

# Chapter 6

## Summary and Conclusion

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The present investigation had been conducted at four villages namely Porobasti, Pampubasti in Alipurduar districts and Srikrishnapur and Sagrakata in Bankura districts of West Bengal. For selection of state and district purposive sampling techniques was adopted due to unique nature of the locations in terms of subject area of study and in case of selection of block, villages and farmers or respondents simple random sampling technique was taken up. A pilot study was conducted to understand the area, its people, institution, communication, education and attitude of people towards the management efficiency, their livelihood in forest fringe area, benefit gets from forest and also forest department.

The 14 independent variables and 2 dependent variables were selected and measured with the help of exact scales developed by previous social science researcher or by modifying the developed scale by structured schedule for requirement of the investigation.

The statistical tools like mean, standard deviation, coefficient of variance, correlation coefficient, multiple regression analysis, factor analysis, & paired 't' test have been done for the study.

**Findings:** The data was collected, tabulated, and necessary statistical test have been administered to find out the logical as well as mathematical conclusion over the objectives set forth. The summaries of findings are appended below:

**Socio economic profile for all the respondents**

It is evident from the study that 27% of the respondents were young age (18-30 years) and most of them were middle age (65%) and rest 8% respondents were above 50 years. 27% of the respondents were belonged to schedule caste, 33% were from lower caste, 20% of the respondents were general caste, agricultural caste were 10% and brahmin caste were also found to the tune of 10%. The occupational pattern shows that 24% were labourer, 20% involved in caste occupation, 26% of the respondents were doing business. 10% respondents were engaged in service. 16% of them involved in cultivation. Only 1% of the respondents involved in independent business. The education level of respondents shows that 20% are illiterate, 5% respondents can read only, 1% can read and write. 30% of the respondents had education up to primary level, 25% up to secondary level, 11% respondents had achieved higher secondary education and 8% of them obtained graduate degree. Majority of the respondents had nuclear family (77%). Rest 23% had joint family. It is clear from the table that 57% of the respondents belong to small family (up to 5 members) and the remaining 43% of them belongs to large family (above 5 members). The

land distribution which is an important phenomenon in rural society indicated that 21% of the respondents were landless and remaining 79% were landowner. Among the landowning category 54% were having less than 1 bigha followed by 20% having 1 to 5 bigha and only 5% have 5 to 10 bigha of land respectively. Among the respondents only 1% had no house but the used to live in rented house (hut). 27% of them had house (hut), 23% lived in kutcha house, 26% lived in pucca house. Rest 23% respondents had mixed type of house. 25% respondents had no drought animal. 6% respondents had 1 to 2 drought animal, 42% had 3 to 4 drought animal and 25% of them had 5 to 6 drought animal. Only 1% had tractor. In the villages of the study area 35% respondents had sanitation facilities and rest 65% of the respondents had no sanitation facilities available.

### **Socio economic profile of respondents in Alipurduar**

It is evident from the study that 33.33% of the respondents were young age(18-30 years) and most of them were middle age(58.33%) and rest 8.33% respondents were above 50 years. 26.66% of the respondents were belonged to schedule caste,40% were from lower caste, 25% of the respondents were general caste and brahmin caste were also found to the tune of 8.33%. The occupational pattern shows that 20% were labourer, 21.66% involved in caste occupation, 26.66% of the respondents were doing business. 13.33% respondents were engaged in service.18.33% of them involved in cultivation. The education level of respondents shows that 18.33% are illiterate. 38.33% of the respondents had education up to primary level , 25 % up to secondary level, 10% respondents had achieved higher secondary education and 8.33% of them obtained graduate degree.

Majority of the respondents had nuclear family (78.33%). Rest 21.67% had joint family. 65% of the respondents belongs to small family (up to 5 members) and the remaining 35% of them belongs to large family (above 5 members). The land distribution which is an important phenomenon in rural society indicated that 26.66% of the respondents were landless and remaining 73.34% were landowner. Among the landowning category 60% were having less than 1 bigha followed by 8.33% having 1 to 5 bigha and only 5% have 5 to 10 bigha of land respectively. Among the respondents 33.33% of them had house (hut), 20% lived in kutcha house, 20% lived in pucca house. Rest 26.66% respondents had mixed type of house. 33.33% respondents had no drought animal, 18.33% respondents had 1 to 2 drought animal, 31.66% had 3 to 4 drought animal and 18.33% of them had 5 to 6 drought animal. In the villages of the study area 41.66% respondents had sanitation facilities and rest 58.34% of the respondents had no sanitation facilities available.

