

SOME SOCIO-ECONOMIC ASPECTS OF THE FISHERMEN OF TWIN PRONGED FLOODPLAIN WETLANDS IN WEST BENGAL

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ABSTRACT

A socio-economic investigation was carried out in two Fishermen Co-operative Societies namely Purba Helatala Fishermen Co-operative Society (E-1), Barhal Fishermen Co-operative Society (E-2), under Maldah district, West Bengal to which the *beels* (flood plains) under study belong. A total of 132 member fishermen, which constituted the sample, were personally interviewed. The age group of the fishermen of the sample in E-1 varied between 20 and 66 years whereas in E-2 it was 22 and 61 years. All the members of the sample belonged to Scheduled Caste (SC) community. The primary occupation of all the respondents of both the *beels* was observed to be fishing (100%). Maximum number of illiterate respondents were observed to be 56% in E-2 and 35% in E-1. It has been observed that as many as 38.3% of fishermen were having fishing experience which ranging from 16 to 20 years in E-1 whereas it was 6 - 10 years (36.1%) in E-2. Maximum number of fishermen lived in thatched houses (41.66%) in E-1 whereas in E-2 most of them lived in houses made of corrugated tin/tile shed (41.66%). As many as 41.55% of E-1 and 30.55% of E-2 used dug-out canoes for their fishing. Maximum number of fishermen used cast net with individualistic approach (100%) followed by Gill net (E-1 : 41.66% and E-2:55.55%). Most of the fishermen of the sample participated in fishing activities for 241 to 270 days (41.66%) in E-2 whereas it was 211 to 240 days (33.33%) in E-1 in a year. During fishing season as many as 40.0% of the respondents of E-1 earned on an average Rs. 801.00 to Rs. 900.00 per month whereas it was Rs.901.00 to Rs.1,000.00 (43.05%) in case of E-2. A section of fishermen of the sample borrowed money often (51.6%) E-1 whereas it was most often (27.27%) of E-2. The respondents of E-2 made regular repayment of the loan to the maximum extent (79.48%) whereas it was 57.44% in E-1. Higher fish production *vis-à-vis* higher income for the fishermen was observed in the *beel* (E2) having close characteristic

Keywords: Socio-economic, Illiteracy, Exploitation, Common property resource

INTRODUCTION

One of the important factors that have influenced the utilization and development of the *beel* (Floodplain wetland) fishery resources of the country is the socio-economic condition of the fishermen community. Fishing is generally considered a low profession in India and practised mainly by the members of a number of backward communities who are largely illiterate, superstitious and extremely poor (Anon, 1982). The vicious circle of circumstances has crippled the fishermen community both socially and economically and thus, it is realised that socio-economic advancement of the fishermen is essential for the proper development of the fishery industry (Bhaumik, 2001).

Management of the *beels* and fishing are mostly done by the members of Fishermen Co-operative Societies. Since fishermen are, by and large, economically backward and belongs to lower strata in the Society, despite of their unstained efforts, dexterity and skill, their earnings on the whole are still at lower level when compared with other industrial and professional workers. Evaluation of socio-economic milieu under which fishermen operate is a condition precedent to any worthwhile development strategy contemplated for the *beels* and thus, an investigation was carried out with an objective to assess the socio economic conditions of the fishermen operating in two different

ecosystems situated in same geographical location.

MATERIAL AND METHODS

The socio-economic investigation was carried out in two Fishermen Co-operative Societies namely Purba Helatala Fishermen Co-operative Society (E-1), Barhal Fishermen Co-operative society (E-2), under Maldah district, West Bengal to which the *beels* under study belong. These two beels have emerged out from a single stretch separated by an artificial barrier resulting in creation of an open system (E-1) and a closed system (E-2). A list of member fishermen of respective Societies were prepared and 25% members from the list were selected at random (E-1=60; E-2=72) for making this study. Thus, a total of 132 member fishermen (Co-operatives) which constituted the sample were personally interviewed during November, 1999 to September, 2000 with a pre-tested structured schedule developed for the purpose. To study the borrowing habit and role of communication, scores 3, 2, 1 and 0 were assigned to "regular", "most often", "often" and "never" respectively.

