

**RURAL LIVELIHOOD DIVERSIFICATION IN SERCHHIP DISTRICT  
MIZORAM**

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**RURAL LIVELIHOOD DIVERSIFICATION IN SERCHHIP DISTRICT  
MIZORAM**

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**Submitted in partial fulfillment of the requirement for the Degree of Master of Philosophy in  
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**December, 2015**

**Declaration**

I, K. Vanlalhruaizela, hereby declare that the subject matter of this dissertation is the record of work done by me, that the contents of this dissertation did not form basis of the award of any previous degree to me or to do the best of my knowledge to anybody else, and that the dissertation has not been submitted by me for any research degree in any other University/Institute.

This is being submitted to the Mizoram University for the degree of Master of Philosophy in Social Work Department.

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**Certificate**

This is to certify that the dissertation '*Rural Livelihood Diversification in Serchhip District Mizoram*' submitted by Mr. K. Vanlalhruaizela for the award of Master of Philosophy in Social Work is carried out under my guidance and incorporates the student's bonafide research and this has not been submitted for award of any degree in this or any other university or institute of learning.

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## LIST OF ABBREVIATIONS

A.D	:	Anno Domini
AAJ	:	Antyodaya Anna Yojana
AIDS	:	Acquired Immune Deficiency Syndrome
APL	:	Above Poverty Line
BPL	:	Below Poverty Line
CBO	:	Community Based Organization
CCEA	:	Cabinet Committee on Economic Affairs
CRP	:	Community Resource Persons
CSD	:	Council for Social Development
DDAP	:	Drought Prone Areas Programme
DDP	:	Desert Development Programme
DFID	:	Department of International Development
FAO	:	Food and Agriculture Organization
GDP	:	Gross Domestic Product
HIV	:	Human Immunodeficiency Virus
IDS	:	Institute for Development Studies
IFAD	:	International Fund for Agricultural Development
IISD	:	International Institute for Sustainable Development
IWMP	:	Integrated Watershed Management Programme
Km	:	Kilometre
LPG	:	Liquefied petroleum gas
LSC	:	Land Settlement Certificate
MGNREGA	:	Mahatma Gandhi National Rural Employment Guarantee Act
MHIP	:	Mizo Hmeichhe Insuihkhawm Pawl
MSR	:	Mizoram Society Registration
MUP	:	Mizo Upa Pawl
MZP	:	Mizo Zirlai Pawl
MzSRLM	:	Mizoram State Rural Livelihood Mission
NASW	:	National Association of Social Workers
NEI	:	North East India
NERLP	:	North-East Rural Livelihood Project
NGO	:	Non Governmental Organization

NH	:	National Highway
NLUP	:	New Land Use Policy
NREGA	:	National Rural Employment Guarantee Act
NRLM	:	National Rural Livelihoods Mission
NSS	:	National Sample Survey
NSSO	:	National Sample Survey Organization
OECD	:	Organization for Economic Co-operation and Development
PDS	:	Public Distribution System
PIP	:	Policies, Institutions and Processes
PSNP	:	Productive Safety Net Programme
RD	:	Rural Development
RKVY	:	Rashtriya Krishi Vikas Yojana
RSETI	:	Rural Self Employment Training Institutes
S.G.S.Y	:	Swarnjayanti Gram Swarozgar Yojana
SBI	:	State Bank of India
SDP	:	State Domestic Product
SHG	:	Self- Help Groups
SID	:	Simpson Index of Livelihood Diversification
SLA	:	Sustainable Livelihoods Approach
SPSS	:	Statistical Package for the Social Sciences
Sq	:	Square
UNDP	:	United Nations Development Programme
UPC	:	United Pentecostal Church
US	:	United States
YMA	:	Young Mizo Association

## BIBLIOGRAPHY

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## RURAL LIVELIHOOD DIVERSIFICATION IN SERCHHIP DISTRICT, MIZORAM

### HOUSEHOLD INTERVIEW SCHEDULE

*(Confidential and for research purpose only)*

**Schedule no:**

**I. Profile of the Respondent:**

1. Name of the respondent
2. Sex 1. Male 2. Female
3. Age
4. Village 1. Hualtu 2. Khumtung
5. Form of Family 1. Stable 2. Broken 3. Reconstituted Step 4. Others (specify)
6. Type of Family 1. Joint 2. Nuclear 3. Single
7. Sub- tribe 1. Lusei 2. Ralte 3. Hmar 4. Lai 5. Paihte 6. Others (specify)
8. Denomination
9. Type of House 1. Kutcha 2. Semi Pucca 3. Pucca
10. Ownership of House 1. Owned 2. Rented
11. Socio- economic status 1. APL 2. BPL 3. AAY 4. No Category
12. Jo card under MGNREGS 1. Yes 0. No
13. Type of Cultivators 1. Non Cultivators 2. Shifting 3. Semi Settled 4. Settled
14. Benefitted under NLUP 1. Yes 0. No

**II. Household Profile:**

ID	Name	Age	Sex	Marital Status	Relation to Head	Education	Earner/ Dependent
1.							
2.							
3.							
4.							
5.							
6.							
7.							
8.							
9.							
10.							
11.							

**III. Details of occupation of the earning members of household:**

ID	Sex	Occupation Primary	Annual Primary Income (Rs)	Occupation Secondary	Annual Secondary Income (Rs)

**IV. Details of average monthly expenditure of household:**

Sl.No	Items	Amount (Rs)
1.	Food	
2.	Electricity	
3.	Water	
4.	Fuel (natural gas)	
5.	Transport	
6.	Recreation	
7.	Clothing	
8.	Alcoholic Beverages	
9.	Pan and Supari	
10.	Tobacco and Smoking	
11.	Health	
12.	Education of Children	
13.	House Rent	
14.	Others (specify)	

**V. Details of household savings and dept in rupees:**

Sl.No	Form	Savings (Rs)	Debt (Rs)
1.	Cash in hand		NA
2.	Friends and Relatives		
3.	Money Lenders		
4.	Commercial Banks		
5.	Government		
6.	Self Help Groups		
7.	Insurance		
8.	Others(Specify)		

**VI. Family assets:**

Sl.No	Items	No of Items	Value (Rs)
1.	House		
2.	House Plot		
3.	Land		
4.	Four wheeler		
5.	Two wheeler		
6.	Television		
7.	Mobile phone		
8.	Transistor/ Radio		
9.	Iron		
10.	Sewing Machine		
11.	Water Connection		
12.	Washing Machine		
13.	LPG connection		
14.	Pigs		
15.	Poultry birds		
16.	Cattle		

**VII. Details of land possessed/ owned by your family?**

Sl.No	Title	No of Plots	Area (Tins)	Value (Rs)
1.	Land Settlement Certificate			
2.	Periodic Land Pass			
3.	Temporary Pass			
4.	Other (Specify)			

**VIII. Livestock Owned**

Sl.No	Livestock	No	Value of Asset(Rs)	Monthly Income(Rs)
1.	Pig			
2.	Poultry Birds			
3.	Cow			
4.	Goat/Sheep			
5.	Fish			
6.	Others (Specify)			

**IX. Details of Cultivation**

Sl.No	Crop	Area (Tins)	Annual Income
1.	Cereals		
2.	Pulses		
3.	Oil Seeds		
4.	Vegetables		
5.	Fruits		
6.	Tree crops		
7.	Others (Specify)		

**X. How frequently the members of your family participate in your community?**

Sl.No	Association	Always	Mostly	Sometimes	Never
1.	Churches	3	2	1	0
2.	YMA	3	2	1	0
3.	MHIP	3	2	1	0
4.	MUP	3	2	1	0
5.	Games and Sports	3	2	1	0
6.	Voluntary works	3	2	1	0
7.	SHGs	3	2	1	0
8.	Others (specify)	3	2	1	0

**XI. Indicate your family rate of votes in the last election of the following?**

Sl.No	Election	Always	Sometimes	Never
1.	General (MP)			
2.	Assembly			
3.	Village Council			

**XII. Please give us the details of household's Political and Civil Society Organizational Affiliation:**

Sl.No	Name	None	Sympathizer(s)	Members	Executive Member(s)	Office Bearer(s)
1.	Political Party	0	1	2	3	4
2.	Churches	0	1	2	3	4
3.	YMA	0	1	2	3	4
4.	MHIP	0	1	2	3	4
5.	MUP	0	1	2	3	4
6.	Games and Sports	0	1	2	3	4
7.	SHGs	0	1	2	3	4
8.	Others (specify)	0	1	2	3	4

**XIII. What are the major problems concerning your livelihood and living conditions and how did you manage them?**

<b>Sl. No</b>	<b>Challenge</b>	<b>Coping Strategy</b>	<b>Agencies Supporting LD</b>



## **PARTICULARS OF THE CANDIDATE**

NAME OF THE CANDIDATE	:	K.Vanlalhruaizela
DEGREE	:	Master of Philosophy
TITLE OF DISSERTATION	:	Rural Livelihood Diversification in Serchhip District Mizoram
DEPARTMENT	:	Social Work
DATE OF PAYMENT OF ADMISSION	:	19.08.2014
COMPLETION OF COURSE WORK	:	December 2014
COMMENCEMENT OF SECOND SEMESTER	:	February 2015
APPROVAL OF RESEARCH		
1. BOARD OF PROFESSIONAL STUDIES	:	20.04. 2015
2. SCHOOL BOARD	:	01.05.2015
REGISTRATION NO & DATE	:	MZU/M.Phil./250 of 01.05.2015

# CHAPTER I

## INTRODUCTION

The present study attempts to assess the level of rural livelihood diversification and its impact on living conditions of the rural households in Serchhip district, Mizoram.

