

**PROBLEMS AND PROSPECTS OF LIVELIHOOD DIVERSIFICATION AMONG
THE MISING AND SONOWAL KACHARI RURAL TRIBES IN DIBRUGARH
DISTRICT OF ASSAM**

Sikha Dutta
Research Scholar
School of Social Sciences
Tata Institute of Social Sciences, Mumbai
E-mail- sikhadutta123@gmail.com
Mobile Number: 8454005414

INTRODUCTION:

Rural tribal people have distinct problems and prospects on livelihood diversification based on demographic, socio-economic and geographical conditions. Diversification activities make greater contribution to generate cash incomes for poorer households and it is a key strategy by which people try to make ends meet and improve their well-being. Diversification is a continuous adaptive process whereby households add new activities, maintain existing ones or drop others, thereby maintaining diverse and changing livelihood portfolios. Livelihood in rural areas is very erratic and risk hidden. Agricultural and allied activities support livelihood of nearly 70 percentage of India's rural population. However land based livelihood of small and marginal farmers are becoming unsustainable in recent times due to surplus manpower and decrease in arable land. Due to inadequate income from on-farm activities to support family's needs, rural populations are forced to look at alternative means for supplementing their livelihoods. The Paper is analysis the problems and prospects of livelihood diversification among two tribes, the Mising and the Sonowal Kachari of Dibrugarh district of Assam. The importance of livelihood diversification activities in improving economic condition of rural farmers of the two communities is studied. Variables determining livelihood diversification activities of two selected communities are also identified during the study.

RESEARCH QUESTIONS:

The study intends to answer following research questions:

- I. Does Livelihood Diversification translate into improved livelihoods of rural tribal communities?
- II. What are the inherent and emerging constraints in relation to livelihood diversification?

RESEARCH OBJECTIVES:

The main objectives of this paper are

1. To identify the pattern of rural tribal livelihood diversification,
2. To explain critically the problematic and prospective issues related to livelihood diversification strategies on selected rural tribal communities.

METHODOLOGY:

The study is based on fieldwork conducted in Barbaruah Block of Dibrugarh district, Assam, during the months of July 2015 to August 2015. Before the commencement of fieldwork, a pilot study is conducted during the month of June 2015. During the pilot study, it is found that Barbarua Block of Dibrugarh district has the highest percentage of Scheduled Tribe population in the district. The same is confirmed through secondary data.

Based on these primary and secondary data, Barbaruah Block of Dibrugarh district is selected for final study. Within Barbarua block, Six Sonowal Kacharis and five Mising community dominated villages are selected for the study. Using purposive sample of ten households with diverse socioeconomic background is selected from each village. General surveys of the villages in those localities are done on the basis of available information with local bodies like Development Blocks or local level key-informants such as village head (Gaon Bruha) or village school teacher. Semi structured interviews are conducted with the villagers, local shop's owners, teachers, youth. Special emphasis is given to take interviews of specific target group viz. agricultural laborers, landless people, unemployed youth and women. The villagers are interviewed to understand their perceptions towards the present source of livelihoods and their changing source of livelihoods. The scope of the interviews is wide covering different cultural practices and indigenous knowledge related to resource management. The household survey schedule is designed to capture the details of socio cultural and economic information of the villagers. This includes demographic details, educational status, occupational and income aspects. These aspects can be break down into micro data of landholding patterns, irrigated, and non irrigated field, sharecropping pattern, production of crops, source of livelihoods, migration pattern, factors affecting income generating activity, diversity of livelihood portfolios, experience of self help groups, contribution of diverse family members to household income, family perceptions of wellbeing and people's hopes for the future etc. Some special interviews are also held with small tea garden owners as tea growing is a new avenue of income for the tribal communities of Assam.

STUDY AREA:

The Dibrugarh district extends from 27° 5' 38" North to 27° 42' 30" North latitude and 94° 33' 46" East to 95° 29' 8" East longitude. Dibrugarh district covers an area of about 3381 sq. km which is 4.31 per cent of the total land of Assam. The Dibrugarh climate is humid subtropical climate with extremely wet summers and relatively dry winters. The soil of the district is mostly fertile, alluvial soil. The National Highway 37 is the major road running through the district. Tea and oil are the major revenue generators for the district. There are 144 tea gardens in Dibrugarh which supplies raw tea leaves to more than 85 Tea processing factories in the district. Dibrugarh is also known for petroleum industries. Headquarter of Oil India Limited is situated in Duliajan town in Dibrugarh.

Three of the state government PSUs viz Brahmaputra Valley Fertilizer Corporations, Assam power generation corporation Limited and Assam Petro Chemicals Limited are situated in Dibrugarh district. Brahmaputra Cracker and Polymer Limited (Assam Gas Cracker Project), a mega petrochemical plant with investment of Rs. 10,000 crores is being commissioned in Lepetkata, Barbarua block of Dibrugarh. Out of the seven development Blocks of Dibrugarh district, the Barabaruh Development Block is selected for the study. This block is the nearest to district headquarter and has highest Schedule Tribe (17.19 percent) population. Agriculture is the chief occupation of livelihood of the people in this area. Besides, there are also certain small tea growers which occupy three per cent of the total population. The ongoing construction of Brahmaputra Cracker and Polymer Limited (BCPL) in Lepetkata and Brahmaputra Bridge in Bogibil has provided an employment opportunity to the people of the study area. The villagers are engaged in unskilled and semi-skilled works in these projects.