RESULTS AND DISCUSSION

The analyses on the studies conducted on the socio-economic condition of the fishermen involved in the *beels* under study E-1 and E-2 are depicted below:

The age group of the fishermen of the sample (Table 1) in E-1 varied between 20 and 66 years whereas in E-2 it was 22 to 61 years but as many as of them belonged to the age group 46 - 50 years (28.30%), 36 - 40 years (25%). Cent

Almost all the members of the sample belonged to SC community (100%). Similar observation have been made by Bhaumik *et al.* (1991a), Biswas (1991) and Sugunan *et al.*, (2000) where they also mentioned that the fishermen

Table 1 : Distribution of age of the respondents.

Age group (year)	E-1 (N=60)	E-2 (N=72)	Pooled size (N=132)
20 - 25	3(5.0)	6(8.33)	9 (6.81)
26 -30	3 (5.0)	5 (6.94)	8 (6.06)
31 - 35	6 (10)	8 (11.11)	14 (10.60)
36 - 40	8 (13.3)	18 (25)	26 (19.70)
41 - 45	12 (20)	16 (22.2)	28 (21.21)
46 - 50	17 (28.3)	6 (8.33)	23 (17.42)
51 - 55	5 (8.3)	2 (2.77)	7 (5.30)
56 - 60	1 (1.66)	8 (11.11)	9 (6.81)
61 -65	3 (5.0)	2 (2.77)	5 (3.79)
65 - 70	2 (3.33)	1 (1.38)	3 (2.27)

• Figures in parentheses indicate percentage

percent of them belong to Schedule Caste community (SC).

Bhaumik and Pandit (1991) while studying socio-economic status of fishermen in some *beels* of West Bengal indicated age group of majority fishermen at 26 - 34 years. Sinha *et al.*, (2000) mentioned the dominant age group of the fishermen engaged fishing in *beels* of West Bengal as 30 - 60 years and mostly they belong to SC community.

engaged in beel fishing mostly belong to SC community.

Fishermen are operationally defined as the persons who, irrespective of their castes, pursue fishing as their chief occupation. The primary occupation of all the respondents of both the beels (Table 2) was observed to be fishing (100%). But their secondary occupation varied with some other activities namely daily labourer (77.63% in E-2 and 55% in E-1.).

The study made by Bhaumik and

Table 2 : Distribution of occupation of the respondents.

Occupation	E-1 (N=60)	E-2 (N=72)	Pooled size (N=132)
Primary Fishing	60 (100)	72 (100)	132 (100)
Secondary Fish culture	5 (8.33)	7 (9.71)	12 (9.09)
Agriculture	2 (3.33)	3 (4.16)	5 (3.79)
Labour	33 (55.0)	56 (77.63)	89 (67.42)
Fish vendor	7 (11.66)	-----	7 (5.30)
Net making/ net mending	8 (13.33)	11 (15.27)	19 (14.39)

• Figures in parentheses indicate percentage

Pandit (1991), Biswas (1991) and Sugunan *et al.*, (2000) also observed fishing as primary occupation of the fishermen.

The present study revealed that the fishermen are still educationally backward (Table 3). Maximum number of the respondents were illiterate (56.9% in E-2 and 35% in E-1). A lone respondent having qualification at Secondary level was observed in E-2.

Illiteracy is rampant in the fishing families, which has been portrayed in the

study. Of course, children of the fishermen families are now being sent to school as the fishermen are reluctant to involve their children in the profession of fishing. But unfortunately, those who go to school can seldom complete the Madhyamik (Secondary) standard due to poverty. The respondents expressed, that sending a child to school involves double loss to the family as it entails additional expenditure on education in one hand and the family is deprived of his contribution towards economic

Table 3 : Educational level of the respondents.

Dimension	E-1 (N=60)	E-2 (N=72)	Pooled size (N=132)
Illiterate	21 (35)	41 (56.9)	62 (46.97)
Can sign	15 (25)	7 (9.7)	22 (16.67)
only	3 (5.0)	12 (16.7)	15 (11.36)
Can read &	9 (15)	4 (5.5)	16 (12.12)
write	8 (13.3)	-----	12 (9.09)
Primary	3 (5.0)	-----	3 (2.27)
Eight pass	1 (1.7)	-----	1 (0.76)
Secondary	-----	1 (1.7)	1(0.76)

• Figures in parentheses indicate percentage

upliftment on the other hand. Bhaumik and Pandit (1991) observed illiteracy in the fishermen to the extent of (46.10%). Sinha *et al.*, (2000) observed illiteracy rate to the tune of 59% in North Bengal and 31% in South Bengal.