### **1.1 Rural Poverty and Livelihood Diversification**

Poverty is a multidimensional social phenomenon where its definitions and causes vary across gender, age, and other social cultural, and economic contexts. In simple terms, it means lack of well-being. It can be expressed as a sense of hopelessness, powerlessness, humiliation, and marginalisation. In social work profession, the primary mission has always included enhancing the well being of the vulnerable, oppressed and people living in poverty. It is committed to the values of service and social justice, especially in terms of helping the poor and disadvantaged (see NASW, 1999). It is also distinguished from other helping professions by its unique focus on poverty and poverty related issues (see Austin, 2006).

In the global context, the largest segments of poor people settle in rural areas. According to World Bank (2011) it was estimated that in 2005 there were 2.6 billion people living in poverty, that is, on less than US\$2 per day, and about 1.4 billion people living in extreme poverty, that is, on less than US\$1.25 per day. The Rural Poverty Report 2011 also shows that despite development over the past 10 years that has lifted more than 350 million rural people out of extreme poverty, global poverty remains a massive and predominantly rural phenomenon, and 1.4 billion still live in extreme poverty in rural areas (see IFAD, 2011). Despite urban migration, it is further predicted that by 2030, a little over one-third of the world's poor population will live in rural areas and both poverty incidence and depth of poverty will continue in rural areas (see World Bank 2007). Such global figures hide large regional and national variations but nevertheless show the magnitude of global poverty, and rural poverty in particular.

India, being a home for a large number of poor and malnourished people, is projected to overtake the largest population China within next forty years. The problems of unemployment and poverty remain one of the major challenges particularly in remote villages with high concentration of tribal communities and rural poor. As per national sample survey office, the persons below poverty line in 2011 to 2012 were estimated at 25.7 percent in rural areas, 13.17 percent in urban areas and 21.9 percent for the country as a whole (see NSS 68th round 2011-12). The total population of rural areas comprises of 70 percent in the country where 60 percent of the rural workforce remains primarily involved in agriculture (see Himanshu et al., 2013). The economy of the country grew faster than expected at 5.7% in April- June, 2014. The growth in GDP was much higher in the first quarter from 4.6% in the previous quarter and is the fastest expansion in over two years. In recent years, the slowdown in employment has been a serious concern. According to the National Sample Survey Office data, the numbers of persons in the workforce increased from 398 million in 1992-2000 to 458 million in 2004-05, an increase of nearly 60 million (nearly equally divided between the agriculture and non agriculture sectors) or 15% in five years. Further this increased to 473 million in 2011-12, an increase of 15 million or 3.3 percent over a span of seven years.

In India, to capture livelihood context is a complex exercise due to diversity of resource conditions and development dynamics across regions. In the country, close to 40 percent in the labour force, available or looking for such work and about 39 percent are indeed able to find work, either as their usual and principal activity or as a subsidiary activity. However, this figure does not demonstrate the real extent of underemployment in the informal economy and the growth experienced by the country without rise in employment (captured by the phrase ‘jobless growth’) indicates that underemployment is prevalent in the economy (see Nair 2014). Due to rural poverty, people living in rural areas engage in non-

agricultural activities to generate their income as they are unable to obtain employment or self-employment in agriculture. This is the last resort for them rather than an attractive alternative livelihood (see Ghosh & Bharadwaj, 1992).

In the context of Mizoram, the census of 2011 shows that the total population of the state was 10,91,014 and the growth percentage is 22.78% while the country (India) has recorded the growth percentage as 17.64%. Of the total population, about 5,61,977 persons live in urban areas while 5,29,037 persons live in rural areas. In urban areas, 2,81,020 are males while the other 2,80,957 are females while in rural areas, the state has 2,71,319 male population and 2,57,718 female population (Provisional population totals- Mizoram; census of India 2011). According to Statistical Handbook, Mizoram 2010, the total numbers of families below poverty line in rural Mizoram were 33,713 in 2008. In the state, in order to alleviate poverty and generate employment, livelihood promotion became an essential means which is being undertaken by different government and non-government sectors. One of the important policies was the idea of a New Land Use Policy which was conceived in 1984 and is implemented since January 14th, 2011.

The rate of growth in employment opportunities is far below the growth rate of population in the state. It is estimated that the growth rate of population has been 2.2 while the rate of employment opportunities may be less than 0.5 percent. The state Per Capita Income has increased from Rs.16443 to Rs.50021 at Current Prices and at constant prices it has increased to Rs.34767 from 2001 to 2011. The average monthly Per Capita Expenditure for rural areas has increased to Rs.778.35 and Rs.1200.51 for urban areas in 2010 according to NSS 61st Round.

The concept of livelihood diversification becomes an important strategy of rural survival in developing countries (see Ellis, 2000; Bryceson, 2000). Rural households are looking for diverse opportunities to increase and stabilize their incomes, which are

determined by their portfolio of assets (see Ellis, 1999). In South and South East Asia, livelihood diversification is the single most important strategy for poverty reduction of small farmers (see FAO and World Bank, 2001).

Literally the word 'diversification' means 'the act of diversion' from the existing status or position or introducing some sort of changes into the activities undertaken hitherto (Manjula, 2002, p.19). A leading scholar in this domain states livelihood diversification as 'the process by which rural households construct an increasingly diverse portfolio of activities and assets in order to survive and to improve their standard of living' (see Ellis, 2000, a:15). It refers to an attempt by individuals and households to find new ways to raise incomes and reduce environmental risk, which differ sharply by the degree of freedom of choice (to diversify or not), and the reversibility of the outcome (see Hussein and Nelson, 1999, p.3). It is also defined as the process wherein rural households try to enlarge their income source and employment opportunities either due to the inability of the traditional sources to fully support their livelihood or due to new opportunities arising out of the socio-economic changes occurring locally or externally (see Shylendra and Rani, 2005).

Different studies across the world demonstrated that rural households are increasingly engaging in a diverse set of activities to generate their income which include a wide range of non-agricultural activities apart from source of farm and off-farm income. The studies of developing countries show that an average shares of 42 per cent of non-farm income in the total rural household income in Africa, 40 per cent in Latin America, and 32 per cent in Asia (see Reardon, et. al., 1998). Thus livelihood diversification is an important strategy for livelihood promotion and poverty eradication particularly of rural poor.

## **1.2. Overview of Literature**

Livelihood diversification has been a focus of many researchers and policy makers as a strategy to enhance the living condition of poor rural families. There is copious literature on

livelihood (see, De Haan, 2012; Scoones, 2009; Ellis, 1999; DFID, 1999; Chambers and Conway, 1992) and livelihood diversification in different regions of the globe (see Ambibola and Oluwakemi, 2013; Carswell, 2002; Barrett et. al., 2001; Hussein and Nelson, 1999; Reardon, et. al., 1998 etc.). It has been seen as a positive phenomenon, as it constitutes an important component of economic growth (see, Shylendra and Rani, 2005).

Literature on development studies has heavily emphasized the importance of livelihood diversification in enhancing rural economy (see Ellis & Bahiigwa, 2003; Ellis et al., 2003; Bird and Shepherd, 2003; Ellis, 2000; Bryceson, 2000). Rural households diversified their livelihood activities which are largely determined by their portfolio of assets - social, human, financial, natural and physical capital (see Ellis, 1999). Despite the positive contributions made by diversifying their livelihood, it has often been ignored by policy makers who have chosen to focus only on agriculture (see Ellis, 1998).

There are some studies on the pattern of livelihood diversification in different regions or countries (see Okere & Shittu, 2013; Oraon, 2012; Liyama, 2006; Smith. et. al., 2001). Determinants of rural livelihood diversification are also taken into account (see Khatun and Roy, 2012; Fabusoro et al., 2010; Smith, et al, 2001;). Different levels of livelihood diversification are also put into focus (see Assan, 2014; Linda, 2013; Tesfaye, 2011; Kimenju & Tschirley, 2008; Hussein and Nelson, 1998;) while there are also studies on the impacts of livelihood diversification across regions (see, Ncube, 2012; Babatunde & Quaim, 2009; Rahman, et.al., 2007).

In India, livelihood diversification has not been widely studied. Some studies could be found relating to the level of its diversification (see Saha and Bahal, 2010) and the determinants and constraints were also covered (see Khatun and Roy 2012). The strategy followed by people in diversifying their livelihood also took an attention (see Datta and

Singh, 2011). There is also a study which devoted to agricultural diversification (see CSD Report, 2010).

The current literature on rural livelihood diversification is partial and segmented, so there is a need for an empirical study which will bring together various aspects of rural diversification within a common analytical and operational framework. There are studies that consider diversification in its broadest form and focus on the larger policy and institutional issues (see Vyas, 1996; Barghouti, et al., 1990; World Bank, 1990; Timmer,1987) but limitations could be found regarding the role of diversification as it is somewhat narrowed to price and income stabilization. So the other roles associated with a broadly conceived diversification strategy such as employment generation and income augmentation that are equally crucial for countries like India are not studied with the importance they deserve (Saleth, 1999).

