

## Coastal indebtedness and impact of microfinance in marine fisheries sector of Andhra Pradesh

V. P. VIPINKUMAR<sup>1</sup>, P. S. SWATHILEKSHMI<sup>2</sup>, B. JOHNSON<sup>3</sup> AND R. NARAYANAKUMAR<sup>1</sup>

<sup>1</sup>Central Marine Fisheries Research Institute, P. B.No.1603, Kochi- 682 018, Kerala, India

<sup>2</sup>Mangalore Research Centre of Central Marine Fisheries Research Institute, Mangalore- 575 001, Karnataka, India

<sup>3</sup>Mandapam Regional Centre of Central Marine Fisheries Research Institute, Mandapam Camp-623 520

Tamil Nadu, India

e- mail: vipincmfri@gmail.com

### ABSTRACT

In Indian marine fisheries sector, Micro-Finance Institutions (MFI)/Self Help Groups (SHG) mobilised among marine fisherfolk play a vital role in reducing coastal indebtedness. The paper makes an effort to assess the extent of indebtedness among marine fisherfolk in mechanised, motorised and traditional fisheries sectors and impact assessment of MFI on coastal indebtedness based on the study carried out in two coastal districts of Andhra Pradesh. Situational analysis was done through PLA in selected locations and sample respondents were selected from mechanised, motorised and traditional sectors. Data were collected through personal interview from members of 12 selected MFI and nonmembers comprising a total of 600 respondents. The results showed that the level of indebtedness of members of MFI was less compared to the non members. The level of indebtedness was reduced to the tune of 75% after joining MFI in general. Even though the indebtedness was more in certain cases, repayment capacity significantly improved in members of MFI. There is an extreme necessity for strengthening the MFI ventures in the traditional fisheries sector in the state. A comparative assessment of sources of credit, purposes of credit and utilisation pattern of loans in the state was undertaken to draw valid conclusions. It was also found that the MFI ranked better in most of the major attributes in the perception of stakeholders compared to banks and non-institutional credit sources. Success cases of MFI on entrepreneurial capacity building which significantly played a role in debt redemption and poverty alleviation were documented as case models.

Keywords: Credit, Indebtedness, Microfinance, Self Help Groups

### Introduction

Throughout the Indian coastal belt, coastal rural indebtedness in the marine fisheries sector is quite observable. The Micro Finance Institutions (MFI)/Self Help Groups (SHG) mobilised in marine fisheries sector do play a vital role in reducing the vicious circle of indebtedness among marine fisherfolk. An exact assessment of indebtedness level has not so far been attempted among marine fisherfolk. 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 boosts 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 from institutional sources, but the affairs of fisherfolk were really grim as they were gripped in the hands of non-institutional agencies, namely money lenders and traders for which legitimate data sources do not exist. Success cases of SHGs in marine fisheries sector in entrepreneurial capacity building for

debt redemption through appropriate micro-enterprises were elucidated in an impact assessment study of Vipinkumar and Singh (2007). But in fisheries sector, fisherfolk are attracted to the non-institutional agencies due to simple procedures and timeliness in availing finance for operational expenses which ultimately make them fall in to debt traps. Even though, fisheries sector plays a major role in earning foreign exchange, the fisherfolk are still in the lower strata of the society because of indebtedness. Cheap credit facilities are essential for development of Indian marine fisheries sector. Microfinance institutions play a distinct role here by offering low cost credit, thereby saving the fisherfolk from permanent debt trap. This study aims to (a) assess the extent of indebtedness among marine fisherfolk in mechanised, motorised and traditional sectors of two districts of Andhra Pradesh (b) assess the impact of selected MFI/SHGs on rural indebtedness in marine fisheries sector and (c) to assess the role of credit agencies in providing credit, credit utilisation pattern as well as repayment behaviour and perception of fisherfolk towards the financial institutions. In Andhra Pradesh, there are 1,63,427 fishermen families

