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**Ankit Thakur**

College of Horticulture and  
Research Station, Jagdalpur,  
Chhattisgarh, India

**SR Gaur**

College of Agriculture Raipur,  
Chhattisgarh, India

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## Comparative studies on the socio-economic status of fishery cooperatives societies, SHGs and fishermen groups in the Bastar district of Chhattisgarh

**Ankit Thakur and SR Gaur**

### Abstract

In the Bastar district, the fish farming is being done by the Fisheries cooperatives societies, Self Help Groups and Fishermen groups. In this context it is needed to assess the comparative socio-economic status of these three fish cultivators in the district to increase fish production. In this view, the study was carried out during the year 2014-015 in Bastar district of Chhattisgarh State the study indicates, that Socio-economic Characteristics of the respondents indicated that the majority of them belongs to middle age (35-55 years), had middle school education for Fishery Cooperative Societies as well as SHGs and up to Primary School education for fisherman groups SHGs were having about 71.43 percent of females as compared to only 28.58 percent of males, however in Fishery in Fishery cooperative societies and fishermen groups their percent was very less, more number of members were found in fishery cooperative societies as compared to SHGs and Fishermen groups.

**Keywords:** Fishery cooperative societies, SHGs, fishermen groups, socio-economic status, fish production

### Introduction

Under Integrated Farming system Fisheries sector has an important role to enhance the Socio-economic Status of the community whose is engaged in the fisheries occupation secondly the food security problem in India has been alarming due to rapid growth of population and the reduction in per capita land. The current scientific, economic, environmental and social trends are forcing farmers and policy makers to look for alternatives to fulfill the nutritional requirement for the growing population. Fish with an average of 18-21 percent protein can be the best alternative in this context. Fisheries sectors have been playing an important role in the national economy through improved food supply, employment and income. During 2002-03, fisheries sector contributed Rs 35482.0 to the total Gross domestic Product (GDP) Forming 1.43 percent of the total GDP Fish Farming practices hold promise for many farmers and potential significant benefits for strengthening the rural economy. In the View of these facts, the present study was conducted to assess the comparative Socio-economic Status of the community who belongs to fishery cooperatives, SHGs and fishermen groups in the Bastar District of Chhattisgarh.

### Material and method

The Study will be confined to Bastar district of Chhattisgarh during the year 2014-15. In accordance with the Fisheries Statistics reported in the annual report of the Directorate of fisheries Chhattisgarh for the year 2009-10 Anonymous (2010), Bastar district remarks 3<sup>rd</sup> as per the water area utilized for fish culture practices in Villages as compared to other districts of Chhattisgarh state. The Bastar district is mainly dominated by the tribal's poor and backward class people, where fisheries and its related activities livelihood. Therefore, Bastar district is being selected purposively for this study.

The Bastar district comprises of seven blocks. Out of which six blocks were selected for the purpose of this study on the basis of lightest dominated tribal, poor and backward class people where fisheries and its related activities play an important role in earning their livelihood in the district, namely, Jagdalpur, Bastar, Lohandiguda, Tokapal, Bakawand and Darbha.

**Correspondence**

**Ankit Thakur**

College of Horticulture and  
Research Station, Jagdalpur,  
Chhattisgarh, India

Bastar district has 20 fishery cooperative societies, 41 SHGs and 86 fisherman groups working in the fisheries sector. Taking these numbers into consideration, 50 percent will be taken purposively for the study waking the numerous 10' 21 and 43 members from the fishery cooperative societies, CHGs and fishermen groups, respectively. With over all respondents being 74.

In This study both primary and secondary date will be collected. Primary date will be collected through personal interview method by pre- tested questionnaires from fish farmers. Secondary data were collected from various sources loch as department of fisheries district- Bastar and Directorate of fisheries, Government of Chhattisgarh. Collected data were tabulated and processed by using appropriate statistical methods.

### Result and discussion

Results on the Socio-economic Status of Fishery cooperative, SHGs and Fishermen groups are discussed related to age, education, Sex, group size, occupation, annual income, size of water body/pond and credit acquisition.

**Table 1:** Distribution of the respondents according to their age.

S. No.	Category	Fishery Cooperative Societies		Self Help Groups		Fishermen Groups	
		Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
1.	Young (<35 years)	0	0.0	2	9.52	9	20.93
2.	Middle (35-55 years)	10	100	19	90.48	31	72.09
3.	Old (>55 years)	0	0.0	0	0.00	3	6.98

### Education

The data related to education presented in Table 2 indicates that the majority of the fishery cooperative societies respondents (60%) were having middle school education followed by 40 percent having primary school education. Among the members of SHGs, the majority of respondents (52.38%) had middle school education followed by 28.58 percent having primary school education; however, 19.04 percent were uneducated. Among the members of fishermen groups, the majority of the respondents had primary school education(37.20%) followed by 27.90 percent having middle school education, 23.25 percent having high school education and 11.62 percent were found to be uneducated.