The overview of literature on livelihood diversification shows that it has become a popular strategy of promoting sustainable livelihood in the developing nations and has attracted the attention of researchers from different countries. This literature helps us in identifying and understanding the theoretical, conceptual, operational and methodological issues in the study of livelihood. However, few research gaps could be noted in the literature on livelihood in general and livelihood diversification in particular.

The first major gap in the literature is that livelihood diversification as a strategy of promoting sustainable livelihood has not been probed adequately in the Indian context. The literature on this strategy is highly inadequate in India especially in North East region. The studies on livelihood diversification in India are assessed only in terms of pattern, level and determinants (see Mehta 2009).

Secondly, there are only few empirical studies on livelihood promotion in North East and even less in Mizoram. In the context of Mizoram, there is an emerging literature on

livelihood in rural (see Zaitinvawra 2014; Zaitinvawra and Kanagaraj 2008) and urban contexts (Sailo, 2014), and voluntary organization and livelihood promotion (see Lalrinkima, 2014).

However, there are no studies on livelihood diversification as strategy of poverty eradication or rural development. There is a need to study how rural people construct a diverse portfolio of activities in their survival and how it sustains their livelihood. The present study tries to fill these research gaps in the context of Serchhip district, Mizoram.

### **1.3. Theoretical Framework: Sustainable Livelihood Framework**

A theory is an explanation of certain events and phenomenon which either acts as a framework for understanding the phenomenon in society or to draw a hypothesis. The present study uses Sustainable Livelihood Framework to understand the dynamics of livelihood diversification in rural areas and to construct a hypothesis.

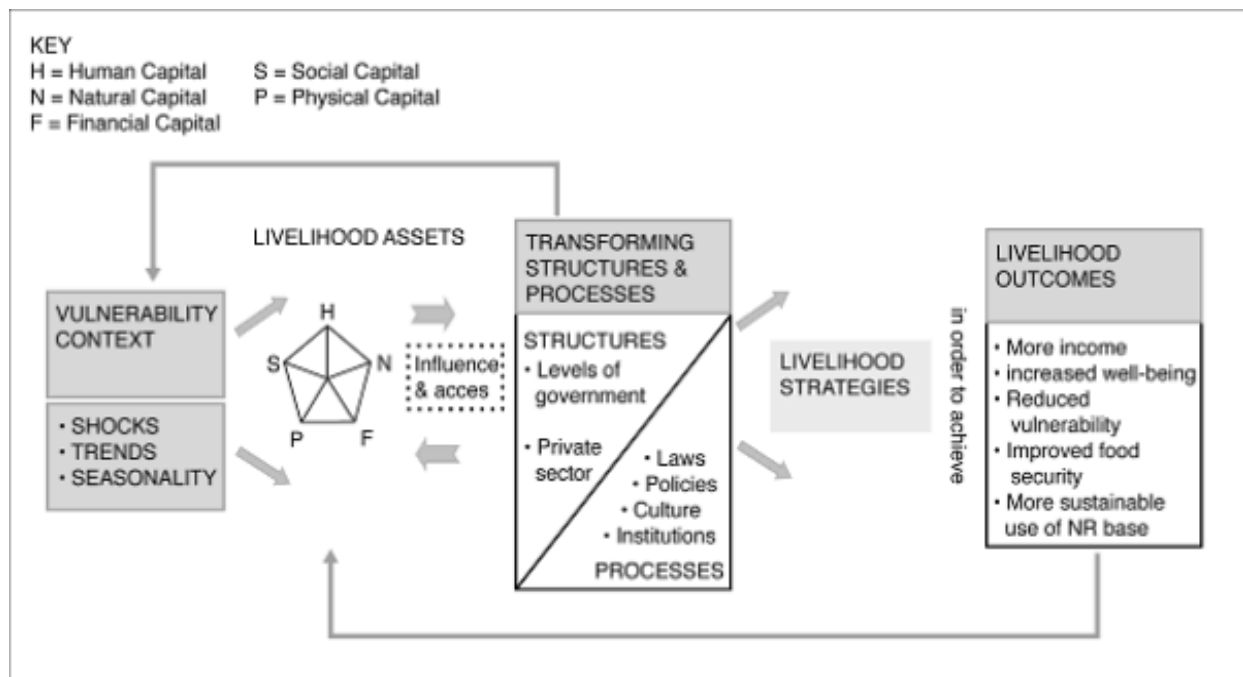
The idea of sustainable development was first introduced by the Brundtland Commission on Environment and Development, and in 1992, the United Nations Conference on Environment and Development expanded the concept by advocating for the achievement of sustainable livelihoods as a broad goal for poverty eradication. The term 'sustainable livelihood' came to prominence as a development concept in the early 1990s, drawing on advances in understanding of famine and food insecurity during the 1980s. Ian Scoones (1988) of Institute for Development Studies (IDS) proposed a modified definition of sustainable livelihoods:

*“A livelihood comprises the capabilities, assets (including both material and social resources) and activities required for a means of living. A livelihood is sustainable when it can cope with and recover from stresses and shocks maintain or enhance its capabilities and assets, while not undermining the natural resource base.”*



Livelihood approaches guide the way of thinking about the objectives, scope and priorities for development which place people and their priorities at the centre of development. The focus lays on poverty reduction and interventions on empowering the poor to build their own opportunities, supporting their access to assets, and developing an enabling policy and institutional environment. The ‘Sustainable Livelihoods Approach’ (SLA) concept and framework adopted by DFID in the late 1990s (building on work by IDS, IISD, Oxfam and others) have been adopted by different organizations to suit a variety of contexts, issues, priorities and applications. This framework is informed by certain core principles like a people-centred approach, holistic view of livelihood factors and process, dynamic view of livelihood strategies, relying on building strength; macro and micro linkages as well as socio-economic and environmental sustainability.

**1.1 Figure: Sustainable Livelihoods Framework**



*Source: Department for International Development of the United Kingdom*

There are certain components of Sustainable Livelihood Framework which includes livelihood assets, vulnerability context, livelihood strategies; policies, institutions and processes and livelihood outcomes.

## **Livelihood Assets**

The hearts of livelihood approaches are people and their access to assets. The five assets categories of assets or capitals are identified:

1. Human capital: It includes skills, knowledge, health and ability to work
2. Social capital: It includes social resources, including inform networks, membership of formalized groups and relationships of trust that facilitate co-operation
3. Natural capital: It includes resources such as land, soil, water, forests and livestock.
4. Physical capital: It includes basic infrastructure, new technologies and access to water.
5. Financial capital: It includes financial resources including savings, credit, and income from employment, trade and remittances

## **Vulnerability Context**

Vulnerability is characterized as insecurity and risks in the well-being of individuals, households and communities in the context of:

1. Trends: This includes economic trends, resource trends and technological trends.
2. Shocks: This includes conflict, economic shocks, health shocks and natural shocks.
3. Seasonality: This includes seasonal fluctuations in prices, production, health, employment opportunities.

## **Livelihood Strategies**

These are the combination of livelihood activities that people undertake to reach their livelihood goals which include productive activities, investment strategies and reproductive choices. Livelihood approaches attempt to identify the strategies and determinants behind people's decisions and to reinforce positive aspects of these strategies and reduce barriers. People's choice of these strategies is a dynamic process where they diversify their livelihood activities in different sectors.

## **Policies, Institutions and Processes (PIPs)**

This element of livelihood framework covers the complex social, economic and political context within which people pursue their livelihoods strategies. It includes the inter-related issues of social relations, quality of service; system of governance, resource access institutions, policy issues and role of social and political organization.

## **Livelihood Outcomes**

Livelihood outcomes are the results of pursuing livelihood strategies, the goals to which people aspire. Livelihood approaches try to understand poor people's effort and support them to achieve their goals. The goals can include an increase in their income, reduced vulnerability, increased well-being, improved food security and more sustainable use of natural resources.

The livelihood framework helps in developing better understanding of livelihoods, particularly of the poor people. It covers the factors that determine people's livelihoods and the typical relationships between these. It enhances in planning new developmental activities and assessing the sustainability of different livelihood activities. Further, the framework reveals how sustainable livelihoods are achieved in different context through access to a range of livelihood resources (natural, economic, human and social capitals) which are combined in the pursuit of different livelihood strategies (agricultural intensification, livelihood diversification and migration) (see Haidar, 2009).

### **1.4. Statement of the Problem**

The present study tries to probe into the pattern, determinants and effect of livelihood diversification among rural households in Mizoram by applying the Sustainable Livelihood Framework (see Chambers and Conway, 1992; Scoones, 1998). It tries to assess the level of livelihood diversification. It throws light on the livelihood assets and how they linked to diversification of rural household. The study will also try to gauge the effect of livelihood

diversification on the living conditions of rural households in the vulnerability context of rural poor in Serchhip district, Mizoram.

The findings of the study will be useful for policy makers, planners, voluntary organizations as well as social workers at multilevel who are concerned with issues in livelihood promotion. It will offer suggestions for planning and policy making for livelihood promotion in rural areas. It will develop better understanding and direction for different developmental workers. It will also benefit social workers by providing relevant information and appropriate intervention strategies at micro, mezzo and macro levels.