SIGNIFICANCE OF THE STUDY:

The significance of the study is:

1. This study helps to identify different impact of livelihood diversification strategies in the selected rural tribal communities and filled the gaps that have been yet addressed by researchers in a study.
2. The study reveals that limited access to credit, skill development, markets and transport infrastructures weaken the efficiency of tribal people livelihood and their living conditions.
3. Areas requiring further investigation, which emanated from the study, include impact of shifting from traditional agriculture activities to tea farming among Sonowal Kachari and how it has affected smallholder farmers.

4. In Mising tribe, the study finds that youth has migrated to urban towns for employment opportunities and how flood prone Mising tribal communities sustain their traditional livelihood activities are significant for the study.

ANALYSIS:

In this study seven mutually exclusive livelihood diversification strategies are identified. These include on -farm only, off-farm only, non-farm only, on -farm plus off -farm, on-farm plus non-farm, off- farm plus non-farm and on-farm plus off-farm plus non-farm.

The independent variables that expected to affect diversification of livelihood strategies of rural tribal households head in the study area are age, gender, education level, land size of the household and total income.

Demographic characteristics of household Head:

Table.1 summarizes the demographic characteristics of households head. Demographic characteristics of households head such as age, gender, household size are important factors which determine the extent of livelihood diversification in the study area.

Table.1 Demographic characteristics of Household Head

Characteristics	Total	Sonowal Kachari	Mising
Total number of Household	110	60	50
Age of household head (in years)			
Below 30	4	1	3
31-40	23	9	14
41-50	19	8	11
51-60	27	20	7
60+	37	22	15
Household Head Average age (Median value)	55	58	48
Gender of the household head			
Male (%)	84	82	86
Female (%)	16	18	14
Gender distribution in the household			
Male (%)	52	49	53
Female (%)	48	51	47
Family Size			
2	6	5	1
3	8	7	1
4	36	18	18
5	19	10	9
6	18	13	5
7-9	14	5	9
10+	9	2	7
Average household size	5	5	6

It is found that 33% of the household head age lies in 60 years above age bucket while average age of household head age is 55. This shows that majority of the households heads are in their old age and economically not active. This age group people are reluctant to venture into non-agricultural activities and not involved in livelihood diversification.

Gender is an integral determinant of rural livelihoods. 84% of the households head in the study area are male. They provide majority of agricultural labour and is sole decision maker concerning agricultural activities.

The role of the Family size is central in demographic analysis, because this unit is usually the locus of joint decisions regarding consumption, production, labor force participation, savings, and capital formation. Household's size has both positive and negative effect on livelihood. A larger household's size has more income generating activities than a smaller household's size. Minimum hired labour is required in larger household's size. However due to limited land holding, large families who solely dependent on agricultural activities are not able to fulfil food security for the entire year. Smaller families have children and old age parents as dependent members who may not contribute in agricultural activities. Majority of families in the study area consists of 4-5 members.

Household Head Population by age group, gender and Tribes:

Table.2 Household Head Population by Age, gender, and Tribes

Head Age Years	Total			Sonowal Kachari			Mising		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
>30	4		4	1		1	3		3
31-40	22	1	23	9		9	13	1	14
41-50	19		19	8		8	11		11
51-60	23	4	27	18	2	20	5	2	7
< 60	24	13	37	13	9	22	11	4	15
Total	92	18	110	49	11	60	43	7	50

The data in the table 2 shows that, by age group wise female headed head household is less compare to male headed households. The Sonowal kachari has 11 female headed households than 7 female headed households of Mising. Out of 110 households head, only 4 persons are shown in the table below 30 years of age. On the other hand above 60 years of age there are 37 persons.

Household Total Population by age group, gender and tribes:

The distribution of the household population in this field survey data is shown in Table.3 by age groups, gender and selected two tribal communities. The 110 households successfully interviewed in the September 2015 were composed of 593 persons; 306 were men, representing 52 percent of the population, and 287 were women, representing 48 percent. The age structure of the population indicates that a larger proportion of the household population falls into the youth age groups for each gender in both Sonowal Kachari and Mising villages as a result of relatively high working population.

Table.3 Household Total Population by Age group, gender, and Tribes

Age Years	Total			Sonowal Kachari			Mising		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
1-10	49	44	93	25	19	44	24	25	49
11-20	56	50	106	15	22	37	41	28	69
21-30	58	81	139	25	34	59	33	47	80
31-40	57	44	101	25	25	50	32	19	51
41-50	36	28	70	12	19	31	24	9	33
51-60	25	18	43	20	12	32	5	6	11
60+	25	22	47	14	15	29	11	7	18
Total	306	287	593	136	146	282	170	141	311

Socio-economic characteristics of Household Head:

Table.4 presents some selected socio-economic characteristics of household head. 97.3% of households are married showing that majority of the respondents are married and have families to care for.