The perusal of the Table 4 indicated that maximum fishermen of E-1 had family size of 6 - 7 members in their family (55%) whereas it was 4 - 5 members (48.61%) in E-2. The study revealed that maximum members of the sample of E-1 (90%) and E-2 (94.45%) were married and they preferred nuclear family (E-1: 85% and E-2 : 84.72%). Sinha *et al.*, (2000) observed fishermen family having 3 - 4 members in maximum frequency (56%) in North Bengal. Biswas (1991) indicated 4 - 6 member

in a family was found (62.73%) in the fishermen community of the Sunderbans. Bhaumik and Pandit (1991) mentioned that majority of fishermen families have 4 - 6 members (56.38%) who are engaged in operation in *beels* of West Bengal.

The study revealed (Table 5) that a fishing family is a primary economic group. It is also a basic production unit. Adult males participate in fishing activities for sustenance of the livelihood of the members of their families. It was observed that 38.3% of fishermen were highly experienced which ranged from 16 to 20 years in E-1 whereas it was 6 - 10 years in E-2 (36.1%). The experience of the respondent or possessing more than 26

Table 4 : Family size of the respondents.

Dimension (Nos.)	E-1 (N=60)	E-2 (N=72)	Pooled size (N=132)
2 - 3	-----	8(11.11)	8 (6.06)
4 - 5	22(36.6)	35(48.61)	57 (43.18)
6 - 7	33(55.0)	17(23.61)	50 (37.88)
8 - 9	3 (5.0)	9(12.50)	12 (9.09)
10 & above	2 (3.33)	3(4.16)	5 (3.79)

• Figures in parentheses indicate percentage

Table 5 : Fishing experience of the respondents.

Characteristics	Dimension	E-1 (N=60)	E-2 (N=72)	Pooled size (N=132)
Experience in Fishing (Years)	1 - 5	6(10)	11(15.2)	17 (12.88)
	6 - 10	14(23.0)	26(36.1)	40 (30.30)
	11 - 15	12 (20)	16(22.2)	28 (21.21)
	16 - 20	23(38.3)	16(22.2)	39 (29.55)
	21 - 25	3(5.0)	2(2.77)	5 (3.79)
	26 & above	2 (3.33)	1(1.38)	3 (2.27)

• Figures in parentheses indicate percentage

years is limited. Bhaumik and Pandit (1991) observed fishing experience of 21 years and above years as maximum (47.7%) whereas Biswas (1991) observed 19 -20 years as maximum in the Sunderbans.

Operationally, social participation has been defined as the degree to which the respondents are involved in formal organisation as members or office bearer and maintain regularity in their attendance to meetings. Attendance to meetings either as a member or as office bearer was considered important. In the study the respondents attended the meetings, organised by respective

Cooperative Society, regularly.

The economic status of the respondent fishermen was measured (Table 6) with the help of some components of the socio-economic status, which consists of possession of house, land, animals and materials. It was observed that maximum number of fishermen lived in Thatched house (41.66%) in E-1 whereas in E-2, houses made of corrugated tin/tile shed was used by most of them (41.66%). Maximum number of fishermen owned residential plots (E-1 : 71.66% and E-2:77.77%). They mostly kept ducks as (35.0%) in E-1 from which they earned

Table 6 : Economic status of the respondents.

Characteristics	E-1 (N=60)	E-2 (N=72)	Pooled size (N=132)
House in possession			
Pucca	15 (25)	27 (37.5)	42 (31.82)
Thatched hut	25 (41.66)	15 (20.83)	40 (30.30)
GI sheet/tile shed	20 (33.33)	30(41.66)	50 (37.88)
Land in possession			
Agricultural	3 (5.0)	12 (16.66)	15 (11.36)
Pond	4 (6.66)	7 (9.72)	11 (8.33)
Residential	43 (71.66)	56 (77.77)	99 (75.0)
Animals in possession			
Cow	15 (25)	23 (31.94)	38 (28.79)
Bullock	4 (6.66)	6 (8.33)	10 (7.58)
Duck	21 (35)	19 (26.38)	40 (30.30)
Goat	17 (28.33)	34 (47.22)	51 (38.64)
Materials in possession			
T V	2 (3.33)	12 (16.66)	14 (10.61)
Radio	55 (91.66)	59 (81.94)	114 (86.3)
Cycle	12 (20)	19 (26.38)	31 (23.48)
Wristwatch	29(48.33)	43 (59.72)	72 (54.55)
Tape recorder	7 (11.66)	11 (15.27)	18 (13.64)