#### **Socio economic profile of respondents in Bankura**

It is evident from the study that 17.5% of the respondents were young age (18-30 years) and most of them were middle age (75%) and rest 7.5% respondents were above 50 years. 27.5% of the respondents were belonged to schedule caste, 22.5% were from lower caste, 12.5% of the respondents were general caste, agricultural caste were 25% and brahmin caste were also found to the tune of 12.5%. The occupational pattern shows that 22.5% were labourer, 10% involved in caste occupation, 12.5% of the respondents were doing business, 13.33% respondents were engaged in service. 40% of them involved in cultivation. Only 2.5% of the respondents involved in

independent business. The education level of respondents shows that 22.5% are illiterate, 12.5% respondents can read only, 2.5% can read and write. 15% of the respondents had education up to primary level, 27.5% up to secondary level, 12.5% respondents had achieved higher secondary education and 5% of them obtained graduate degree. Majority of the respondents had nuclear family (75%). Rest 25% had joint family. 47.5% of the respondents belongs to small family (up to 5 members) and the remaining 52.5% of them belongs to large family (above 5 members). The land distribution which is an important phenomenon in rural society indicated that 10% of the respondents were landless and remaining 90% were landowner. Among the landowning category 50% were having less than 1 satak followed by 35% having 1 to 5 satak and only 5% have 5 to 10 satak of land respectively. Among the respondents only 2.5% had no house but the used to live in rented house (hut). 17.5% of them had house (hut). 27.5% lived in kutcha house, 27.5% lived in pucca house. Rest 25% respondents had mixed type of house. 15% respondents had no drought animal. 52.5% respondents had 1 to 2 drought animal, 22.5% had 3 to 4 drought animal and 7.5% of them had 5 to 6 drought animal. Only 2.5% had tractor. In the villages of the study area 25% respondents had sanitation facilities and rest 75% of the respondents had no sanitation facilities available.

### **Livelihood pattern of study area**

The distribution pattern of livelihood and it is suggestive of the fact that the most of the people of Porobasti involved in Mahatma Gandhi National Rural Employment Grantee Act (MGNREGA) (23.47%), 21.73% people

collect firewood from forest and sold in nearby market,18.2% respondents work as local labour(agril.labour, mason, construction labour etc.) 16.2% engaged in animal rearing(cow, pig, goat, buffallow). One of the important characteristics of Porobasti that in promoting the rural tourism they have established picnic spot, where women are also taking part actively, 8.69%people are involved in managing picnic spot,6.08% migrate to other state as labour seasonally. Only 7% of the respondents their livelihood was agriculture. Only 0.86% respondents were engaged in government services. The distribution pattern of livelihood and it is suggestive of the fact that the most of the people of Porobasti involved in Mahatma Gandhi National Rural Employment Grantee Act (MGNREGA) (23.07%),16.92% people collect firewood from forest and sold in nearby market,16.92% respondents work as local labour(agril.labour, mason, construction labour etc.) 14.61% engaged in animal rearing(cow, pig, goat, buffallow). One of the important characteristics of Pampubasti that in promoting the rural tourism they have established picnic spot,where women are also taking part actively,11.53%people are involved in managing picnic spot,7.69% migrate to other state as labour seasonally. Only 3.84% of the respondents their livelihood was agriculture. Only 5.38% respondents were engaged in government services.

In Bankura district at Srikrishnapur village 10.52% respondent choose agriculture as their livelihood. 12.63% people involved in animal husbandry. Piggery, poultry, fishery also found as existing livelihood of the respondents. In piggery 8.24% respondent involved and in poultry and fishery 6.31%, 2.10% respondent involved respectively. It is evident that

labour in local area got 1<sup>st</sup> rank as existing livelihood. Only 7.36% men of the respondents going other state for work as labour. In this village most of the people got job card in MGNREGA (14.73). One of the important livelihoods in Bankura district that the villagers were making plates from Sal leaf and sale in the market. In Srikrishnapur village 15.78% respondent collecting Sal leaf from forest and making plate and bind it and sale in the market @ 80/- per bundle.

In Bankura district at Sagrakata village 17.97% respondent choose agriculture as their livelihood. 12.35% people involved in animal husbandry. Piggery, poultry were also found as existing livelihood of the respondents. In piggery 8.24% respondent involved and in poultry 5.61% respondents involved. It is evident that labor in local area got 1<sup>st</sup> rank as existing livelihood. Only 6.74% men of the respondents going other state for work as labour. In this village most of the people got job card in MGNREGA (14.60%). In Sgrakata village 13.48% respondent collecting Sal leaf from forest and making plate and bind it and sell in the market @ 80/- per bundle.