with a total population of 6,05,428 and maximum numbers of families in East Godavari District (44,476) followed by Visakhapatnam District (28,779). There are 555 marine fishing villages and 353 landing centres. Traditional fishermen families comprise about 98.5% and the average number of families in village was 294, with 1091 persons per village and 48.5% of the population are females (CMFRI, 2010). There are 1,59,101 (97%) families below poverty line; 34% of fisherfolk were educated with different levels and the proportion of uneducated fisherfolk was highest in Vizianagaram District. There are 1,50,868 active fishermen of whom 1,27,837 were fulltime fishermen, 19,373 part-time and the rest engaged in fish seed collection. Hindus constitute 99% of the total fishermen families. There are 31,741 crafts in the fishery of which 3167 are mechanised, 10,737 motorised and non-motorised formed the rest. Gillnetters (52%), trawlers (42%) and ringseiners (6%) are the main crafts in the mechanised sector. There are 31,168 crafts owned by fisherfolk, of which 2,447 are mechanised, 3,965 motorised and 24,756 non-motorised. In Andhra Pradesh, 70% of the fishermen houses are pucca houses. There are 571 primary schools, 99 secondary schools, 9 colleges and most of the villages are electrified (CMFRI, 2010).

## Materials and methods

The study was undertaken in two coastal districts namely Visakhapatnam and Vizianagaram of Andhra Pradesh. Situational analysis was done through PLA at selected potential maritime locations in the above mentioned zones. Marine fisherfolk from various strata such as mechanised, motorised and traditional sectors were taken as representative samples through proportionate random sampling method. From each district, 6 MFIs were selected and collected data from 600 respondents including MFI members and non MFI members of all the three sectors. Any mobilised 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 is considered an MFI for the study. Study made use of

personal interview of the fisherfolk to assess extent of coastal rural indebtedness, supply of credit, empowerment and other parameters with a pre-tested and standardised data collecting protocol. Success cases of MFIs on entrepreneurial capacity building were elucidated which significantly played a role in the debt redemption as well as poverty alleviation, and were documented.

Similarly to study the comparative appraisal of the 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 a meaningful comparison. The data obtained from the respondents were systematically tabulated for the purpose of analysis. Garret's Ranking Technique was used to identify and rank the attributes on the functioning of MFIs. Garret's ranking technique provides the change of orders into numerical scores. 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 percentage position of each rank was converted into scores referring to the table given by Garret and Woodworth (1969). Garret's formula for converting ranks into percent is given below:

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

where,  $R_{ij}$  = Rank given for  $i^{\text{th}}$  factor by  $j^{\text{th}}$  individual and  $N_j$  = Number of factors ranked by  $j^{\text{th}}$  individual

## Results and discussion

The data were collected from 600 individuals from mechanised fishing families at Vizianagaram, Visakhapatnam Fishing Harbour, motorised/ non motorised fishing families at Lawson's Bay, Annavaram, Bheemilpatnam, Uppada and Kappudibbulapalam fishing villages (Table 1). The results showed that the level of indebtedness among fisherfolk in mechanised sector was 65% and that in motorised sector is 59%. It was also observed that the MFI-member-fisherfolk had tremendous repayment capacity. The level of indebtedness got reduced to the tune of 75% after joining MFI and their repayment capacity improved to the

Table 1. Sampling distribution, level of indebtedness and repayment in Andhra Pradesh

Marine capture fisheries sector	Total (n=600)	Non MFI members (n=360)	MFI members (n=240)	Indebtedness in ₹ lakhs		% of Repayment	
				Non MFI members	MFI	Non MFI members	MFI
Primary mechanised	280	160	120	0.50	0.37	32.28	65.00
Motorised	180	100	80	0.42	0.69	36.93	53.00
Traditional	140	90	50	0.25	0.34	14.00	18.00

extent of 65% in mechanised sector. But in motorised/non motorised sector, level of indebtedness increased to the tune of 65% after joining MFI. In the meantime their repayment capacity also got improved to the extent of 53%. The results of the study were 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 for purchasing nets, repairing boats and buying other fishing accessories. The major locations surveyed for MFIs and non MFIs in Andhra Pradesh included Annavaram, Bheemlipatnam, Uppada, Kappudibbulapalam, Lawson’s Bay and DWCRA (Development of Women and Children in Rural Areas) women’s MFIs. The sampling distribution, level of indebtedness and repayment particulars are presented in Table 1. It is obvious from the table that the level of indebtedness is less for the MFI members compared to nonmembers in mechanised and traditional sectors. In motorised sector, the level of indebtedness is more for MFIs, but the repayment percentage is much better compared to non members.