**Table 2:** Distribution of the respondents according to their education level.

S. No.	Category	Fishery Cooperative Societies		Self Help Groups		Fishermen Groups	
		Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
1.	Illiterate	0	0.00	4	19.04	5	11.62
2.	Up to Primary School	4	40.0	6	28.58	16	37.20
3.	Middle School	6	60.0	11	52.38	12	27.90
4.	High School and above	0	0.00	0	0.00	10	23.25
5.	Higher Secondary School	0	0.00	0	0.00	0	0.00
6.	College and above	0	0.00	0	0.00	0	0.00

### Sex

The data presented in the Table 3 indicates that the majority of the fishery cooperative respondents (90%) were male followed by 10 percent of finale. Among the members of SHGs, the majority of respondents (71.43%) were female followed by 28.58% being male. Among the members of fishermen groups, the majority of the respondents were male (88.38%) followed by 11.62 percent of female.

Thus, it may be concluded from the data that highest percent of respondents in the study area were male for fishery

### Age

The finding on as of the respondents is presented in Table 1. The data reveals that the majority of the fishery cooperatives (100.0%) belonged to middle age group (35-55 years). Among the members of SHGs, the majority of respondents (90.48%) belonged to middle age group (35 to 55 years) and among the members of fishermen groups, the majority of respondents belonged to middle age group (72.09%) followed by 20.93 percent belonging to young age group (<35 years) and 6.08 percent to old age group(>55year). This, it may be concluded from the data that highest percent of the respondents in the study area belonged to middle age group for fishery cooperative societies, SHGs and fishermen groups. Nath (2014) [5] also reported the same findings that 60.0 percent of the surveyed fish farmers belonged to matured age category i.e.30-50 years and 31.0 percent belong to old age category i.e. more than 50 years, only 8.0 percent of surveyed fish farmers were young. The findings were very near to the expectation because only middle aged (35-55 years) person come take responsibility of such enterprise with confidence.

Thus, it many be concluded from the data that highest percent of respondents in the study area were having middle school education as well as SHGs and up to primary school education for fishermen groups. This findings is supported by the findings reported by Abraham *et al.* (2010) [1] reported that majority of fish farmers educated up to middle school level and Gooswami *et al.* (2011) revealed that the majority of fish farmers education level was medium school level. It may be inferred from this observation that as only 23.25 percent of fishermen groups were found to be from high school, highly educated persons are mostly not involved in fish farming.

cooperative societies and fishermen groups, however for SHGs they were female. This fact was also observed by Nath (2014) [5] studied the sex/gender distribution and shows that most of the surveyed fish farmers (93.0%) were male. However, it is interesting to observe that 8.5 percent of surveyed fish farmers wars females in case of lohit district of Arunachal Pradesh. It was encouraging to note that SHGs were having about 71.43 percent of females as compared to only 28.58 percent males, however in fishery cooperative societies and fishermen groups their percentage was very less.

**Table 3:** Distribution of the respondents according to their sex

S. No.	Category	Fishery Cooperative Societies		Self Help Groups		Fishermen Groups	
		Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
1.	Male	9	90.0	6	28.58	38	88.38
2.	Female	1	10.0	15	71.43	5	11.62

### Group Size

The data presented in the Table 4 indicates that the majority of the fishery cooperatives (60.0%) had large group size (725 members) followed by 40.0 percent of medium group size (15-25 members). Among the member of SHGs, the majority of respondents (95.24%) belonged to small group size (< 15 members) followed by 4.76 percent of medium group size (15-25 members) however, among the members of fishermen

groups, the majority of the respondents belonged to small group size, 90.69 percent (<15 members) followed by 9.30 percent, belonging to medium group size (15-25 members). Thus, it is evident from the data that highest percent of respondents in the study area belonged to large group size (>25 members) for SHGs as well as fishermen groups. More number of members found in fishery cooperative societies as compared to SHGs and fishermen groups, was expected.