Table .4 Socio-economic characteristics of Household Head

Characteristics	Total	Sonowal Kachari	Mising
Total number of Household	110	60	50
Marital status of respondents (%)			
Married	97.3	95.0	100
Unmarried	2.7	5.0	-
Education level of Head (%)			
Never attend school (illiterate)	19.1	15.0	24
Primary education	14.5	13.3	16
Secondary education	7.3	10.0	4
High School	46.4	51.7	40

Higher Secondary	8.2	6.7	10
Undergraduate	3.6	-	4
Graduate and above	0.9	3.3	2
Household Head livelihood Strategies (%)			
On-farm	46.4	48.3	44.0
Off-farm	3.6	3.3	4.0
Non-farm	14.5	18.3	10.0
Off-farm + Non-farm	0.9	-	2.0
On-farm +Non-Farm	27.3	20.0	36.0
On-farm+ Off-Farm+ Non-Farm	1.8	-	4.0
Household Head annual income			
Less than 30,000	9	8	1
From 31,000 to 60,000	51	24	27
More than 60,000	28	13	15
No income	22	15	7
Household Total Land			
Landless	2.7	-	6.0
Less than 2 bigha	2.7	1.7	4.0
2 to 4 bigha	16.3	20.0	12.0
4 to 6 bigha	17.2	23.3	10.0
6 to 8 bigha	20.9	25.0	16.0
8 to 12 bigha	20.9	20.0	22.0
More than 12 bigha	19.0	10.0	30.0
Household Agricultural Land			
Landless	2.7	-	6.0
Less than 2 bigha	11.8	8.3	16.0
2 to 4 bigha	29.1	45.0	10.0
4 to 6 bigha	28.2	38.3	16.0
More than 6 bigha	28.2	8.3	52.0
Households tea-garden land			
No tea garden land	70.9	48.3	98.0
Less than 2 bigha	11.8	21.7	-
2 to 4 bigha	8.2	15.0	-
4 to 6 bigha	4.5	6.7	2.0
More than 6 bigha	4.5	8.3	-
Households expenditure			
Food	13.6	15.0	12.0
Medical/Health	20.9	21.7	20.0
Rituals/Function/Marriage	35.5	36.7	34.0
Education	11.8	18.3	4.0
Household Essentials	8.2	6.7	10.0
Transportation	10.0	1.7	20.0

Most of the respondents had one form of formal education or the other with majority 46.4 % having high school education. The level of education of farmers is assumed to influence the level of awareness and ability to adopt innovation. Moreover, 19.1% of the households head no formal education, 14.5% had primary education, 7.3% had secondary education while

8.3% had Higher Secondary education. From the table above, it is seen that the literacy level of households head are relatively low in the study area. Furthermore, households head engaged in various income generating activities which can be on- farm, off-farm and non-farm activities so as to make ends meet. The type of non-farm livelihood activities engaged by farm households greatly influences their participation in farming activities.

Occupationally, 46.4% of the households have farming as their main occupation. 27.3 % have both on-farm and non-farm activities, and 1.8% have all on, off and non-farm activities as their main occupation respectively. The 51 household head annual income is come under category of 31,000 to 60,000. Total 22 households head is not involved in directly income generation activities. The total land and farm land both are more in Mising comparable to Sonowal Kachari tribe. On the other hand Sonowal Kachari tribe converts their land into tea garden, but Mising tribe 4 to 6 bigha, 2 percent only using for tea plantation. Out of 110 families, 19 percent possess 12 bigha and above, where Mising tribe possess 30 percent more than Sonowal Kachari 10 percent only. But their cultivated fields are affected by floods in every year. Therefore now a day they cannot solely depend upon the agricultural production. The household expenditure is 35.5 percent shown highest in ritual and functions.

Table. 5 Educational Level of households Head and background characteristics

Background Characteristics	Head Level of Education by sex																
	No Education		Primary (i-v)		Secondary (vi-viii)		High School (ix-x)		H.S (xi-xii)		Graduate		Post Graduate		Total		
Age	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	T
>30	1		1				1		1						4		4
31-40	1	1	3		1		10		5		2				22	1	23
41-50	1		3				12	1	2				1		19	1	20
51-60	5	1	1	1	4		11	2	1		1				23	4	27
60+	4	7	5	2	2	1	12	2			1				24	12	36
Total	12	9	13	3	7	1	46	5	9		4		1		92	18	110
Tribe																	
Sonowal Kachari	4	5	6	2	5	1	28	3	4		2				49	11	60
Mising	8	4	7	1	2	2	18		5		2		1		43	7	50
Total																	
Annual Income																	
>30,000		1	2		2	1	3						1		7	2	9
30,000 – 60,000	7		8	1	3		23	2	5		1				48	3	51
<60,000	2	1	3		2		13		4		3				27	1	28

No income	3	7		2			7	3						10	12	22	
Total	12	9	13	3	7	1	46	5	9		4		1		92	18	110
Livelihood Strategy																	
On-farm	6	5	8	1	4		21	2	2		2			43	8	51	
Off-farm	1		1				1	1						3	1	4	
Non-farm	2	1	1	1			8		2			1		14	2	16	
Off-farm + Non-farm	2		3		3		14		5		2			29	1	30	
On-farm +Non-Farm						1	1							1		1	
On-farm+ Off-Farm+ Non-Farm	1						1							2		2	
dependent		3		1				2							6	6	
Total	12	9	13	3	7	1	46	5	9		4		1		92	18	110

*M= Male & F= Female

Education to positively affect the diversification decision as more educated family members tend to look for off-farm labour opportunities as well as for a non-farm activities. In this study, information on educational attainment was collected for every member of the household. Tables.5 shown the households head distribution by gender over by the highest level of education attained, according to background characteristics. There is a strong differential in educational attainment between the genders, especially as age increases.