### **1.5. Objectives**

The following are the objectives of the present study

1. To understand the rural vulnerability context and livelihood strategies adopted by rural households to cope with their livelihood challenges.
2. To explore the patterns of livelihood assets in rural Mizoram.
3. To probe into the levels of livelihood diversification in rural Mizoram.
4. To determine the factors affecting livelihood diversification in rural Mizoram
5. To examine the impact of livelihood diversification on living conditions of the rural households.

### **1.6. Hypotheses**

The present study attempts to test the empirical validity of the following hypotheses:

1. The volume of livelihood assets viz., human, natural, physical, financial, and social capital endowment of the household is directly related to its livelihood diversification.
2. Livelihood diversification of household is positively related to its living conditions.

The first hypothesis draws its inspiration from the Sustainable Livelihood Framework (see Scoones, 1998; Chambers and Conway, 1992) and earlier studies which used different capitals to determine the factors of livelihood diversification (see Okhere & Shittu 2013;

Khatun & Roy 2012; Datta & Singh, 2011). The relationship between livelihood assets and livelihood strategies is proposed to know direction for social work intervention for rural livelihood promotion in Mizoram.

The second hypothesis draws its inspiration from earlier studies (see Israr et. al. 2014; Babatunde & Quaim, 2009; Sujithkumar, 2007). In the context of rural development in Mizoram, the testing of this hypothesis would establish the rationale for livelihood diversification as a strategy of poverty eradication and rural development.

### **1.7. Chapter Scheme**

The study is organised into the following eight chapters.

Chapter I: Introduction

Chapter II: Review of Literature

Chapter III: Methodology

Chapter IV: Rural Vulnerability Context and Livelihood Challenges

Chapter V: Socio Economic Structural Bases

Chapter VI: Patterns of Rural Livelihood Assets

Chapter VII: Livelihood Diversification and Living Conditions

Chapter VIII: Conclusion

## **CHAPTER II**

### **REVIEW OF LITERATURE**

Review of literature explores other works that were already carried out in the field of the study. It is an important step in any research and helps to identify the substantive, theoretical, methodological, conceptual and operational gaps in the literature. Hence, reviews of related studies are presented in this chapter. The present chapter is divided into three sections. The first section presents the review of studies on Sustainable Livelihood while the second chapter is concerned with studies on rural vulnerability context. In the last section, review of studies on livelihood diversification is presented.

#### **2.1. Studies on Sustainable Livelihood**

L.J. De Haan (2012) outlined livelihood approach and its subsequent critical analysis and evolution. The paper discussed the basis of the original livelihood approach in its development cooperation context around the turn of the millennium. The popularity of it in academic research and the criticism are explained. It stated that the neglect of power relations was an important flaw of the initial livelihood approach. The paper explained how the subsequent generation of livelihood studies managed to come to integrate with that shortcoming and how it developed an understanding of the operation of power in livelihood strategies that can enable development interventions to effectively contribute to livelihood enhancement. It also criticised the current livelihood research for limiting itself to the production of series of studies presenting almost endless variations of local livelihoods. The paper also argued that livelihood approach starts a new line of studies and the line of its studies should aspire to formulate broader generalisations through meta-analysis and comparative research, which may eventually challenge the existing theories.

O.A. Valdes- Rodriguez and A. Perez-Vazquez (2011) discussed the meaning and methodologies of sustainable livelihood approaches (SLA) which is an applied strategy for

rural development. The paper outlined how the approaches have been developed by different organisations to achieve better perspectives thereby applying their own methodology. A comparative analysis is carried out which reveals the purposes, strengths and weaknesses. However, despite different approaches utilised by different organisations, they have a common objective which is to develop human groups in situation of social disadvantage and the eradication of poverty.

C. Dakson and T. Binns (2009) probed into the importance of cultural values in attaining rural livelihood sustainability drawn upon field based research in two villages in Central Sri Lanka. The study identified that although sustainable livelihood approach is very useful it does not adequately address traditional cultural values, and frequently perceives culture as a constraint in understanding livelihood opportunities and planning future development trajectories. It supported livelihood perspective as a pragmatic approach under which cultural knowledge and traditions can be explicitly treated as resources in the context of achieving sustainable community development. It showed how the extent to which these cultural complexities and rural lives are interconnected in terms of both livelihood choices and opportunities and in building up various livelihood assets in the shape of human, social, natural, financial and physical capital. It stated that livelihood perspectives help in developing a better understanding of how culture is conceptualized and incorporated into the process of community development.

K. Hussein and J. Nelson (2004) attempted to explore how institutional arrangements determine rural people's entitlements, provide the setting within which they construct their livelihoods, and determine who gains and losses in the struggle to maintain livelihoods based on the study in four countries viz., Bangladesh, Mali, Ethiopia and Zimbabwe. The paper proposed that rural people construct their livelihoods by three main strategies which include agricultural intensification, livelihood diversification and migration. The natures of livelihood

diversification in different contexts were outlined which include sometimes a means to enable accumulation for consumption and investment, sometimes employed to help spread risk, or to cope with temporary crises, sometimes an adaptive response to longer-term declines in income or entitlements, due to serious economic or environmental changes beyond local control and others. The paper concluded that livelihood diversification is normal for most people in the majority of rural areas and non-agricultural activities are critical components of the diversification process. Livelihood diversification is pursued for a mixture of motivations, and these vary according to context and the character of livelihood diversification is dependent primarily upon the context within which it is occurring. Lastly, the paper also expressed that the poorest rural groups probably have the fewest opportunities to diversify in a way that will lead to accumulation for investment purposes.

D.F. Bryceson (2004) explored the concepts of livelihoods, sustainability and poverty alleviation with reference to recent rural economy survey findings in sub-Saharan Africa, policies in the international development policy arena during the last 20 years, and South Africa's rural history. Argument is made that the processes of deagrarianisation and depeasantiation have accelerated in association with the implementation of structural adjustment policies. The study indicated a decline in peasant commodity production, an increase in non-agricultural income diversification, the proliferation of multi-occupational households, accelerating rural class stratification and growing poverty. The sustainable rural livelihood approach acknowledges structural change in rural areas but has not yet fully analyzed the depth of ongoing change and the policy scope needed to deflect rural poverty.

A. Toner (2003) is of the opinion that while sustainable livelihoods 'thinking' is potentially valuable in advancing our understanding of the complexity and socially embedded nature of people's lives, the frameworks and principles are too eager to codify this complexity and to produce toolboxes and techniques to change the internal management of



development interventions. The paper offered an analysis of two interventions that apply aspects of sustainable livelihoods approaches based on the study in Tanzania. Though the interventions proved much good practice, both are fundamentally limited in their potential for sustainable impact. The paper also outlined the importance of the external context within which an intervention exists and explores some of the limitations faced by development agencies in trying to 'manage' sustainability. The major strength of SLAs is their recognition that institutional arrangements can shape and constrain the livelihoods strategies that people can follow and a better understanding of how institutions are created and evolve is required in both theoretical and practical treatments of such approaches.

L. Krantz (2001) attempted to introduce approach to poverty reduction. The paper outlined that Sustainable Livelihood is an attempt to go beyond the conventional definitions and approaches to poverty eradication which had been found to be too narrow as they focused only on certain aspects or manifestations of poverty and did not consider other vital aspects of poverty such as vulnerability and social exclusion. Recently it was recognized that more attention must be paid to the various factors and processes which either constrain or enhance poor people's ability to make a living in an economically, ecologically, and socially sustainable manner. The concept offers a more coherent and integrated approach to poverty. The paper illustrated how the approach has been used by certain international development agencies into real field. It also presented a critical analysis of the strength and its weaknesses. It concluded that complementary action is required in different sectors and all projects need to define their target and participant groups and show what impact they will have on poverty.

I. Scoones (1998) described a framework for analysing sustainable livelihoods, explained in relation to five key indicators where it shows how, in different contexts, sustainable livelihoods are achieved through access to arrange of livelihood resources (natural, economic, human and social capitals) which are combined in the pursuit of different

livelihood strategies (agricultural intensification or intensification, livelihood diversification and migration). It stated that central to the framework is the analysis of the range of organisational and institutional factors that influence sustainable livelihood outcomes. The paper concluded by expressing some of the practical, methodological and operational implications of a sustainable livelihoods approach.

R. Chambers and G.R. Conway (1991) explored the concept of sustainable livelihoods in the context of rural areas. The paper outlined in the 21<sup>st</sup> century livelihoods will be needed by perhaps two or three times the present human population. It comprises of people, their capabilities and their means of living, including food, income and assets where tangible assets consists of resources and stores, and intangible of claims and access. The paper discussed that livelihood is environmentally sustainable when it maintains or enhances the local and global assets on which livelihoods depend and is socially sustainable when it can cope with and recover from stress and shocks, and provide for future generations. The paper also mentioned that future generations are not included in our decision making but will outnumber us, so new concepts and analysis are needed for policy and practice. The implications include personal environmental balance sheets for the better off, and for the poorer, policies and actions to enhance capabilities, improve equity, and increase social sustainability.