- More than one item mentioned
- Figures in parentheses indicate percentage.

cash regularly. Maximum number of the fishermen possessed radio for their recreation. This is in conformity with the studies made by Bhaumik, *et al.*, (1991c); Biswas (1991) and Sharma and Thakur (1988). Of the fishermen 51.2% possessed wrist-watch and 33.6% possessed bicycle. Sugunan *et al.*, (2000) revealed that 92% of the fishermen have clay houses and rest have pucca house in Andhra Pradesh, Uttar Pradesh and Bihar.

Fishermen of the sample underwent various training courses (Table 7) at Block and District level organised by Directorate of Fisheries. Most of them (56.94%) of E-2 underwent the training of 15 days duration followed by E-1 (41.62%). Mostly of the respondents received the training in fish culture followed by fish seed raising and prawn farming. Fishing is a specialised job. It requires both skill and experience. Boat and nets are the principal implements for

any fishing expedition. It is a matter of concern that the fishermen engaged in management of open water system hardly received any training in open water systems. Sugunan *et al.* (2000) indicated similar observation among the fishermen of West Bengal where 52% of the fishermen operating in the *beels* were trained in culture practices.

The fishermen operated various types of crafts and gears for exploitation of fish from the *beels* (Table 8). 41.55% of E-1 and 30.55% of E-2 use dug-out canoes for their fishing which were made out of the broader stem of Palm trees. This type of canoe was mainly used for individual fishing. Built-in boats were mostly used for group fishing which were made of wooden planks. Generally, 4-7 fishermen made individual group to utilize their boat. The crafts mostly owned by the fishermen (E-1 : 77.12% and E-2: 71.42%) and rest boat/canoes are used

Table 7 : Training received of the respondents.

Level	Duration	E1 (N=60)	E-2 (N=72)	Pooled size (N=132)
Block	15 Days	25 (41.62)	41 (56.94)	66 (50.0)
District	30 Days	11 (18.33)	17 (23.61)	28 (21.21)
Subject				
Seed raising		12(22.7)	21(29.15)	33 (25.0)
Fish culture		20(33.3)	27(37.4)	47 (35.61)
Prawn farming		4(6.66)	10(13.8)	14 (10.61)

• Figures in parentheses indicate percentage.

Table 8 : Craft and gear of the respondents.

Characteristics	E1 (N=60)	E-2 (N=72)	Pooled size (N=132)
CraftTypes			
Dug-out	25 (41.6)	22(30.55)	47 (35.61)
Built-in	10(16.66)	20(27.77)	30 (22.73)
Materials			
<i>N=Total nos. of boats</i>			
Wood	10(28.59)	20(47.61)	30 (22.73)
Stem of palm tree	25(71.42)	22(52.38)	47 (35.61)
Ownership			
<i>N=Total nos. of boats</i>			
Owned	27(77.14)	30(71.42)	57 (43.18)
Hired	8(22.85)	12(28.57)	20 (15.15)
Gear Types			
Cast net	60(100)	72(100)	132 (100.0)
Gill net	25(41.66)	40(55.55)	65 (49.24)
Dip net	4(6.66)	7(9.72)	11 (8.33)
Encircling net	5(8.33)	10(13.88)	15 (11.36)
Drag net	4(6.66)	9(12.5)	13 (9.85)
Materials			
<i>N=Total nos. of gears</i>			
Nylon	90(91.83)	120(86.9)	210(159.09)
Cotton	8(8.16)	18(13.04)	26 (19.70)
Ownership			
<i>N=Total nos. of gears</i>			
Owned	89(90.81)	119(86.2)	208 (157.58)
Hired	9(9.18)	19(13.76)	28 (21.21)

