebtedness

No	Sources	No. of respondents	%
1	Banks	204	30.86
2	Co-operatives	38	5.75
3	Private money lenders	200	30.26
4	Friends / Relatives	4	0.61
5	Fish traders	42	6.35
6	Boat owners	4	0.61
7	Shop keepers	4	0.61
8	Jewel loans	10	1.51
9	Microfinance	155	23.45

catch. Banks levied 7 to 14 per cent interest, whereas micro-financial firms levied 7 to 16 per cent interest on the principal amount. Private moneylender levied 24 to 72 per cent interest on the principal amount and the interest repayments by the borrowers were either weekly or monthly.

Appraisal on the functioning of the MFI/ Institutional / Non-Institutional credit agencies

The appraisal on the functioning of the MFI / Institutional / Non-Institutional credit agencies was studied and presented in Table 7. As per the Garrets ranking technique, it was

found that majority of the respondents ranked better for the following attributes with respect to MFI / SHG functioning like easy approval process, diverse areas of funding, provision of longer loans, provision of loan grace periods and easy repayment schedule, low interest rate, less stringent for default of payment, limited hidden cost and concerns and need for collateral security. By comparing the appraisal on the functioning of the MFI / Institutional / Non-Institutional credit agencies, from the above table it is evident that, the MFIs/SHGs are ranked better in functioning by the respondents followed by institutional and non-institutional credit agencies.

out from the trap. Microfinance institutions/ self help groups significantly reduced the dependence of fisherfolk on private money lenders and considerably reduced the indebtedness level and increased their repayment capacity.

The results of the study are in agreement with impact assessment study of MFIs in Karnataka coastal belts (Vipinkumar and Swathilekshmi, 2012). MFIs considerably assisted the fisherfolk in meeting their expenditure on purchasing of nets, repairing boats and for buying other accessories. By comparing the appraisal on the functioning of the MFIs/ institutional / non-institutional credit agencies, it

Table 7. Appraisal on the functioning of the MFI/Institutional/Non-institutional credit agencies

S.No	Attributes	Institutional		Non Institutional Credit		Micro Finance Institution	
		Score	Rank	Score	Rank	Score	Rank
1	Easy approval process	54.6	II	40	III	57.0	I
2	Diverse areas of funding	47.3	II	42.4	III	61.8	I
3	Eligibility of recipients	63.8	I	51.0	II	36.2	III
4	Maximum loan amount	44.4	II	57.0	I	42.9	III
5	Need for collateral security	51.3	II	55.9	I	42.1	III
6	Provision of longer loans	51.8	II	40.5	III	57.3	I
7	Provision of loan grace periods	52.9	II	41.4	III	56.5	I
8	Easy repayment schedule	51.9	II	39.7	III	55.6	I
9	Low interest rate	57.7	I	40.4	III	47.6	II
10	Stringent for default of payment	44.9	II	59.7	I	43.9	III
11	Hidden cost and concerns	50.5	II	59.0	I	40.4	III

Finance plays a crucial role in accelerating any business activity/ economic development and fisheries sector is not an exception. The present study makes an attempt on the assessment of the extent of indebtedness among marine fisherfolk in mechanized, motorized and traditional sectors and the perceived impact assessment of MFI on coastal rural indebtedness based on the data collected from three districts in the potential coastal belts of Tamil Nadu and in general, it could be observed that the level of indebtedness in MFIs is less compared to non MFIs. Per household indebtedness in Tamil Nadu is approximately 1.03 lakhs and level of indebtedness is 87 %. Though the banks are the major sources of loans, private money lenders also hold good in providing loans. SHG-bank linkage had a pivotal role in successful entrepreneur capacity building of fisherfolk. Tripathi and Sharma (2007) conducted an impact assessment of SHG-Bank linkage programme on financial behaviour of rural poor in Raebareli district in Uttar Pradesh to address the issue of sustainable development of the rural poor through SHG-Bank linkage using participatory approach. The present study also revealed that fishermen are most often trapped under debt to private money lenders and they are not able to come

is evident that the MFIs/SHGs are ranked better in functioning by the respondents followed by institutional and non-institutional credit agencies. Non-institutional credit agencies still hold good across the sectors and Non Performing Assets (NPAs) creation existed to a great extent as loans are being used for non-fisheries activities like asset creation and social obligations. Vasantha and Manohar (2008) reported that microfinance programmes are presently being promoted as an important strategy for concurrently addressing both poverty alleviation and women's empowerment and micro financial firms must maintain efficiency levels to increase their scale of operations which surely will bring down the cost of financing and ultimately the benefits will be transferred to the poor people in terms of improving the standard of living and reasonable cost of borrowing. Another important inference which could be drawn from the study is that, as the repayment percentage of MFIs in the traditional sector was not up to the mark, there is an extreme necessity of strengthening the MFIs in the traditional sector because 93% of the fisherfolk households come under the category of traditional sector in Tamil Nadu. Therefore, concerted efforts in this direction to

strengthen SHGs in the traditional sector are inevitable for better entrepreneurial capacity building through mobilized microfinance ventures.

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