**Table 4:** Distribution of the respondents according to their group size.

S. No.	Category	Fishery Cooperative Societies		Self Help Groups		Fishermen Groups	
		Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
1.	Small (less than 15 members)	0	0.00	20	95.24	39	90.69
2.	Medium (15 to 25 members)	4	40.0	1	4.76	4	9.30
3.	Large (More than 25 members)	6	60.0	0	0.00	0	0.00

### Occupation

The data Presented in table 5 depicts very interesting fault that the majority of fishery cooperative societies (80.0%) do not have fish farming as only occupation but are having at least three occupations namely fish farming agriculture and animal husbandry at a time. only 10.0 percent are doing fish farming agriculture and nosiness. Among the member of SHGs, the majority of respondents (71.41%) had occupation fish farming, agriculture and animal husbandry at a time followed by 19.04% fish farming and agriculture and 9.52 percent had fish farming, agriculture and labor. Among the members of fishermen groups, the majority of respondents (46.51%) having fish farming, agriculture and animal husbandry at a time followed by 39.53 percent were having fish farming, agriculture and labor, 9.30 percent engaged in fish farming agriculture and forest produce and 4.65 percent had fish farming, agriculture and business.

Thus it may be concluded from the data that highest percent of respondents in the study area has fish farming agriculture and animal husbandry as their major occupation for fishery cooperative societies, SHGs as well as fishermen groups. this finding is in conformity to the findings reported by Goswami *et al* (2011) who stated the majority of respondents perceived fish culture as secondary occupation.

Being small and marginal farmers, most of the members of all groups were having a combination of occupations instead of only fisheries. However, under the conditions of these villages an integrated approach is better as they may be benefited multifold by doing agriculture, animal husbandry as well as fisheries. Moreover, integrated fish farming is more suitable for farmers of Chhattisgarh giving an ecofriendly and organic approach with maximum benefits.

**Table 5:** Distribution of the respondents according to their occupation.

S. No.	Category	Fishery Cooperative Societies		Self Help Groups		Fishermen Groups	
		Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
1.	Fish farming + Agriculture	0	0.00	4	19.04	0	0.00
2.	Fish farming + Agriculture +Animal husbandry	8	80.0	15	71.42	20	46.51
3.	Fish farming + Agriculture + Labour	1	10.0	2	9.52	17	39.53
4.	Fish farming + Agriculture + Forestry product	0	0.00	0	0.00	4	9.30
5.	Fish farming + Agriculture + Service	0	0.00	0	0.00	2	4.65
6.	Fish farming + Agriculture + Business	1	10.0	0	0.00	0	0.00

### Annual Income

The data presented in the table 6 reveals that the majority of the fishery cooperatives i.e. 60.0 percent has high level of annual income followed by 40 percent having very high level of annual income. Among the members of SHGs the majority of respondents (85.71%) belonged to medium level of annual income followed by 9.52 percent having high level of annual income and 4.76 percent with low level of annual income. Among the member of fisherman groups, the majority of the respondents having medium level of annual income (72.09%)

followed by 23.25 percent having low level of annual income whereas only 4.65 percent had high level of annual income.

Thus, it may be concluded from the data that highest percent of respondents in the study area had high level of income for fishery cooperative societies and medium level of annual income for SHGs as well as fishermen groups. The same findings was also reported by Angela *et al* (2012) [2].

Although, highest income was observed in case of fishery cooperative societies, their income was not from single source of fisheries whereas SHGs were getting more income from their activities of fisheries.

**Table 6:** Distribution of the respondents according to their annual income.

S. No.	Category	Fishery Cooperative Societies		Self Help Groups		Fishermen Groups	
		Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
1.	Low (Less than Rs 50,000)	0	0.00	1	4.76	10	23.25
2.	Medium (Rs 50,001 to 5,00,000)	0	0.00	18	85.71	31	72.09
3.	High (Rs 5,00,001 to 10,00,000)	6	60.0	2	9.52	2	4.65
4.	Very High (More than Rs 10,00,000)	4	40.0	0	0.00	0	0.00

### Size of water body/pond

The data presented in the table 7 indicates that the majority of the fishery cooperatives (80.0%) had big size of water bodies/ponds (more than 5.0 ha. area) followed by 20.0 percent with medium size of water bodies/ponds (3.0 to 5.0 ha area). among the SHGs, the majority of respondents had (80.95%) small size of water bodies/ponds (less than 3 ha area) followed by 19.04 percent having big size of water bodies/ponds (more than 5.0 ha area) and among the members of fishermen groups, the majority of the respondents 79.06 percent has small size of water bodies/ponds (less than 3.0 ha area) followed by 18.60 percent with medium size of water bodies/ponds (3 to 5.0 ha area) and 2.32 percent with big size of water bodies/ponds (more than 5.0 ha area).