- Use of more than one gear mentioned. • Figures in parentheses indicate percentage,
- Built-in boats used by groups.

by them on hire basis. As evident from the study, it is clear that the fishermen use more than one type of gear. Maximum number of fishermen used cast net with individualistic approach (100%) followed by Gill net (E-1 : 41.66% and E-2: 55.55%). Encircling nets or Drag nets were operated under group approach. The gears were mostly made of nylon twines since it needs low

maintenance, easy to use, light in weight and lasts long. The gears were mostly owned by them (E-1 : 90.81% and E-2: 86.2%). Bhaumik and Pandit (1991) observed that 54.2% of the fishermen in some areas of West Bengal used built-in boats and 85.98% operated gill nets for exploitation of fishes for the *beels*. Biswas (1991) indicated cent percent use built-in boats with bag nets

(53.63%) for fishing in the Sunderbans.

The fishermen exert their maximum effort to get more catch from the common property resource for better living (Table 9). Most of the fishermen of the sample (41.66%) participated in fish exploitation process for 241 to 270 days in E 2 whereas it was 211 to 240 days in E-1 : 33.33%) in a year. Upto 300 fishing days was indicated as maximum days of operation. Generally

fishermen participated in fishing for 5 - 6 hours followed by 3-4 hours. Due to their best efforts maximum average fish catch was 4 -5 kg/head/day (61.66%) in E-1 whereas 6-7 kg/head/day in E-2. Higher catch of more than 12 kg/head/day was seldom as had been indicated in both the *beels*.

The study revealed (Table 10) that the fishermen had more income per month during the fishing season

Table 9 : Effort and catch of the respondents.

Characteristics	Dimension	E-1 (N=60)	E-2 (N=72)	Pooled size (N=132)
Fishing Day	151 - 180	7(11.66)	-----	7 (5.30)
	181 - 210	11(18.33)	2(2.77)	13 (9.85)
	211 - 240	20(33.33)	25(34.77)	45 (34.09)
	241 - 270	19(31.66)	30(41.66)	49 (37.12)
	271 - 300	3(5.0)	15(20.83)	18 (13.64)
Average fishing hours	3 - 4	14(23.33)	20(27.77)	34 (25.76)
	5 - 6	35(58.33)	33(45.83)	68 (51.52)
	7 - 8	11(18.33)	13(18.05)	24 (18.18)
	9 - 10	-----	6(8.33)	6 (4.55)
Average catch per day (kg)	2 - 3	4(6.66)	2(2.77)	6 (4.55)
	4 - 5	37(61.66)	18(25)	55 (41.67)
	6 - 7	17(28.33)	35(42)	52 (39.39)
	8 - 9	2(3.33)	10(13.88)	12 (9.09)
	10 - 11	-----	5(6.94)	5 (3.79)
	12 & above	-----	2(2.77)	2 (1.52)

• *Figures in parentheses indicate percentage.

they observed closed season for 2 months. However, during closed season weed fishes were permitted by the societies to exploit by the members. During off-season, the fishermen go for alternative jobs for their livelihood .During season maximum number of

compared to off-season as fishing was obviously the primary source of income. During fishing season as many as 40.0% of the respondents of E-1 earned on an average Rs.801.00 to Rs.900.00 whereas it was Rs.901.00 to Rs.1,000.00 (43.05%) in case of E-2.

Table 10 : Income distribution of the respondents.

Characteristics	Dimension	E-1 (N=60)	E-2 (N=72)	Pooled size (N=132)
Income during season per month (Rs.)	501 - 600	—	—	—
	601 - 700	5(8.33)	9(12.5)	3(3.79)
	701 - 800	15(25)	22(30.55)	24(18.18)
	801 - 900	24(40)	31(43.05)	46(34.85)
	901 - 1000	10(16.6)	10(13.88)	41(31.06)
	> 1000	6(10.0)	—	16 (12.12)
Income during off season per month (Rs.)	401 - 500	4(6.66)	12(16.66)	4(3.03)
	501 - 600	15(25)	18(25.0)	27(20.45)
	601 - 700	28(46.6)	33(45.83)	46(34.85)
	701 - 800	12(20)	—	45(34.09)
	801 - 900	—	—	—
	901 - 1000	1(1.66)	9(12.5)	10 (7.58)

• *Figures in parentheses indicate percentage.