Table.6 Farmers' Land Sizes and Annual Income Levels

Farmers' Land Size	Household Annual Income Levels				Total
	Less than 50,000	50,000 to 1,00,000	1,00,000 to 1,50,000	More than 1,50,000	
Landless	1	2			3
Less than 2 bigha	2	1			3
2 to 4 bigha	3	14	1		18
4 to 6 bigha	4	12	1	2	19
6 to 8 bigha	2	16	5		23
8 to 12 bigha		10	12	1	23
More than 12 bigha		6	7	8	21
Total	12	61	26	11	110

Table.6 summarizes farmers' land sizes, corresponding annual income levels, and number of farmers in each of the land size-income level cross tabulations

It could be seen that the few number of farmers who had relatively higher annual incomes of 1,50,000 lakh or more had farm sizes ranging from 10 or larger whereas farmers with relatively lower incomes had smaller sizes of farmland, ranging from 2 to 4 hectares. This

also implies that, among others, those farmers with larger farmlands are able to grow more produce for more income provided there is availability of labour and other necessary farming inputs. Interestingly, interviews with the farmers also revealed that majority of the farmers with larger farmlands actually owned the land outright through inheritance and/or purchase, and were in a better position to invest time and other resources in maintaining the farmlands' quality over longer periods.

Housing Characteristics

Table.7 Housing Characteristics

Housing Characteristics	Tribes (%)		
	Sonowal Kachari	Mising	Total
Electricity			
Yes	99.0	88.0	92.0
No	1.0	12.0	8.0
Sources of drinking water			
Tube well	70.0	70.0	70.0
Pond	6.7	4.0	6.0
Both pond and Tube well	23.3	26.0	23.6
Water Treatment			
Yes	66.7	38.0	53.6
No	33.3	62.0	46.4
Toilet Facility			
Yes	100	50.0	77.3
No	-	50.0	22.7
Fuel for cooking			
Fire-wood	26.7	46.0	35.5
Lpg/natural gas	13.3	-	7.3
Both wood & Gas	60.0	54.0	57.3
House Type			
Kachha	65.0	76.0	70.0
Semi-Pacca	23.3	18.0	20.9
Pacca	11.7	6.0	9.1
Usual place of medical treatment			
Hospitals	35.0	36.0	35.5
Sub-center	63.3	64.0	63.6
Private hospitals	1.7	-	0.9

Major infrastructure problems			
Road Problem	43.3	14.0	30.0
Transport & Communication Problem	31.7	54.0	41.8
Market distance	21.7	28.0	24.5
Other	3.3	4.0	3.6
Benefit of any government facility			
Yes	41.7	28.0	35.5
No	58.3	72.0	64.5

Survey respondents are asked about their housing environment, including access to electricity, source of drinking water, water treatment, toilet facilities, fuel for cooking, house type, usual place of medical treatment, major infrastructure problems, benefit of government schemes and possession of various household durable goods. This information is summarized in Table.7 and 8. According to the table, 99 percent of households have electricity. Electricity is much more common in all villages than in some areas (1 percent). A household's source of drinking water is important because potentially fatal diseases including typhoid, cholera, and dysentery are prevalent in unprotected sources. Table shows that overall, 70 percent of households have access to tube well water, 7 percent from pond water and 23 percent from both pond and tube wells. Modern sanitation facilities are not yet available to large proportions of Mising tribe households. The use of traditional pit latrines is still common in rural areas. The type of cooking fuel used by a household reflects both economic status as well as exposure to varying types of pollutants. Most households (27 percent) use firewood. 60 percent of households use both firewood and gas as their cooking fuel. 43.3 percent respondent tells that road problem as the major infrastructure problems.

Respondents are also asked about their household's ownership of particular durable goods. In addition to providing an indicator of economic status, ownership of these goods provides measures of other aspects of life. Ownership of a radio or television is a measure of access to mass media; ownership of a refrigerator indicates a capacity for more hygienic food storage; and ownership of a bicycle, motorcycle, or car reflects means of transport, which can be important for seeking emergency medical care or taking advantage of employment opportunities. Ownership of a telephone/mobile opens up communication with other users. Information on ownership of these items is presented in Table 8, 55 percent of households own a radio and a television. Two percent of households own a refrigerator, and only 10 percent have a sewing machine. 86 percent households have mobile phone. Water pumps 37

percent and tractor 30 percent in the study area. Bicycles are the most common type of vehicle owned by households; 63 percent of households have a bicycle. Ownership of motorised transport is rare: only 14 percent of households have cars, and 33 percent households have motorcycles.

Table.8 Household durable goods

Household durable goods	Tribes (%)		
	Sonowal Kachari	Mising	Total
TV	63.3	44.0	54.5
Radio	50.0	60.0	54.5
Refrigerator	5.0	-	2.7
Sewing Machine	20.0	-	10.9
Mobile Phone	85.0	88.0	86.4
Water pump	25.0	52.0	37.3
Tractor	13.3	52.0	30.9
Means of Transport			
Bicycle	70.0	56.0	63.6
motorcycle/Scoter	30.0	30.0	33.0
Car/truck	5.0	26.0	14.5

Livestock Keeping:

Rearing animals and fowls is also another important economic activity of these selected tribal communities. Every household rears pigs, fowls, cattle for their own earning. These livestock have good market in the villages. In every worship or ritual, marriage of the community pig, chicken, fish are required.

Some Self Help Groups in the villages women are rearing and selling livestock's as a profitable enterprise. Table.9 shows livestock owned by sampled households by tribes. Goat rearing is less compare to pig, cattle and fowl in both communities. Mutton is not at all required in any socio-religious function of these communities. Hence, it is not popular livestock as others. So, goat is kept mainly for sale to extra personal income.