## **2.2. Studies on Rural Vulnerability Context**

The linkage between vulnerability and livelihood diversification has been studied by many researchers in developmental field. These studies mainly concluded that majority of rural households have diversified historically in their activities to become sustained and secure from risks and reduce their vulnerability. Thus, this recognition has led many researchers to represent rural livelihoods as a constructed from portfolio of resources or

activities (see Adams and Mortimore 1997; Dercon and Krishnan 1996; Ellis 1996; Unni 1996).

N.K. Kimani and S.K. Bhardwaj (2015) examined people's perceptions and adaptations to climate change and variability in mid- hills of Himachal Pradesh, India. The study inferred that nearly ninety percent of the people perceived rise in temperature of the region and a decreasing trend in amount of rainfall. The people living in mid hills responded to rise in temperature and decrease in rainfall by shifting to other crops, varieties, early planting and other cultural measures. The main barriers to adaptation includes limited knowledge on adaptation measures, lack of access to early warning information, unreliability of seasonal forecast and high cost of adaptation in the region. The study demonstrated that education of the household head, farming experience, off farm income, access to credit and extension services as factors that enhance adaptive capacity to climate change in the area. Hence, policy formulation to address these factors was outlined.

G. Kaushik and K.C. Sharma (2015) explored changes in climate and rural livelihoods adaptation and vulnerability in Rajasthan. The state climate ranging from semi-arid to sub-humid and natural depletion of resources, has already experience the consequences of climate change. The paper stated that the region is expected to become worse with increased in temperature, intensity of rainfall events, and increased variability in space & time of monsoon rains being consistently projected for the region. The government also promotes livelihood for sustainable development where livelihoods of the rural poor are directly dependent on environmental resources like land, water, forests and are vulnerable to weather and climate variability. The study recommended that local coping strategies and traditional knowledge need to be used in synergy with government and local interventions. The interrelationships between water, agriculture, forests and pastures must be

integrated in the solution. Lastly, there exists a great potential for policies and schemes to be employed synergistically towards building true adaptive capacity for the rural communities.

S.K. Kimani, et al., (2014) stated that climate change is one of the major expected threats to sustained economic growth which leads to extended poverty in semi-arid regions of sub Saharan Africa. The highest vulnerability areas include the health sector, food production, biodiversity, water resources, and range lands. The paper stated that climate change will likely increase the temperature of much part of the world in the future which will result in severe drought conditions in many parts of the world. This will further bring a profound and negative impact on livelihoods of many rural and urban areas which could lead to changes in land use. It is estimated that eastern regions of Africa are vulnerable where they will experience reduced average rainfall exposing agriculture to drought stress and a rise in temperature. With this the situation will be worsened by the interaction of multiple stresses factors occurring at various levels, which will negatively impact agricultural productivity. It concluded that reduced vulnerability to climate variability and change and promotion of climate resilience requires development of investments in support of reducing poverty, enhancing biodiversity, increasing yields and lowering greenhouse gas emissions.

T. Moreda (2012) studied argued that household livelihood vulnerabilities should not be conceived as 'discrete' events caused by external factors such as drought although which impact have been long recognized. The internal factors were also linked to vulnerabilities of long term instability in socio- economic and political process; land degradation, land scarcity and fragmentation, landlessness, and particularly tenure insecurity. These resulted in declining land access, rising livelihood vulnerability, and hampering agrarian and rural change. In addition to its impact on land conservation, the lack of tenure security tends to trap the rapidly growing population to subsist on the continuously dwindling land resources. This entrapment limits the expansion of the non-farm sector and constrains

agriculture, contributing to a vicious circle of poverty and livelihood vulnerability. Livelihoods are evolving in complex ways in response to mounting challenges and changing opportunities. Consequently, households tend to engage in many diversified livelihood activities of which seasonal migration is a typical example. The studies sets out to explore the nexus between vulnerability, land, livelihoods and migration through examining the underlying causes of vulnerability, such as access to and control of land, land tenure relations, population growth and resulting livelihood strategies with the objective of understanding why vulnerability and livelihood insecurity persists in the study areas.

R. Holmes and N. Jones (2011) outlined the vulnerability of poor households to economic and social shocks and stresses such as indebtedness due to economic, social or life-cycle events, food insecurity, health problems, productivity loss, lack of access to inputs, information and markets, gender discrimination in ownership of assets and discrimination in the labour market. To reduce risk and vulnerability a well- designed social protection programmes is useful by building resilience to shocks and stresses. The paper focused on a sub-set of social protection programmes which aim to tackle rural poverty and food insecurity and to promote agricultural productivity based on two case studies of public works programmes in Ethiopia (PSNP) the Productive Safety Net Programme and India (MGNREGS). The study analyzed the extent of what the programmes consider gender specific risks and vulnerabilities in the design and implementation. The study revealed that in India poor rural households has limited investment in agriculture infrastructure and limited access to resources. The two case studies revealed a number of findings that can be used to inform policy dialogues on public works initiatives in other contexts as well as highlighting some key policy areas in the design and implementation of public works programmes which can support a more positive impact on gender equality and the effectiveness of public works programmes.

A. Agrawal (2008) outlined that it is essential to attend the historical repertoire of strategies used by rural populations in order to understand the role of institutions in future adaptation of rural livelihoods to climate change, especially by poorer and more marginal groups. The paper identified a framework to view the relationship between rural institutions, adaptation owing to climate variability and change, and livelihoods of the rural poor. Using the existing literature on risks and livelihoods, the paper proposed five major classes of adaptation practices available to the rural poor in varying measures depending on their social networks, access to resources, and asset portfolios: mobility, storage, diversification, communal pooling, and exchange. It suggested that attention must be paid to civil society or micro-level institutions in crafting national responses to climate change. A close integration of different institutional arrangements is also likely critical for enhancing the effectiveness of adaptation practices. Adaptation interventions and investments will not achieve much success without greater attention to local institutions and their role in adaptation efforts and the ways in which local and external institutions can be articulated in the context of adaptation.

S. Dercon et al., (2005) attempted to examine the vulnerability context to different types of shocks based on the study in Ethiopia. The study used rural households survey which characterized the nature, frequency and severity of climatic, economic, health and other shocks faced by the region. The study revealed how different shocks affect the households, which are the dominant shocks and which shocks have the worse impact on the households. The findings showed that drought shocks and illness shocks are the most dominant shocks and female households, illiterates of the head in the household are reported to have much bigger impact of drought shocks.

E. Francis (2002) conducted a case study in North West province of South Africa, where she examined how, and why, rural livelihoods have changed in one of the former 'homelands' over the past four decades. The study focused on the nature and extent of the

differentiation processes and the resources that have been critical in the process. It discussed the major risks which people face in pursuing their livelihoods and their responses to such risks. The factors identified for these risks include institutions governing resource access and contract enforcement, together with labour and commodity markets. Responses were taken in the form of livelihood diversification, between activities and across space, putting a premium on access to information and social networks, as well as to the state while the others have responded to risk by clustering around a person with a regular income. The study suggested that policy interventions to promote poverty reduction must combine support for the generation of livelihoods with institutional reform to reduce vulnerability to risk.

R. Slater (2002) scrutinised the changing pattern of livelihood of black South African peoples under apartheid transition to democracy. The paper identified the process of differentiation and how the people responded to the changing livelihood opportunities and related risks and insecurity which are associated with different institutional and socio-economic changes. The study revealed that in search of new employment, those who have capital resources can begin trading and household circumstances and social relations became increasingly significant differentiating factors, as households attempted to diversify their livelihood activities. The study suggested there is a need recognize the diverse range of households livelihoods and to focus on integrated rather than sector-based planning for rural development. There is also a need to improve infrastructure for equitable access to accountable institutions and for securing land tenure among the rural poor.

### **2.3. Studies on Livelihood Diversification**

A.O. Adepaju and O.O. Oyewole (2014) outlined that the pattern of income diversification has been a major concern in the developing world. Based on this, a study was conducted to examine rural livelihood strategies and their impacts of income in Akinyele area of Oyo state. Multistage sampling was used and descriptive statistics, multinomial logit and

the generalized entropy inequality indices were employed to measure income equality. The study inferred that almost half of the respondents engaged in farm and non- farm strategy while the remaining adopted only a single livelihood strategy. Income equality was highest among non- farm households and lowest among farm households. The major factor which negatively influenced the choice of farming was household size, while factors such as age and land ownership had positive and negative effects on the adoption of the non-farm strategy. The study recommended that policies should lay attention on improving access to productive assets such as land for the landless farmers and improving technology which will encourage the ageing farmers to engage in farming continuously.

C.P. Okhere and A.M. Shittu (2013) studied the patterns and determinants of livelihood diversification among farm households in Ogun state, Nigeria, where poverty incidence is higher than others. The study tried to explore on the socio-economic characteristics of the farm households and determine the contributions of various livelihood activities to the farm households as well as the level of diversification and the factors influencing off- farm livelihood diversification of the farm households. The study inferred that modal age group was 41- 50 years and households had fairly large household sizes of about 6 people per household. The majority was uneducated and farm income accounted more than non- farm income. About half of the households were moderately diversified while undiversified falls in the lowest level below highly diversified. The factors influencing livelihood diversification showed that four out of seven postulated independent variables were significant which includes farm income, level of education, marital status and religion. For sustainable livelihood, the study recommended that government and non- governmental organisations should gear effort towards furnishing social welfare services for enhancing their standard of living and encourage them to form cooperatives. Government should put efforts in enhancing human capital by revamping education system and lastly, non-



governmental organisation should also provide services that could assist in sensitizing them on divorcee and its impact of their wellbeing among rural households.