Thus, it may be concluded from the data that highest percent of respondents in the study area has big size of water bodies/ponds (more than 5.0 ha area) for fishery cooperative societies and small size of water bodies/ponds (less than 3 ha area) for SHGs as well as fishermen groups. this finding is similar to the findings reported by Goswami *et al* (2011) revealed that the majority of ponds were medium sized, low in water holding capacity and rained while Rajan *et al.* (2013) [6] stated that the average pond size holding of fish farmers was 1-2 ares.

It may be inferred that SHGs having less members were taking water bodies of less than 3.0 ha whereas fishery cooperative societies having more members were working on big water bodies of more than 5.0 ha area.

**Table 7:** Distribution of the respondents according to their size of pond/water body.

S. No.	Category	Fishery Cooperative Societies		Self Help Groups		Fishermen Groups	
		Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
1.	Small (less than 3 ha.)	0	0.00	17	80.95	34	79.06
2.	Medium (3 to 5 ha.)	2	20.0	0	0.00	8	18.60
3.	Big (more than 5 ha.)	8	80.0	4	19.04	1	2.32

### Credit Acquisition

The data presented in table 8 reveals that 100.0 percent of the respondents had acquired the credit for fishery cooperative societies and SHGs while 74.41 percent of the respondents had acquired the credit for fishermen groups while 25.58 percent of the respondents had not acquired the credit at all.

In case of sources of credit based on multiple responses for fishery cooperative societies, 100.0 percent credit had been taken from the cooperative societies itself. However, 40.0 percent of respondents had taken credit from money lenders whereas 20.0 percent of respondents took it from friends, neighbors, relatives and others. Among the self Help Groups 100.0 percent credit was taken from the nationalized banks. However, 42.85 percent of respondents took it from friends, neighbors, relatives and others while 38.09 percent of respondents had taken credit from money lenders. Among the fishermen groups, 78.12 percent respondents had taken credit from money lenders and 21.87 percent of respondents had taken credit from friends, neighbors, relatives and others.

In case of duration of credit, 80.0 percent had taken short-term credit for fishery cooperative societies followed by 20.0 percent with mid terms credit. Among the SHGs, 90.47 percent has taken short term credit followed by 9.52 percent who had taken mid-term credit. Among the fisherman groups, out of the only 32 respondents, 56.25 percent had taken short-term credit followed by 43.75 percent taking mid-term credit.

It can be concluded that majority of the respondents had acquired short term credit. The acquired short term credit might have been taken for pond constructions purchasing seeds, fertilizers and implements etc. The reason for the respondents willing to acquire credit for short-term only may be because of fish farming being an annual practice, they had to deposit their entire loan, as until and unless they do not deposit the league amount of land, they cannot get credit (loan) again from credit agency. In case of availability of credit, out of the total respondents who had acquired credit the data presented in table-8 revealed that 90.0 percent has not acquired it so easily for fishery cooperative societies. Among the SHGs 90.47 percent of the respondents had acquired the credit easily whereas 9.52 percent had not acquired it so easily. Among the fishermen groups, only 18.75 percent of the respondents had acquired the credit easily whereas 81.25 percent had not acquired it so easily. This clearly shows that creditability of cooperatives societies and SHGs is much more than individual fishermen groups. Angela *et al* (2012) [2] also found the similar results in their studies that majority (89%) of the fishers were found to be dependent on money lenders for credit.

Only SHGs have taken credit from nationalized banks and friends/neighborly est. whereas fishermen groups have taken most of the credit from money lenders, this shows that working in groups is much better than working individually as far as fish farming is concerned.

**Table 8:** Distribution of the respondents according to their credit acquisition.

S. No.	Category	Fishery Cooperative Societies		Self Help Groups		Fishermen Groups	
		Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
A.	Acquisition						
	1. Not acquired	0	0.00	0	0.00	11	25.58
	2. Acquired	10	100	21	100	32	74.41
B.	Source of credit*						
	1. Nationalized banks	0	0.00	21	100	0	0.00
	2. Co-operative society	10	100	0	0.00	0	0.00
	3. Money lender	4	40.0	8	38.09	25	78.12
	4. Friend/Neighbour/Relatives/other	2	20.0	9	42.85	7	21.87
C.	Duration of credit						
	1. Short term credit	8	80.0	19	90.47	18	56.25
	2. Medium term credit	2	20.0	2	9.52	14	43.75
	3. Long term credit	0	0.00	0	0.00	0	0.00
D.	Availability of Credit						
	1. Acquired easily	9	90.0	19	90.47	6	18.75
	2. Acquired difficulty	1	10.0	2	9.52	26	81.25

\*Data based on multiple responses

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