Table. 9 Number of livestock owned by sampled households

Livestock	Total		Sonowal Kachari		Mising	
	Yes	No	Yes	No	Yes	No
Cattle	79.1	20.9	76.7	23.3	82	18
Sheep/goat	40.0	59.1	31.7	66.7	50	50

Pig	74.5	25.5	53.3	46.7	100	0
Fowls	92.7	7.3	86.7	13.3	100	0

Pattern of Livelihood Diversification:

Pattern of livelihood diversification shows the various income generating activities of selected households. Some rural households engage in multiple activities and relied on diversified income portfolios. Most household's diversification is just on-farm. A common pattern is for very poor and the comparatively well off to have the most diverse livelihoods, while the middle ranges of income display less diversity (Ellis, 2000). The table 10 below shows the contributions of various livelihood activities to the farm households. Farm income accounted for 65.5 percent of the total households income both on-farm and non-farm income generating activities. Only on-farm accounted for 8.2 percent of the total household's income. This shows that majority of farm households in the study area are more engaged in farming activities and non-farm activities. Also, all the households are farmers, and out of the 110 farm households interviewed, 54 are engaged in farming, 10 in Artisans, 13 in Salary Job, and 4 in other income generating activities (table 11).

Table.10 Livelihood diversification strategies of the Total and selected communities

Livelihoods diversification Strategy	Total		Sonowal Kachari		Mising	
	Numbers	Percentage	Numbers	Percentage	Numbers	Percentage
On-Farm only	9	8.2	6	10.0	3	6.0
Off-farm only	1	0.9	-		1	2.0
Non-farm only	12	10.9	8	13.0	4	8.0
On-farm+ Off-farm	1	0.9	1	1.7	-	
On-farm + Non-Farm	72	65.5	37	61.7	35	70.0
Off-Farm + Non-Farm	8	7.3	5	8.3	3	6.0
On-farm + Off Farm+ Non-farm	7	6.4	3	5.0	4	8.0
Total	110	100.00	60	100.00	50	100.00

Sources: Own Survey 2015

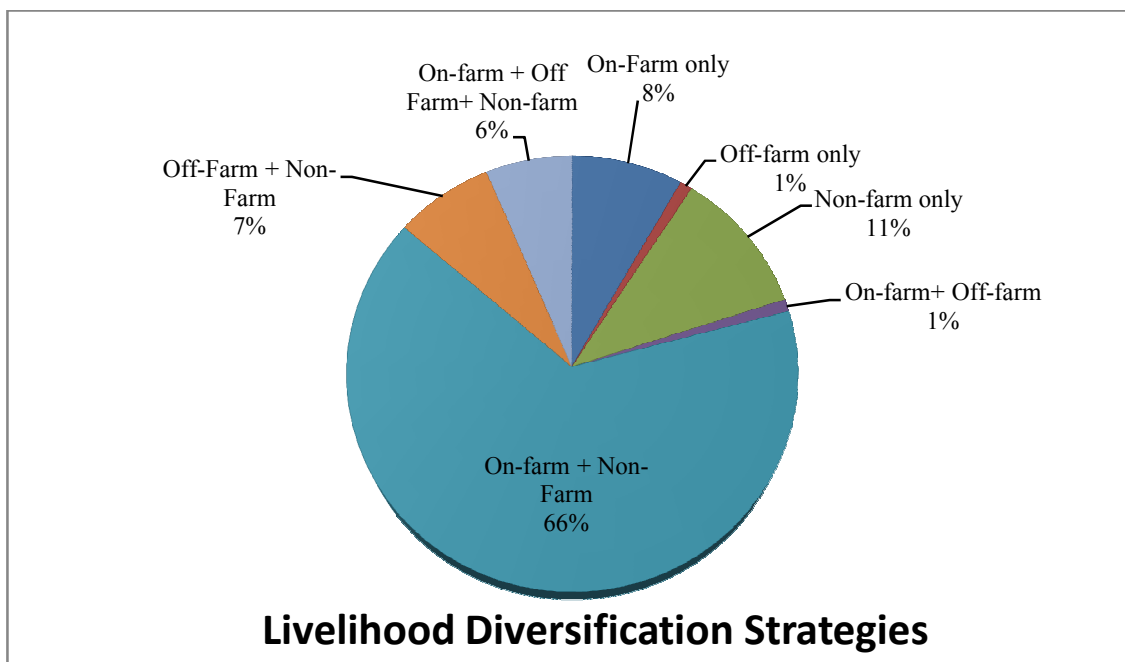


Figure: 1

Table.11 Sources of income of household head by gender

Sources of income	Household Head		
	Male	Female	Total
On-farm			
Farming	44	1	54
Vegetables	3		3
Livestock	1		1
Tea gardening	6		6
Both tea garden & Farming			
Co-worker	3	6	9
Off-farm			
Agricultural labour	4	1	5
Non-farm			
Salaried job (govt./private)	13		13
Wage labour	5		5
Remittances (migration)	2		2
Business	4		4
SHSs			
Artisans			

i. Weaving/Handicraft		3	3
ii. Carpenter	3		3
iii. Driving	2		2
iv. Making bamboo product	1		1
v. Selling local liqueur	1		1
Dependent		7	7
Total	92	18	110

Reasons for Livelihood Diversification

In table.12 result of this analysis reveals that 31 percent of the respondents reported limited agriculture income as their first priority for engaging in livelihood diversification, 20 percent considered available of non-farm opportunities as their second or most important reason, 15 percent reported to live well as their third reason. The finding shows that the main reason why rural people engaged in livelihood diversified activities was to raise household's income portfolio. This is because among the reasons for engaging in livelihood diversification, income had the highest percent as the first, against the other reasons for engaging in livelihood diversification.