With regard to the age of respondents from all three sectors of fishing, it was seen that, 20% were coming under age group up to 35 years, 45% under age group of 36 to 45 years and 35% between 45 to 50 years. With regard to education, 50% have no education, 30% have 4<sup>th</sup> to 5<sup>th</sup> class education and 17% have 6<sup>th</sup> to 8<sup>th</sup> class education. Out of the total income, 49% is being spent for food, 5% for clothes, 5.5% for shelter, 1.4% for education, 7% for entertainment, 8.2% for personal and 5.2% for miscellaneous expenditure. The distribution of respondents based on sources of indebtedness was studied and presented in Fig. 1.

The present study found that 27.63% of marine fisherfolk are indebted to private money lenders, followed

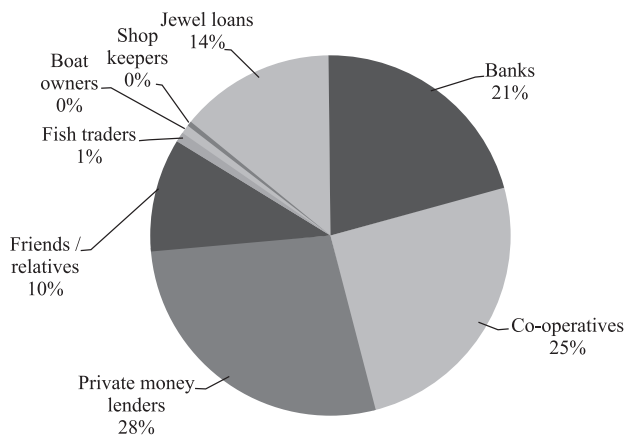


Fig. 1. Distribution of respondents based on sources of credit

by 25.43% indebted to co-operatives and 20.61% to banks. Apart from these, majority of them have borrowed money from their respective MFIs/SHGs mobilised by DWCRA. *Spandana* is a microfinance firm which provides money as per the requirement of the needy beneficiaries at a nominal interest. Finance plays a crucial role in accelerating any business activity/economic development and fisheries sector is no exception. The economic activities of the fishing villages in Andhra Pradesh depend upon to a large extent on the availability of credit at reasonable cost. Regarding the indebtedness in fisheries sector of Andhra Pradesh, the average indebtedness per household was observed as ₹ 0.43 lakhs and the fisherfolk are virtually gripped in the hands of non-institutional agencies, mainly the money lenders and traders (Vipinkumar *et al.*, 2013). Fisherfolk are attracted to the non-institutional agencies on account of simple procedures and timeliness in availing finance mainly for meeting their immediate operational expenses.

The saving details of the respondents’ households indicated that 79% of them had no savings and 16% of them possessed savings of less than ₹ 0.50 lakhs. Lack of savings related to the need for indebtedness for the sustenance of their livelihoods.

The major purposes of credit based on the response in the survey are presented in Fig. 2. It can be seen that the credit was mainly for purchase/repair of craft/gear and other fishing related equipments (40%) followed by marriage and education expenses (20% each). Loan was also being utilised to a large extent for creation of Non Performing Asset (NPAs) other than fishing and related activities like asset creation and fulfilling social obligations. This is also in agreement with the findings of the report on assessment of literacy, income and health status of fishers in India (CMFRI, 2012).

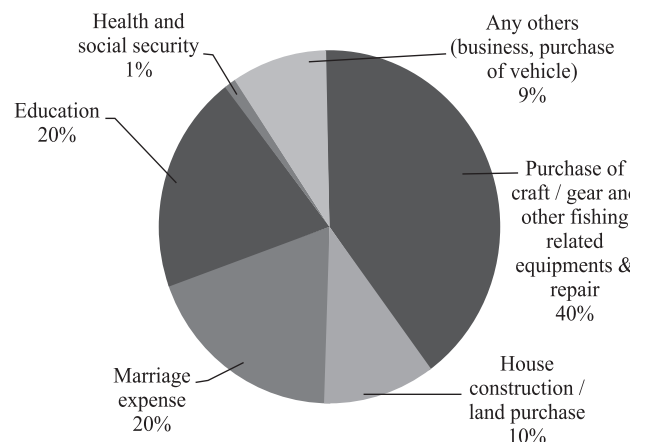


Fig. 2. Distribution of respondents based on purpose of credit

Table 2. Appraisal on the functioning of the MFI/ institutional/ non-institutional credit agencies