In case of Age( $X_1$ ), mean age of respondents of the study was 48 with a standard deviation of 14.29 for total distribution. The coefficient of variation of the age distribution of respondents was 29.93% which explained the moderator consistency of the total distribution. The mean value of Caste( $X_2$ ) of respondents was 2.43 that were in primary and secondary school level & graduation level. The S.D of distribution was 1.26 with a coefficient of variation 0.52 which in turn reflected the low level of consistency. The mean value of occupation( $X_3$ ) was 3.2. The S.D of

distribution was 1.76. The coefficient of variation was 0.55. The mean value of Education( $X_4$ ) was 3, with a standard deviation of 1.84. The coefficient of variation was 0.61 which depicted the medium level of consistency. In case of family type( $X_5$ ) mean value of family type of respondents of the study was 1.24 with a standard deviation of 0.49 for total distribution. The coefficient of variation of the age distribution of respondents was 39.98% which explained the moderator consistency of the total distribution. In case of family size( $X_6$ ) mean value of family size of respondents of the study was 1.44 with a standard deviation of 0.49 for total distribution. The coefficient of variation of the age distribution of respondents was 34.93% which explained the moderator consistency of the total distribution. In case of Land Holding( $X_7$ ), mean value of these variable of respondents of the study was 1.09, with a standard deviation 0.77 for total distribution. The coefficient of variation of these variable distribution of respondents was 71.53 explained the medium level of consistency of the total distribution. The mean value of House Type( $X_8$ ) was 2.46, with a standard deviation of 1.17. The coefficient of variation was 47.79 which depicted the medium level of consistency. The mean value of Farm Power( $X_9$ ), Asset Possession( $X_{10}$ ) of respondents was 2.52 ,9.59 that were in low level. The S.D of distribution was 2.95, 6.68 with a coefficient of variation 11.71 , 69.96 percent respectively which in turn reflected the very low level of consistency. The mean value of Outside Communication ( $X_{11}$ ) was 7.07 with a standard deviation of 3.26. The coefficient of variation was 46.20 which depicted the medium level of consistency. The mean value of Planning orientation( $X_{12}$ ), Production orientation( $X_{13}$ ) and Market



orientation( $X_{14}$ ) of respondents was 8.84 , 13.96 , 14.38 for last two antecedent variables. The S.D of distribution was 4.82 , 7.91 , 8.64 with a coefficient of variation of 54.61 , 56.69 , 60.11 respectively which in turn reflected the high level of consistency. The mean value of income ( $Y_1$ ) was 1.46. The S.D of distribution was 0.62 The coefficient of variation was 42.68. The mean value of livelihood ( $Y_2$ ) was 3.42. The S.D of distribution was 0.87. The coefficient of variation was 25.63.

### **Correlation coefficient**

#### **Correlation Coefficient between Dependent and Independent variables of the respondents**

It is found that out of 14 independent variables( $X$ ), 8 variables have positive and significant relationship with income( $Y_1$ ), 6 independent variables have no significant relationship with income. The variables farm power and assets possession are positively correlated with the income at 0.05% level of significance. And the variables caste, occupation, land holding, planning orientation, production orientation and market orientation are also positively correlated with income at 0.01% level of significance. It is quite obvious that the occupational pattern from which the income of the respondents in the study area is largely depends on the land based activities and contributed significantly from agriculture and animal rearing, despite the fact that their earning is also contributed as wage earner from the different developmental activities. One of the most interesting features of the findings is that management orientation in the form of planning orientation, production orientation and market orientation have played a major role in the proper utilization of land and effective marketing of the produce

contributed significantly from the agriculture and its allied sectors. So, the income from the different sources have nicely scanned by the analysis and the people of forest fringe area for their sustenance and survival fighting hard after they have been deprived from the facilities of the forest department.

It is found that out of 14 independent variables(X), 4 variables have positive and significant relationship with livelihood (Y2), 10 independent variables have no significant relationship with livelihood. The variables age and family type are positively correlated with the livelihood at 0.05% level of significance. And the variables planning orientation and market orientation are also positively correlated with livelihood at 0.01% level of significance. Here it is interesting to note that age and family type have played a major role in livelihood as the younger member in the family can earn more income from the different sources available and their agility and ability to work hard in order to augmenting the family income. It is evident from the study that a family type which is mostly nuclear in nature is suggestive of the fact that their demand is lesser than the joint family so, the requirement will be less in comparison to the other type of family. Other variables which are found to have contributed significantly in the livelihood like planning orientation and market orientation. The traditional livelihood pattern in the forest fringe area people assumed to have major contribution like management of picnic spot, collection of fire wood and sale and making of plate from Sal leaf besides other livelihood option available in the area.

### **MULTIPLE REGRESSION ANALYSIS**

It has been found that caste( $X_3$ ), land holding( $X_7$ ), assets possession ( $X_9$ ) has recorded a significant causal-effect impact on income ( $Y_1$ ) which is dependent variable. Value of  $r^2$  is 0.285. we can conclude that almost 29% of variability has been embedded with consequent variable income ( $Y_1$ ), which has been explained with the combination of 14 causal variables.