Table.12 Reasons for livelihood diversification

Reasons for diversification (%)	Total	Sonowal Kachari	Mising
Limited Agricultural income	30.9	33.3	28.0
Large Family	3.6	5.0	2.0
Available of non-farm opportunities	20.0	15.0	26.0
Favourable demand of goods and services	10.0	8.3	12.0
To live well	15.5	15.0	16.0
Limited agricultural income and large family	9.1	13.3	4.0
Limited agricultural income, large family and Available of non-farm opportunities	10.9	10.0	12.0
Total	100	100	100

RESULT AND DISCUSSION:

Livelihood diversification pattern of Mising tribe:

In the study area, Mising villagers traditional livelihoods are mostly forest dependent and agriculture. They are mostly found to inhabit areas which are in the vicinity of rivers thus ideal for a farming community. In the past, size of population was small; hence availability of

land per person was sufficient for sustaining and nearby forest fulfilled villager's needs such as construction material, household's items and other artifacts. However increase in population and rapid industrialization results in shrinkage as well as extinction of forest area forcing villagers to look for other source of livelihood. In present days, non-agricultural labor, self-employment, government service, industrial work force etc are example of various types of livelihood. Introduction of governmental projects such as Mahatma Gandhi National Rural Employment Scheme (MNGRES), old age pension Scheme, staple rice at subsidized rate for below poverty line villagers have also widened their scope of livelihoods.

In study area, agriculture is not yet modernized. Their main crop is paddy (Ahu and Sali) and people are still practice traditional method of paddy cultivation. They are very conscious about their old paddy seeds and are not much influenced by the High Yielding Variety (HYV) seeds and chemical fertilizer. Although farming is the main source of livelihood for most of the households in study area, yet only agricultural income has not able to provide complete sense of security. The main reasons include frequent floods, small size of their land holdings, low productivity, inefficient agricultural methods, lack of irrigation facilities and the constant threat of wild animals (such as elephants, monkeys).

The other sources of livelihood in Mising tribe are animal husbandry, vegetable garden, fishing, selling homemade alcohol (made of rice), weaving and making bamboo product. They have a natural propensity to rear animals like pigs, goats, cows, fowls etc. During field visits, it is observed that almost every family has pigs, cows and bullocks. They go to the local *hats* (markets) to sell their home grown vegetables and other produce (mustard seeds, betel nut, black pepper, coconut, and banana). Weaving is another occupation for women. It is found that almost every household has weaving looms and some old men are engaged in making bamboo handicraft product.

Farming activities are being operated by two types of labour; family labour as well as hired labour. But most of the Mising people preferred in family labour. Neighbors are also working as labour in each other farm land without any wage. This type of barter system of labour exchange is not seen in any other tribes in upper Assam. Due to very small land holding and very low yield, most households are facing problems for a living, thus maintaining a diversified pattern of occupations. No single activity provides sufficient resources to entirely ensure their livelihood. Vegetables are cultivated nearly year round and overall food security can extend from five to seven months only.

Regarding the educational status, although the number of literate person is high compared to other communities but the quality of education is very poor. Low income, improper guidance,

lack of educational environment and basic facilities are the factors responsible for their educational hindrance.

Study Mising villages:

Mising villages are divided into three pockets based on their three different localities. All three pockets are coming under Barbaruh Block of Dibrugarh district.

Pocket 1: In Kalakhua area, i) Pani Miri and ii) Jaji Mukh are two Mising villages selected. This whole area is flood prone area. Every year flood destroys their crops, vegetable gardens, livestock and houses. People are mostly engaged in agriculture. But every year because of flood they have to transplant and sow more than once. Some village people are making traditional liquor for sale. Most of the women are engaged in weaving. Wage labour, shop keeper, business and services sectors are other sources of livelihood, where basically men are engaged. During the interview, it is found that most of the tribal household not able to get any government schemes due to lack of awareness.

Pocket 2: In Modhupur area, i) Thekera Pukhuri and ii) Baroghoria two villages are selected. The Thekera Pukhuri village is very far from district town. Flood affects every year in this village. Agriculture is the main occupation, but that is not sufficient for livelihood. Most of the youth of the village migrated towards metropolitan cities like Chennai after completing their class 10th or 12th education. According to the villagers' narrative, if such migration continues, then one day whole village will have only aged people. The networks of roads connecting to highways or main road are improved after Pradhan Mantri Garm Sadak Yojana. In Baroghoria, agriculture is the main occupation of all the families in the village. However, as the result of the emergence of modern education and other opportunities some individuals are gradually getting engaged in non-agricultural occupation, such as teaching, salaried jobs, business etc. Sometimes elephants from nearby Jokai forest come and destroy crops. Civil development block office has provided solar electrified net around farm area to protect from elephants but due to non-maintenance, the solar net becomes an ineffective method of protection.

Pocket 3: In the Bogibeel Choulkhua village is near to the undergoing Bogibeel Bridge, which is 4th largest bridge over Brahmaputra River. Villagers are engaged in agriculture and vegetable garden crops. Wage labour is also common because of the ongoing bridge construction work. Besides production of rice, they used to support themselves by raising crops of mustard, potatoes and pumpkins in the river bank area. Fishing is also common in this village. Some village women rear eri silk worm and spin yarn. Every Sunday, weekly local market opens at the village. Livestock are common in every household. Pigs and fowls

provide good income as well as an important source of protein to their diet. Some village people are engaged in driving; they used to drive for private taxi and cargo van. Road condition is good but vehicle frequency is less. People generally go to sell their agricultural outputs and livestock in Dibrugarh town market.