D. Khatun and B.C. Roy (2012) attempted to answer the determinants and constraints of rural livelihood diversification which was conducted on West Bengal, thereby selecting one districts which represent a more diversified and the other of less diversified. The study inferred that rural households are likely to have a diversified livelihood when they have more experience (age) and better skill (training), more working hands, higher level of education, more asset, and access to credit facilities. Other determinants also have a significant and positive influence which includes rural infrastructure, agro-climatic condition, and membership of social organisation as well as overall socio- economic development of the region. In contrary to this, dependency ratio was found to be negatively related with its household level of diversification. Regarding constraints to livelihood diversification, more diversified area faced constraints like poor asset base, lack of credit facilities, lack of awareness and training facilities, and lack of opportunities in non- farm sector. Less diversified area faced constraints like poor transport facilities, poor asset base, unfavourable agro- climate, lack of credit facilities, lack of awareness and training as well as lack of basic infrastructure. The study outlined certain measures for policy makers thereby to revamp rural financial systems, education system and make remunerative non- farm opportunities which will be accessible for rural households.

A. Kumar, S. Kumar, D. K. Singh and Shivjee (2011) stated that in post- Independent India, one of the failures for economic development was its inability to significantly reduce the dependency on agriculture. The government noticed this and gained importance over time towards non- agricultural activities by implementing different schemes which results in transformation to non- farm sector. Rural employment diversification was studied across major states using NSSO data at household level. The study revealed that non-farm sector

emerged as the sole source of additional employment opportunities in rural areas as the decline in farm sector. Meanwhile, the overall employment scenario depicted that the dependence in crop production even increased at all India level in a slow pace. Diversification in crop sector at different states fluctuates over time and the rate of poverty reduction declined along with the growth in agricultural wage and agricultural GDP. Agricultural productivity with real growth played an important role in poverty reduction in rural areas. However agricultural growth alone is not sufficient to reduce poverty and it needs diversification to engage in different livelihood activities. The study concluded that non- farm sector plays an important role to generate employment opportunities and agriculture has shown a mixed trend (of both high and low pace). Crop diversification has been observable which indicates the possibility of enhancing effective employment opportunities by shifting towards cultivation of horticulture and cash crops. Policies implication was the need for higher agriculture growth by increasing public investment, removing barriers, well designated technical programme and training which will foster in rural economic growth.

S.K. Datta and K. Singh (2011) outlined that rural economy in developing countries are not based solely on agriculture but engage in a diverse array of activities and enterprises. As access to different types of assets and socio-economic factors in different regions give rise to differences in skill formation and income generating activities, the study attempted to probe the strategy of livelihood diversification in two backward regions in West Bengal. The study inferred that in one of the selected village, there is no single household depend only on non-farm occupation. Household with more working hands are likely to be varied in skill which results in diverse occupation which in turn leads to stabilization and minimized risk of failure and shocks. People of younger age usually have high zeal to pursue diverse occupation and are agile in shifting from one occupation to another. Gradually they gain expertise which leads to liking for specific areas of job where they become more specialized.

Rise of education generates employment opportunities and urban linkages which results in the possibility of getting employment in high-end non-farm sector with possible entry barriers. There is likely to be a positive linkage of diversification with formal loan of relatively low interest and negative relation in case of informal loan sources which are of high interest rates. However, the level of diversification in the selected villages appears to be rather moderate. Household level of diversification differs by dissimilarities in socio-economic attainments, differential access to assets and available diversification opportunities as a form of insurance to guard against uncertain income shocks. The study recommended policies to take part in enhancing systematic skill and training opportunities with attendant extension of formal credit facilities, spread of awareness of individual rights and opportunities and extension of marketing facilities.

A.A. Abro and M. Sadaqat (2010) illustrated that diversification towards high value crops can provide sufficient income and employment to rural people based on their study in Pakistan. They are of the opinion that greater attention must be paid in this avenue for rural growth which will increase their income and provide better employment opportunities thereby reducing poverty. The study recommended that the government should take initiatives by considering the importance of crop diversification in the overall development strategy for their economic development which will enhance rural income.

V. Rawal, M. Swaminathan and N.S. Dhar (2008) probed into the issue of income diversification based on the study of three villages in Andhra Pradesh where the three villages belong to different agro-ecological conditions. The study provided detailed information on incomes and other household characteristics. The study found that the per capita household income is much lower than the per capita SDP (State Domestic Product) in all the three villages. Secondly, in the two villages, income generation is dominated by the primary sector where agriculture (crop and animal husbandry) is the main source of income generation. On

the three villages, only one village showed greater diversification of income generation and the location of this village on a major highway is clearly a determining factor in the process of diversification. Lastly, relationship between the dependence on the primary sector and the level of asset ownership was not proved in the study.

R.Y.M. Kangalawe, et.al (2008) studied how changing socio-economic and environmental conditions contribute to livelihood diversification, land-use changes, poverty reduction strategies and environmental conservation with reference to Lake Victoria Basin. The study inferred that the factors determining livelihood diversification are increase in population, drought, and changes in macro and micro socio-economic conditions. The impacts of these activities include increased land degradation, low agricultural productivity, water pollution, food insecurity and poverty. The study concluded that there is a high level of diversification in the three countries although there are differences in the patterns and determinants and livelihood diversification is recognized as an important strategy for poverty reduction. To ensure environmental and livelihood sustainability, there is a need to address issues of alternative livelihoods, that would balance between economic and environmental objectives while contributing to sustainable poverty alleviation.

OECD (2007) expressed rural households engage in non-farm activities besides agricultural activities which provide alternative pathways for poverty reduction. Agricultural households are provided by three opportunities besides farm production which includes non-farm, rural based agricultural enterprise, rural- based, non- agricultural enterprise and urban-based employment. Diversifying livelihood prevails across different regions but the nature of diversification diverges between the better- off and poorer households. The better- off tend to diversify mostly in non- farm business activities while the poorer tend to diversify mostly in casual wage work. The study in Tanzania illustrated that diversification in and outside agricultural production plays a vital role in poverty reduction for agricultural households.

Diversification also acts as an important strategy for reducing risks especially like in the region of rain-fed agriculture. It emphasized that promoting diversification needs a comprehensive understanding of the nature of its complexity and public institutions must be strengthened for collecting data and analysis.

P.S. Sujithkumar (2007) examined livelihood diversification among three villages of Tamil Nadu. He attempted to assess the relationship between diversification and income level as well as its relationship with possession of land. Household level of diversification was measured which inferred that there was no significant difference in the number of activities. Agriculture occupies the dominant occupation of the selected villages. The study revealed that households with more diversified have higher level of income than less diversified ones. The sizes of land holdings have significant differences in terms of diversity. Although landless group are less diversified than landed households, there is no diversity in income level along with an increase in landholding size. Among different groups of landholding status, highest landholding group does not necessarily involve in higher number of activities. Landless households are less diversified than landed households but an increase in land holding does not increase in its diversification.

J. Lay and D. Schuler (2007) explored changes in income portfolios of rural households and its determinants for the case of Ghana. The study revealed that contrary to common beliefs, rural Ghana has seen major economic transformation, as households increasingly diversify their livelihoods by both increased migration and more local non-farm employment. Households diversified to a large extent by desperation rather than new opportunities. The households with rich asset base are more successful of diversifying or specializing in their activities than the poor asset base households. The focus on agriculture is very important as non-agricultural growth alone will not solve the problem of rural poverty.

M. Hartmann, H.E. Jahnke and K.J. Peters (2006) presented that small scale farmers in southeast- Asian countries are forced to diversify their livelihood activities as farming alone is not sufficient for their income source. Based on the study in Philippine province, the conditions of small scale farming and the constraints the farmers faced are examined. The study found that the lack of human capital like insufficient access to information and health care facilities, lack of social capital to disseminate knowledge and better techniques as well as absence of social security are the main constraints. The other constraints include natural calamities, poor infrastructure and lack of credit.

M. Iiyama (2006) presented a new outlook to link sustainable livelihood approach and practical policy formulation for identifying target groups and guiding interventions. The community of the study area has experienced socioeconomic changes over time which results in more options for income diversification. From the study, five dominant livelihood diversification patterns are identified like specialization in casual off-farm, specialization in traditional livestock, staple food crops, fruit-exotic animal integration and specialization in regular off-farm. Specialization in casual off-farm and traditional livestock yield low income while specialization in regular off-farm yield high income and staple food crops and fruit-exotic animal integration are more diversified in their income sources. The study indicated that poverty and resource utilization are associated in some cluster where intervention is possible by promoting alternative technologies of crop livestock integration. Dividing into cluster is also found to be useful for identifying target groups than capital asset endowments.