It has been found that family type ( $X_5$ ), house type ( $X_8$ ), planning orientation ( $X_{13}$ ) has recorded a significant causal-effect impact on livelihood ( $Y_2$ ) which is the dependent variable. The value of  $r^2$  is 0.207. and we can conclude almost 21% of the variability embedded with consequent variable livelihood( $Y_2$ ), which has been explained with the combination of 14 causal variables.

#### **t – test**

The study was conducted in four villages of Alipurduar and Bankura districts of west Bengal. In the two districts the livelihood pattern income sources were different. To find out whether, there is any significant difference in the income and livelihood of the respondents in two districts t-test was conducted.

The t – test used to test the variation in the income of the respondents between villages of Alipurduar and Bankura districts. It is observed that the calculated value was 3.159 which were highly significant. Hence, we can conclude that there is significant difference in the income of respondents in Alipurduar and Bankura district of West Bengal.

The t – test used to test the variation in the livelihood of the respondents between villages of Alipurduar and Bankura districts. It is observed that the calculated value was 3.166 which were highly significant. Hence, we can conclude that there is significant difference in the livelihood of respondents in Alipurduar and Bankura district of West Bengal.

### **Factor Analysis**

Factor 1 has accounted for 52.346% of total data variance, 9 variables with a high factor loading i.e. assets possession (X10), house type (8), occupation(X3), Production orientation(X13), Production orientation(X13), Market orientation(X14), Planning orientation(X12), Farm power(X9), Education(X4), Caste(X2). Chosen to interpret this factor. The factor loading of all variable is positive. Factor 1 has been renamed as **Management Orientation**.

The factor 2 has include 3 variables i.e. land holding(X7), outside communication(X10), age(X1) that have contributed 12.267% of variance. The factor loading of all variable is positive. Factor 2 has been renamed as **Modernism**.

The factor 3 has include 2 variable i.e. family type(X6) and family size(X5) that has contribute 11.307% of variance. The factor loading of all 2 variable is positive. Factor 3 has been renamed as **Family construct**.

### **CONCLUSION**

- The socio economic condition of the two villages (Porobasti and Pampubasti in Alipurduar and Srikrishnapur and Sagrakata in Bankura) under study have reflected a sharp contrasts and leading to the poor

socio economic condition exists Alipurduar district as compared to the Bankura district.

- The role of women besides their household activities they have also took part in other economic activities as well. As the agricultural situation in Bankura districts better than the Alipurduar districts so the women are involved more in agricultural activities than the women of Alipurduar district.
- The involvement of women folk was recorded in two most important enterprise management in two districts under study like plate making from Sal leaf in Bankura district and managing picnic spots in Alipurduar district.
- The people of Alipurduar districts has very little option for the diversification of livelihood due to poor agricultural situation on the other hand owing to comparative better agricultural situation the people of Bankura districts have more livelihood generation.
- Income from different livelihood sources the people of Bankura district are far ahead from Alipurduar district. The statistical tools which was administered to know the contribution of different variable on livelihood and income, it is observed that the emphasis to be given on land holding, family type, planning orientation, farm power, assets possession, market orientation etc. are the most important and significant contributors for the generation of livelihood and the enhancement of the income of the family. The result of t test proved the significant differences in the livelihood and the income in two districts of the study area.

- The observation which was made after analyzing the data scanning the finding it is suggested that a paradigm shift is required for sustainable development for the forest fringe area people at large, so that the hindrances stand in the way of development, women, men and other vulnerable group of population encountered the problem living amidst in the nature is minimized. Accordingly, some suggestions were made.

Forests have manifold utilities. It assists in moderating the climate maintaining the soil mentle, regulating the water supply, purifying the air helping in noise abatement and extending recreation facilities. Moreover, it supports various shorts of economic activities through providing fuel wood, fodder, timbers etc. to meet the demand of the burgeoning population of both human and livestock and for other purposes destruction of forest has an adverse effect for the people those who are living in an around forest fringe area and generating their livelihood from the forest from time immemorial. The present study is an endeavor to identify some of the possible areas of existing livelihood pattern in two districts and suggesting alternative sustainable livelihood options. Besides there are other areas left unattended where a lot of scopes of further research are there is summarized below.

- Women empowerment in augmenting the family income.
- Role of SHG's and their development.
- Involvement of people participation in maintaining the forest eco-system.
- Existing forest based enterprise development and management.

- Involvement of large entrepreneur by passing the forest fringe area people for the establishment of cottage/ resort for eco tourism.
- Hunger malnutrition in the forest fringe area people.
- Health and hygiene of the people for protection of the environment of the forest.
- Educational institute, educational status for providing alternative livelihood options.
- Assessment of government programmes for the enhancement of livelihood.
- Involvement of forest fringe area people in the project of forest department
- Participation of tribal people in the production and protection of forests.