Livelihood diversification pattern of Sonowal Kacharies:

In study area of Sonowal Kachari village, traditional livelihood is agriculture. They are also engaged in livestock rearing, horticulture and weaving. Some villagers also sell local alcohol which is made of rice. As a result of the emergence of modern education and other opportunities some individuals are gradually getting engaged in non-farm occupation such as teachings, salaried jobs, business undertakings etc.

The Farming practice is basically being operated by family members. Sometimes they preferred hired labour. They used both bullock, and tractor to plough.

In present time most of the people engaged in making tea garden because tea gives more profit compare to rice cultivation. But maintaining tea garden is not an easy task. If rainfall happens during plucking period, the tea-leaves become heavy and as a result the price per kg is reduced by 2 to 3 rupees. Since the tea processing factories do not collect tea leaves from individual estates, hence self help group collects tea leaves from every household and give it in the processing factory.

In a cultural ceremony like ancestor worship, marriage, funeral ceremony, sacrifice of pigs and fowls is an essential part of Sonowal Kacharies. These rituals and functions are highest expenditure in the household. Sometimes villagers collectively donated to poor household for celebrating these ceremonies.

Land is owned by individual family based on the periodical ownership system in which the families can retain the land on payment of annual revenue to the government.

Study Sonowal Kachari villages:

The Sonowal Kachari villages are divided into two pockets, based on the distance from the district town. One pocket is located in the near to town which is 11 km from district headquarter and 2 km from National Highway 37. The other pocket is 25KM far from district headquarter and 15 km away from National Highway. Pocket 1 villages are Dainijan Gaon, Dulia Gaon and Leptkata Kachari Gaon. Pocket 2 villages are Gojai gaon, Dhobal gaon and Tepor gaon. The villages are surrounded by forest.

Pocket 1: i) Dainijan, ii) Dulia and iii) Leptkota Kachari villages, people in the past are engaged in agriculture as main traditional occupation. But now, villagers are focussing more on tea cultivation as it gives better return.

Most of the households in these villages have their own garden and farm land. Known as Bari, these gardens are in the same compound of the house and are used to grow vegetables, to rear poultry, pigs and cows etc. Farm land is used only for Sali or Ahu rice cultivation. Some households also have pond or fisheries within the bari land. But in present time village people are converting their Bari land to tea gardens because of profit maximization.

They are depending on agricultural farm only for subsistence. Sometimes the rice production is not enough for feeding family round the year. So, most of the household income is dependent on the tea gardens, which is non-traditional.

The road connectivity to the highway is poor and in rainy season, village roads become muddier and not fit for walk. On the education level, most villagers are literate although do not possess higher education. Villagers are dependent on tea cultivation but they are not well trained about the problems and prospects of tea cultivation.

Due to depletion of forest cover, monkeys are entering the village nowadays and destroying fruits and vegetables.

According to the village head, recently land acquisition by Government for Gas Cracker project are carried out in the village and people are forced to sell the land at the nominal government rate of Rs. 60,000/ per Kotha(1 Kotha =2880 sqft)

Pocket 2: In i) Gojai, ii) Dhomal and iii) Tepor villages are mostly engaged in agriculture only. Some household's has tea gardens, but it is very less compare to pocket 1. Earlier, people faced flood problems, but after construction of railway line, flood problem is arrested. Most of the households, bari land is used for betel tree and vegetable gardening. Daily wage labour is also common in these villages. Families have neither any annual target nor planning for production of their crops. The families spend a substantial part of their annual income on religious functions.

Problems of Livelihood Diversification:

Agriculture is the main occupation of the Sonowal Kacharies and Misings. But every family does not have sufficient land for agriculture. The village farmers are not using any fertilizer and improved seeds in their farms. They used to age old practices of farming. Irrigation facilities are not found any farm land.

The level of infrastructure facilities in the areas including transportation, power supply, and other social amenities are well developed in Sonwal Kacharie tribe compare to Mising tribe. The productivity of the various crops in Assam is far lower than in other states, and self-sufficiency seems to be the aim of the farmers and fertilizer consumption, use of machinery, as also the percentage of irrigated area is very low. The average land holding is small and

more farmers are small and marginal. Erosion by the Brahmaputra and its tributaries has been reducing cultivable land by thousands of hectares annually.

In flood time, the farm sector and the entire nonfarm sector became destabilized because farmers and agricultural laborers left the work, causing disruption of supply and demand dynamics. When household livelihoods become insecure, villagers reported that they are most likely to adopt coping mechanisms like borrow money, long-distance migrant work, work in nearby villages, diversify economic activity, or liquidate assets (land, house, gold, or livestock). Women more frequently undertook income diversification as a coping strategy, whereas men tended to migrate.

In social situation, social spending, life style pressure (alcoholism and consumerism) has evolved as important factors that drive the households to risk situations and increases vulnerabilities. In economic situation, irregular and uncertain availability of work, pressing cash requirement on day to day basis, low asset holding, uncertain access to credit, absence of asset ownership, decline in work opportunity due to changes in policy, exploitation of community resources by influential groups; fear, time consuming and poor relation with formal financial institutions, developmental block etc. contribute in experience of households to perceive these as contributing factors that keeps their livelihood at risk.