H.S. Shylendra and U. Rani (2005) outlined that in semi-arid areas, occupational diversification seems to be a major survival strategy for rural households for reducing poverty and vulnerability arising out of agricultural uncertainty and backwardness, population pressure and resource degradation. They discussed different studies on macro dimension which failed to capture the local level dynamics of diversification as well as micro

level studies which failed to capture the links between the labour processes and the broader socio- economic changes. On this light, a study was conducted which attempts to explore the phenomenon both in terms of its local nature and also take a perspective which is derivative of broader social and economic process in semi-arid areas of Gujarat. The study tried to understand the complex link between the phenomenon of growing occupational diversification and issues concerning the sustainability of rural livelihood. The study also focused on the determinants of livelihood diversification and the roles and impacts of developmental interventions. Two varied types of diversification were identified and there was a strong evidence of rural-urban linkage in the nature of diversification. The impact of NGOs intervention was found to be effective and there is evidence of livelihood sustainability between the better-off and the poorer households. The study concluded that in order to ensure equal gain of occupational diversification, the better policy strategy would be to improve their local socio-economic conditions and eventually their bargaining capacity. The poor must diversify with dignity and self-respect which only will ensure true livelihood security and sustainability.

Manjula (2002) is of the opinion that employment structure changes over time especially in rural areas from primary sector to secondary and tertiary sectors. Keeping in mind, an attempt was made to scrutinise the nature and direction of employment diversification among rural workers focusing on women which was conducted in Kerala. It was identified that there is a declining trend in women work participation in Kerala and the level of participation is even lower than the national figure. Women workers mostly work in non-agricultural activities from secondary to tertiary sector which leads to diversification. This is even higher than men in some areas as the rise in education turns them away from agricultural works. The determinants of diversification are not the push factor which includes like social development, economic development, social and familial set up, demographic

factors and commercialization. The study inferred that in different sectors, agricultural labour dominates in primary sector, workers in household industry in secondary sector and employees of private firms and government services in tertiary sector. The determinants of diversification like age, experience, family size, number of non-agricultural members in the family and distance to work place have positive impacts while caste, education, land, and marital status indicate a negative association. For policy implications, provision of training and skill development, better opportunities in non- agricultural sector, introducing an element of status by government not only by focusing on income and employment generation, utilising panchayats to reduce transaction cost and employment exchange are necessary in the region.

D.R. Smith, A. Gordon, K. Meadows and K. Zwick (2001) identified the role of various factors that influence livelihood trends and strategies of two selected districts in Uganda. Both qualitative and quantitative analysis revealed differences based on wealth, gender, and between traditional and non-traditional occupations. In one of the districts, insurgency has a devastating effect which enforced a significant shift from agro-pastoralism, which leads into diversification of farm and non-farm activities. In contrast to this, the other district suffered a rapid spread of HIV/ AIDS which leads to decline in their economy. Due to the negative impacts, high dependency ratios have encouraged themselves to form group to engage in new income generating activities where NGOs and donor agencies play an important role to support them. It concluded that there is a need to revisit the structure of government, NGOs and private sector schemes that may exclude the poor by virtue of initial capital requirements or restrictive payment schedules to tackle the constraint. However NGOs and CBOs intervention was identified as important tools for enhancing the nature, status and profits of these group activities.



Frank Ellis (1999) scrutinised the evidence and policy implications of rural livelihood diversification in developing countries. The paper stated that in the domain of livelihood research, untested assumptions about survival attributes of rural families cannot be made without inferences. With this, it illustrated that rural poor families can no longer confine only on farming for their means of survival. Household of more diversified are less vulnerable than undiversified ones where they are more sustainable over time precisely because they allow themselves for positive adaptation to changing circumstances. It pointed out some positive and negative impacts of livelihood diversification where the advantages outweigh the disadvantages. It also noted the need for policies to consider the complex interactions of livelihood diversity with poverty, farm productivity, income distribution, resource management and gender relations for rural poverty reduction. The argument suggested that in terms of policy agenda, the practical applications of Sustainable Livelihood Framework must place a high significance on diversity and understand the benefits of diversity are context-specific. Policies aimed to accomplish more sustainable livelihoods must take into consideration not only the positive attributes of diversity but the distinction of the differing nature of diversity which occurs within individuals, households, and larger social or economic arenas.

R.M. Saleth (1999) discussed that the Eighth Plan in India adopted rural diversification as a strategy for realizing not only the immediate goals of employment generation and income augmentation but also the long term goal of reinvigorating the ongoing process of rural economic transformation. Since rural diversification play an important role in rural economic transformation, an attempt was made to theoretically outline and empirically evaluate rural diversification with three major departures from existing literature. Based on the study, conducted in four agro-climatic distinct villages in Tamil Nadu, it outlines that the overall thrust of diversification strategies should be on the creation

of multiple avenues of employment and income and not only in each rural sub sector but also in the rural- urban interface. It concluded that rural diversification strategies can neither be an exclusive policy nor be an alternative to existing policies but a critical and leading component of an overall area and group specific strategy is essential for accomplishing a faster and broader process of transformation of rural economy.

The overview of literature on livelihood diversification shows that it has become an important strategy for promoting rural and urban development in the developing nations and attracted the attention of researchers in different contexts and regions. This literature helps us in identifying and understanding the theoretical, conceptual, operational and methodological issues in the study of livelihood diversification. However, some major gaps in the literature could be identified.

Firstly, livelihood diversification as a strategy of promoting sustainable livelihood or development has not been probed adequately in the Indian context. The literature on this strategy is scanty in India especially in North East region. Further, there was no study on this in Mizoram context.

Secondly, most studies on livelihood diversification do not adopt Sustainable Livelihood Framework for studying the determinants of livelihood diversification or its effects on livelihood outcomes. There is a need to adopt this framework to understand the vulnerability context of rural poor and their livelihood problems, strategies assets as well as livelihood outcomes.

Thirdly, most studies have only used quantitative method for data collection. There is a need to combine quantitative and participatory method to understand the process and context.

Lastly, most studies have been carried out by economists, sociologists, agricultural scientists and developmental agencies while social workers have not contributed adequately

in this area. However, there is a need to study from social work perspectives which will develop better understanding of the dynamics of livelihood diversification and show the policy implication. The present study attempts to fill these gaps with a comparative study of two villages which represent low and high levels of livelihood diversification.

This chapter has presented a review of literature on livelihood diversification across different regions of developing world and India. It has also highlighted the research gaps in the literature. In the light of these, the next chapter presents the methodological aspects of the present study by covering the profile of the study area.

## CHAPTER III

### METHODOLOGY

In any research, a sound methodology plays a vital role in achieving its objectives. The methods and techniques adopted in the present study are selected scientifically and objectively to present reliable data, facilitate analysis of data systematically and draw valid inferences carefully. The chapter has been presented in two major sections. The first section deals with profile of the study area while the second section describes the methodological aspects of the present study in terms of research design, sampling, methods of data collection, data processing and analysis, and limitations of the study.

#### **3.1. The Setting: Profile of the Study Area**

The setting of the present study deals with the profiles of the state and the selected district with the villages for the study.

##### **3.1.1. The State of Mizoram**

Mizoram is located in the north- eastern corner of India which lies between 92°.15' to 93°.29' East longitude and 21°.58' to 24°.35' North latitude. The name, "Mizoram" is derived from *Mi* (people), *Zo* (belonging to the people of Mizoram) and *Ram* (land), which means, "land of the Mizos". Mizos originally belong to Mongoloid stock who speaks the languages of Tibeto- Burmese family. As there was no proper historical record, historians traced that the original inhabitants reached the land during 1600 A.D to 1700 A.D. from China. Conflicts between clans and ethnic groups led to the formation of chieftainship which was later abolished in 1955 under Lushai Hills Act 1954 (Acquisition of chief right). The official administration started in the late 1890s during the British rule in India where the Lushai Hills was divided between Assam and Bengal. Later in 1898, the regions merged into a district known as Lushai Hills under a Superintendent. After India attained independence in 1947, insurgency took place by uprising of "Mizo National Front" under the leadership of their

charismatic leader, Lal Denga, which was outlawed in 1967. The demand for statehood gave birth to new arena for the Mizos, where Lushai Hills attained Union Territory on 21<sup>st</sup> January, 1972 and later got Statehood on 20<sup>th</sup> February, 1987.

According to the Statistical Handbook of Mizoram 2014, the state has a total population of 10,97,206 (2011 census) with a geographical area of 21,081 Sq.km. The sex ratio is 976 with a total density of population of 52 per Sq.km. Across different eight districts; urban population consists of 571771 while rural population consists of 525435. The growth rate of population in the decade is 23.48% (2001-11) while it was 29.18 percent in the last decade. The state capital is Aizawl. However, the state has a moderate climate with an influence of south-west monsoon enriched by numerous natural beauties as well as with rich flora and fauna.

### **3.1.2. Serchhip District**

Serchhip district became one of the separate districts created on 15<sup>th</sup> September, 1998. The origin of the name comes from ‘citrus tree’ which was found on the top of the hill which suggests the name Serchhip meaning, “citrus on top”. The first settlement can be traced back to Lallula in Kawlri, Serchhip. He was a Mizo chief who fled after he massacred Thlân râwn Pawi at Zopui as he was afraid of revenge. The second settlement at Serchhip was recorded as Bengkhuaia, son of Lalpuithanga, Chief of Bâwngchâwm, a great Mizo chief from Kawlri. He made a raid on Assam valley (Alexandrapur and its attached areas) in 1871 and captured Mary Winchester, the daughter of James Winchester that led to the first Lushai expedition in 1872.