During off-season average income went down between Rs.601.00 and Rs.800.00 per month.

Bhaumik and Pandit (1991) reported income of majority fishermen varying between Rs. 401.00 and Rs.500.00 per month. Biswas (1991) observed average income of fishermen of the Sunderbans as Rs. 571.00 per month.

Fishing largely depends on the caprices of nature. Moreover, the beels

are generally not managed scientifically resulting in lower fish production against its potentiality. So, the income contribution towards sustenance of livelihood is not always sufficient. It was observed (Table 11) from the study that as many as 36.66 percent of the fishermen of E-1 and 51.38% of E-2 contributed 51 - 75 percent towards total requirement of fund for sustenance of livelihood of the members of the

Table 11 : Income contribution of the operatives towards livelihood.

Contribution Percent	E-1 (N=60)	E-2 (N=72)	Pooled size (N=132)
1 - 25	4 (6.66)	—	4 (3.03)
26 - 50	18 (30.0)	14 (19.44)	32(24.24)
51 - 75	22 (36.66)	37 (51.38)	59(44.70)
76 - 100	16(26.66)	21 (29.16)	37(28.03)

• Figures in parentheses indicate percentag.

family. Sugunan *et al.* (2000) stated that most of the fishermen (56%) of some areas of West Bengal contribute 100 percent income as required for livelihood.

Table 12 revealed that most of the fishermen were involved in indebtedness for various reasons. Indebtedness has been observed to become chronic in the life of the fishermen communities (Prasad, 1987; Bhaumik, 1998). The extent of expenditure on household necessitates about 70 to 80% of their income contributed towards food only that too, to meet minimum requirement

often whereas 27.27% (score 40 with rank order I) fishermen of E2 did so *most often*. It indicated that for meeting at least square meals for their family members a section of the fishermen were compelled to borrow money.

Biswas (1991) observed that a large section of fishermen of the Sunderbans (35.45%) borrowed money *most often* from fish merchants and moneylenders. Pramanik (1993) stated that as the economic situation of the fishermen of South 24-parganas, West Bengal is characterised by chronic insecurity and of what scarcity for which, they are

Table 12 : Borrowing habit of the respondents.

Characteristic	Total Indebted Fisher men	Regular	Most Often	Often	Never
Frequency					
E-1	47	3(6.66)	12 (20)	31 (51.6)	13 (21.6)
E-2	39	11(15.2)	20 (27.27)	8(11.1)	33 (45.83)
Obtained score					
E-1	—	12	24	31	0
Rank	—	III	II	I	----
E-2	—	33	40	8	0
Rank	—	II	I	III	----
Mean score	—	19.5	31.5	14.5	0

• Figures in parentheses indicate percentage

of rice, dal, potato and onion. For supporting their livelihood, the fishermen frequently borrow money from various sources. The investigation revealed that 51.6% (score 31 with rank order I) of the fishermen of E1 borrowed money

forced to take loans for a living.

The cursory perusal of the Table 13 indicates that maximum number fishermen of E-1 (78.3%) became the victim of indebtedness and borrowed money to the limit of Rs. 500.00

Table 13 : Extent of indebtedness of the respondents.

Operative Sector	Indebted fishermen	Up to Rs.500/-	Rs. 500-1000/-	Rs. 1001-2000/-	Rs. 2001-3000/-	Rs. 3001-5000/-
E-1	47(78.3)	27(57.44)	14(29.78)	6(12.76)	-----	-----
E-2	39(54.16)	18(46.15)	10(25.64)	8(20.51)	3(7.69)	-----

• *Figures in parentheses indicate percentage.*

(57.44%) whereas in E-2 it was 46.15%. Maximum loan of Rs. 3,001.00 to 5,000.00 was taken by a fisherman of E-2 (7.67%).

Pramanik (1993) while studying the fishermen of South 24 Parganas, West Bengal reported that 58.73% of the fishermen borrowed money to the tune of Rs. 500/- and Rs. 501 - 1,000 /- by 22.22%.