Factors like repeated failure of crop for unfavorable weather, increasing expenditure structure for rise in wages and inputs prices and absence of subsidiary earning opportunity in the villages are pushing the labour to nearby urban centres for liquid money. Migrant labours working in urban areas though earns higher but their poor living condition, health hazards and absence of security in work keeps their livelihood in static state. Small and marginal farmers have the poor economic base; consequently it has an adverse effect on the diversification in favour of high value crops. Lack of preservation and storage facility for vegetables is another important problem.

There is another problem which is common to the poor everywhere – a larger family size. In the areas inhabited by the tribal, the population growth rate seems to be higher. The emergence of industry and market economy has disturbed the age old tribal and nature relation. The intrusion of non tribes into tribal areas has disturbed the age old organic unity of tribes. Educationally these tribal area students are good, but there are very low percentage of students who pursue higher education and other technical education. The lack of awareness among students about different government schemes like pre-metric, post-metric scholarship etc. are another major problem.

Prospects of Livelihood Diversification:

Agriculture growth performance very much depends on the use of farm power derived from skillful farm implements and their judicious utilization. On the other hand, the availability of tractors, pump sets, cold storage facilities, adequate supply of power, good rural-urban road network, efficient transportation and developed agriculture marketing and other technological advancement that maximize the benefits of the farmers. Pesticides are the mixture of substances which helps in preventing, destroying or controlling the pests of unwanted species on plants.

Credit is the backbone for each sector of the economy. Credit is one of the vital prerequisite of the farmers, which facilitate them to meet the investment as well working capital requirements. The income earning portfolios are to be expanded in both tribal areas. Development of horticulture, food processing units, handlooms and textile sector can promote income earning opportunities. Cooperation of crop cultivation and animal farming like fishery, livestock, poultry, silk worm breeding etc based on the area must be encouraged to develop. Area specific opportunities are to be taken up with the cooperation of Government, private agencies and local residents.

The market for pork is yet to be organized on an extensive and hygienic basis. There is, however, tremendous scope for marketing as well as exporting processed pork. Goat farming in commercial basis is also a good choice in less capital investment. Goats are self feeding animal while grazing without any particular care. Any husbandry selection of proper breeds is important factor. Now a day's cross-bred are also common. But very less farmers has only commercial livestock farming.

To make the new opportunities successful proper training and skill formation programme should be conducted by the Government Credit arrangement must also be facilitated simultaneously with the training programme. Vocational training must be encouraged specially in tea garden areas. The huge energy of the rural youth is to be trapped by understanding the potentiality of the area and involving them in the selected sectors. To stop the outflow of youths into urban areas it is essential to undertake a detail study on the strength and weakness of livelihood capitals of the area and accordingly make a strategic plan to utilize the resources at optimum level. There is enough scope for the development of nonfarm employment, if in rural tribal areas marketing facility and storage arrangement is improved, transport and communication system is forward, mechanization process is good.

In the recent years the significance of market is gradually increasing. Livelihood activities have to be tuned up according to the market movements. Easy access to the information on

prices etc from markets can help farmers get to sell their produce in urban markets, with better prices.

For the success of above measures the prerequisite requirement is infrastructural development and strong local organization. Power supply, good road and transport system are the basic requirement to make other measures successful. Local organizations must be encouraged to form and work in diverse areas. Most of the benefits provided by the Government schemes reach less to the deserving persons. A Monitoring Committee can be formed to keep an eye on the activities and problems faced by the self help group or local organizations. SHGs provided access to credit to their members that they used for purchasing farm inputs as a group; helped to promote savings and yielded moderate economic benefits; reduced the dependence on moneylenders.

SUMMARY AND CONCLUSION:

An individual's occupation choice is found to be influenced by several factors, such as level of education, assets of the household, land ownership, closeness to a town, households size, agriculture wage prevailing in the village and infrastructure facilities developed, as well as demand for non agricultural goods. Individual interviews and households' survey indicate that only a small number of villagers able to sell rice grain. It means people are engaged in paddy cultivation for subsistence only and their incomes come from the other crops and non-farm sources. The Sonowal Kachari tribe expanded their bari (kitchen) gardens to tea garden. Their desire to diversify livelihoods is more important than just satisfying food needs. Rice cultivation is important in supporting the family for food and tea garden is for income generation.

In Mising tribe, both livestock and vegetable garden crops are important besides the paddy cultivation. In Misings, livestock is the base in diversifying the family economy, especially the pig. A "sustainable livelihood" for the Mising tribe is based on a diversified economy with livestock and vegetable farming as its core, but supplemented by cultivation and other possible sources of income. Ritual and ceremonial functions have been highest households' expenditure in both tribes, and the concerns expressed by cultivators with regard to their fields are purely pragmatic, flood havoc and lack of cash credit facilities. Given the isolated location, low agronomic potential and limited resources, indicate that migration is an important coping mechanism among households to secure livelihoods.

Managing livelihood needs has always been a critical factor or challenge amongst the poor everywhere. Diversification in the livelihood in the present scenario has become the key word for better living and for being more resilient to shocks and stresses.

LIMITATIONS OF THE STUDY:

Methodology limitations:

Due to shortage of time, primary data collection is done within three months. In the study area during the period of data collection, flood occurred in most of the villages and hampers the data collection. Respondents are also scared about giving data about their production and income.

Study limitations:

The study does not cover the political behavior (election, voting pattern, female participation in elections) of tribal people. The second limitation concerns about tribal health and hygiene issues (disease) and family planning (gap between children, contraceptive use) perspectives. The third limitation is about tribal history, language, Marriage, dress, food habit pattern, etc.

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