Attributes	Institutional		Non institutional credit		Micro finance institution	
	Score	Rank	Score	Rank	Score	Rank
Easy approval process	42.75	III	50.28	I	46.50	II
Diverse areas of funding	43.85	II	44.55	I	41.35	III
Eligibility of recipients	62.85	I	47.65	III	49.85	II
Maximum loan amount	63.65	I	58.45	II	55.65	III
Need for collateral security	57.35	I	54.85	II	53.75	III
Provision of longer loans	52.35	II	45.75	III	53.55	I
Provision of loan grace periods	44.85	II	41.65	III	46.85	I
Easy repayment schedule	50.55	II	42.85	III	53.65	I
Low interest rate	58.65	I	43.45	III	46.35	II
Stringent for default of payment	57.45	II	60.35	I	56.95	III
Hidden cost and concerns	51.65	II	60.45	I	46.35	III

The comparative assessment of MFI, institutional and non-institutional credit using Garrett's Ranking Technique is presented in Table 2. From the table it can be seen that in many of the attributes like provision of loans for longer periods, loan grace periods, easy repayment schedule, low interest rate, less stringency for default payment, limited hidden cost and concerns and need for collateral security, MFIs are much better in performance in majority's perception.

It can be observed from the table that in the perception of fisherfolk, microfinance institutions are much better in many of the attributes compared to non-institutional and institutional credit sources. The results of the study are in agreement with impact assessment study of MFIs in Karnataka coastal belts (Vipinkumar and Swathilekshmi, 2012; Vipinkumar *et al.*, 2013).

Mammo (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. Khan *et al.* (2005) in a case study undertaken on fisheries sector indebtedness in Baluchistan and Sindh of Pakistan, observed an empirical link between poverty and indebtedness and the mean debt to income ratio in low income group of fisherfolk was 3.4. Yunus (1999), the pioneer of microfinance projects in Bangladesh stated that the micro finance system enabled thousands of people by offering poor people loans and also removed the fear over indebtedness. Impact of microfinance organisations on rural indebtedness in fisheries sector is well explained in a Fisheries Co-management Case Study from Gambia (Njie and Mikkola, 2001). Vipinkumar (2007) studied the 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. Tripathi and Sharma (2007) conducted 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 livelihood analysis encompasses all the strategies and assets that individuals and households used to earn a living, of which micro finance plays a vital role. (Arciaga *et al.*, 2002; 2003; Ashby Jacqui, 2003; NSSO, 2003; Polotan-dela Cruz *et al.*, 2003). Ministry of Finance (2007) and CED (2008) brought out the reports of indebtedness level in the Indian agricultural sector. Kerala state through the Kudumbashree project (2010) had spent ₹ 121.88 crores on microfinance enterprises for women empowerment (Kudumbashree, 2010). So the micro finance institutions/ Self Help Groups of fisherfolk do have a pivotal role in reducing the indebtedness in the marine fisheries sector.

As a part of the study undertaken in Visakhapatnam, the locations like Annavam, Bheemlipatnam, Uppada and Kappudibbalapalam were particularly notable with DWCRA women's Self Help Groups who maintain the documents and registers systematically. DWCRA groups got mobilised with income generating micro enterprises in fisheries and allied sectors, which reduced their level of indebtedness with substantial repayment of loans. Case studies on these SHGs were made as case models for promoting group action for mobilising replicable models of SHGs in marine fisheries sector on a sustainable basis.

SHG-bank linkage had a pivotal role in successful entrepreneur capacity building of fisherfolk. The present study revealed the per household indebtedness in Andhra Pradesh as approximately 0.43 lakhs and level of indebtedness as 79%. Even when the indebtedness is high, the repayment capacity of MFIs is found to be more. Non-institutional credit agencies still hold well across the sectors. Non Performing Assets (NPAs) creation existed to a great extent. Private money lenders were found to be the major source of funding followed by banks. The MFI member fisherfolk have good repayment capacity. The level of indebtedness got reduced to the tune of 75% after joining MFI in general. In motorised sector, the level of indebtedness increased to the tune of 65% after joining MFI, but in the meantime, their repayment capacity also improved to the extent of 53%. Another important inference which could be drawn from the study was that, as the level of indebtedness of MFIs in the traditional sector was much higher than non MFIs, there is an extreme necessity of strengthening the MFIs in the traditional sector because 98.5% of the fisherfolk households come under the category of traditional sector in Andhra Pradesh. Therefore, concerted efforts in this direction to strengthen MFIs in the traditional and tertiary sectors are inevitable for better entrepreneur capacity building through mobilised group ventures in Andhra Pradesh.

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