The study (Table 14) revealed that as many as 34.01 percent of the respondents borrowed money from their friends which to the extent of maximum was recorded in case of E-1. Next

category of fishermen borrowed money from the relatives. A sizeable respondents although took loans from the money-lenders but they expressed that they always try to avoid the same due to high rate of interest. It is evident from the study that a sizeable section of the fishermen borrowed money from the money lenders and became the victim of exploitation from many angles like high rate of interest, mandatory fish sell to the lenders at a lower price, free service as labourer whenever necessary etc. Thus, to salvage the fishermen from such exploitations, drudgery and to uplift their socio economic conditions,

Table 14 : Borrowing source of the respondents.

Source	E1 (N=47)	E-2 (N=39)	Pooled size (N=86)
Money lender	10(16.66)	14(19.44)	24 (27.91)
Relative	23(38.33)	14(15.27)	37(43.02)
Friends	14(23.33)	10(13.88)	24 (27.91)
Co-operative Society	-----	4(5.55)	4 (4.65)
Bank	-----	-----	-----
Panchayat	-----	-----	-----

• *Figures in parentheses indicate percentage.*

presently many Cooperative Societies have initiated many benevolent programmes with active assistance from the government.

The study (Table 15) revealed that regular repayment of the loan was made by the respondents of E-2 to the maximum extent (79.48%) whereas it was 57.44% in E-1. As per observation,

welfare etc from various sources of communication. As per the study (Table 16) ranking in ascending order of importance, are officials of Co-operative Society, Radio, Extension personnel, Friends, Panchayat Officials, Relatives, Television, Extension literature and Exhibition.

It was observed that officials of the

Table 15 : Repayment of loan of the respondents.

Characteristics (Repayment)	E1 (N=47)	E-2 (N=39)	Pooled size (N=86)
Regular repayment	27(57.44)	31(79.48)	58 (67.44)
Irregular repayment	18(38.29)	8(20.5)	26 (30.23)
Fails to repay	2(4.25)	-----	2 (2.33)

• Figures in parentheses indicate percentage.

4.25% of the fishermen of the sample(E1) failed to repay the loan because they had to repay high rate of interest to money lender every month where the principal amount remains in stand still condition.

Pramanik (1993) stated that after taking loans by the fishermen of South 24-Parganas, West Bengal from money lenders against 120 to 144 percent interest, the interest itself becomes the burden to the poor fishermen; what to talk about repayment ?

The fishermen have been receiving information regarding fisheries, meteorology, credit facility, social

Co-operative Societies (198 mean value) played maximum role (1st rank) in transmission of information to the fishermen of both the societies. The role played by Radio was found most effective communication of information (2nd rank in E2 whereas 4th rank in E1) at grass root level since a sizeable section of the respondents possessed Radio with them for entertainment purpose. The Extension functionaries although where responsible communication component but their role was ranked as 2nd and 3rd in E1 and E2 respectively. Bhaumik *et al.* (1991b) and Biswas (1991) in their studies indicated similar observations where

Table 16 : Repayment of loan of the respondents.

Sl. No.	Items	E-1	Rank	E-2	Rank	Pooled mean value	Rank
1	Radio	12	IV	156	II	158	II
2	Television	8	VI	12	VII	20	VII
3	Newspaper	6	VII	11	VIII	17	VIII
4	Extension literature	----	----	2	IX	2	IX
5	Extension personnel	45	II	63	III	108	III
6	Panchayat officials	21	IV	18	VI	39	VI
7	Co-operative Society officials	180	I	216	I	396	I
8	Relatives	12	V	27	V	39	v
9	Friends	35	III	47	IV	82	IV

• Figures in parentheses indicate percentage.

Radio played maximum role towards communication of information to the fishermen community.

The socio-economic profile of the fishermen of E-2 compared to E-1 was observed to be better since the beel belonged to close system. The trophic dynamics as well as broad biodiversity accelerated higher production in E-2 *i.e.*, 1,164.18 kg/ha/yr than that of 1,032.53 kg/ha/yr in E-1. The higher fish production *vis-à-vis* higher income in E-2 was reflected in the economic status of the fishermen *viz.* housing, domestication of pets, materials in possession, possession of craft and gear, more income and lesser borrowing habit. However, management strategies towards stock enhancement, species enhancement along with benevolent

schemes for the fishermen by the Co-operative Societies will not only catalyse enhancement of fish production but also will uplift socio-economic conditions of the fishermen operating in the beels.

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