Serchhip lies in the central part of Mizoram which is 112 km away from the State Capital, Aizawl, with an average elevation of 888 meters (2913 feet). It also lies between two important rivers known as Mat and Tuikum. The annual temperatures range from a high degree of 34°C to a low degree of 10°C. As per 2011 Census, the population consists of

64,967 with average sex ratio of 977 which is against the state average of 976. The density of population is 46 per Sq.km. with a growth rate of 20.56 in the decades, 2001-11. Urban population consists of 32,049 while rural population consists of 32,918. The total geographical area is 1421.6 Sq.km. of 6.74% of the state geographical area. It is located between 23°35'58'82" and 23°00'20'84" North latitude and 92°41'06'00" and 92°40'39'63' East longitude. It has the second highest literacy rate in the state of 97.53 (2011 census). Being situated near a river valley, agriculture is the mainstay of the people's occupation. It occupies an important place for cultivation of cabbage and mustard as well as other agricultural products. Beside this, it plays an important part in Mizo history with location of different places like Vantawngkhawhthla, Lung Vando, Chhura Farep, Lersia Kelkhum Puk, Sanpoh Puk and Chawngchilhi Puk. There are three R.D. block namely, Serchhip Part (20 villages), East Lungdar Part (16 villages) and Thingsulthliah Part (7 villages).

### **3.1.3. Khumtung Village: High Level of Livelihood Diversification**

Khumtung is a medium size village located in Thingsulthliah RD block of Serchhip district with total households of 253. It represents a high diversified village for the sample. It is located 48 kilometers away from its district headquarter, Serchhip, and 64 kilometers from the state capital, Aizawl. The total population is 1163 which consists of 571 males and 592 females (2011-12 census). Average Sex Ratio is 1037 which is higher than the state average of 976. It has literacy rates of 98.68 % which is higher than the state percentage of 91.33%. There are 42 poor (BPL) families and 30 very poor (AAY) families with the remaining of 181 non-poor (APL) families. As per constitution of India and Panchyati Raaj Act, Khumtung village is administrated by Sarpanch (Head of Village) who is the elected representative of the village.

The first settlement of the village can be traced back to the year 1974 with the establishment of a primary school by volunteers. Subsequently in 1976, it came under

government school. In the same year, the first church (Presbyterian Church) was established. Middle school was inaugurated in 1977 and later in 1978, high school came into function. In 1983, the village was electrified and after 8 years in 1991, SBI branch was opened in the village. Currently, the village has three primary schools, two middle schools and two high schools including private school. Beside this, the village also has three water tank, two Anganwadi centers, one sub-centre, one community hall and one playground. The nearest higher secondary school and hospital are located around 4 kilometers away from the village. There are seven denominations and four community based organization viz., YMA, MUP, MHIP, and MZP operating in the village. Majority of the people engage in cultivation as their primary source of income. The National Highway NH 54 runs through the village which plays a vital role in enhancing the village's economy, selling their agricultural products to the people who pass by.

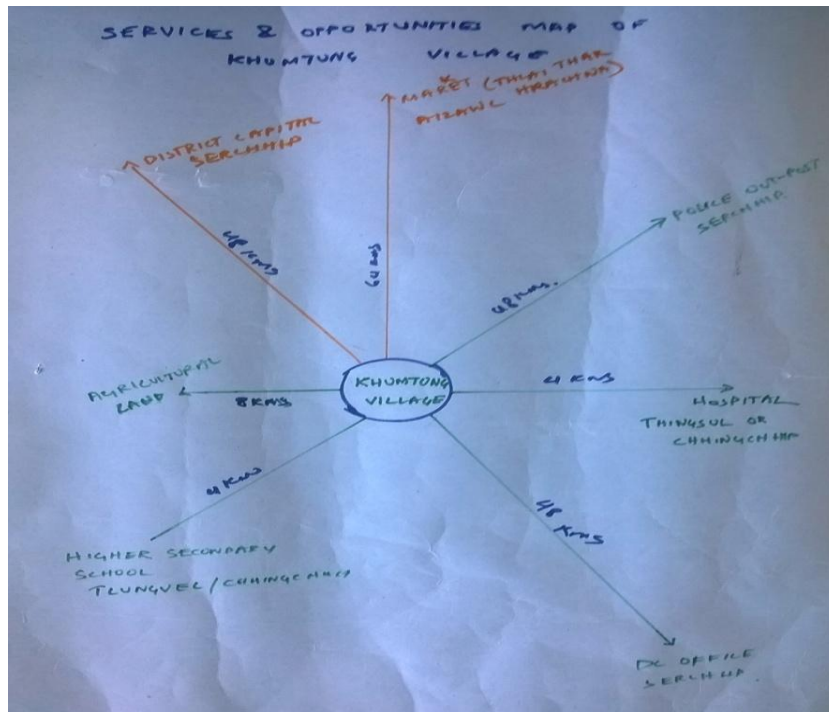
**Figure 3.1. Social Map of High Diversified (Khumtung) Village**



Figure 3.2. Timeline of High Diversified (Khumtung) Village

TIMELINE OF KHUMTUNG VILLAGE	
1974	KHAW DIN KUM
1974	PRIMARY SCHOOL (VOLUNTARY) NEIH KUM
1976	GOVT. PRIMARY SCHOOL DIN KUM
1976	PRESBYTERIAN CHURCH DIN KUM
1977	MIDDLE SCHOOL DIN KUM
1977	A.O. NEIH KUM
1978	HIGH SCHOOL DIN KUM
1982	WATER TANKY NEIH KUM
1981	PHE AWM KUM
1983	ELECTRIC AWM KUM
1985	AIZAW BUS SERVICE KUM
1985	SUB-CENTRE HAWN KUM
1987	VC NEIH KUM
1990	MARKET BUILDING SAK KUM
1990	SBI HAWN KUM
2000	TELEPHONE (LANDLINE) NEIH KUM

Figure 3.3. Services and Opportunities map of High Diversified (Khumtung) Village



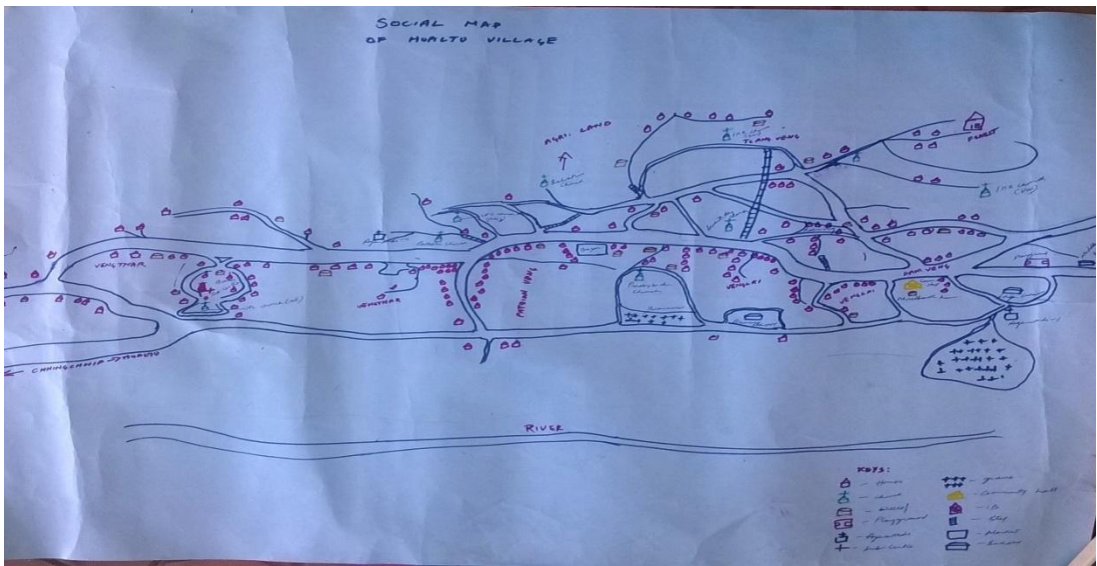


### **3.1.4. Hualtu Village: Low Level of Livelihood Diversification**

Hualtu is a medium-sized village which represents the less diversified village of 203 households. It is located in Thingsulthliah R.D block of Serchhip district with a distance of 41 kilometers away from its district headquarter and 100 kilometers from the state capital, Aizawl. The total population is 1064 consisting of 557 males and 507 females (2011-12 census). The sex ratio is 910 which is lower than the state sex ratio, 976. It has literacy rate of 95.16% which is higher than the state literacy rate of 91.33 %. There are 30 poor (BPL) families and 24 very poor (AAY) families with the remaining of 149 non poor (APL) families. As per the Constitution of India and Panchyati Raaj Act, Hualtu village is administrated by Sarpanch (Head of Village) who is the elected representative of the village.

In 1972, the first settlers arrived in the village and established the first church. In the next year, a primary school was established and later in 1975, a middle school was inaugurated. In 1987, the village was electrified and after 4 years in 1991, a high school was opened in the village. Currently, the village has one sub centre, two Anganwadi centers, one playground, one primary school, one middle school, one high school, one community hall and one playground. The village has number of *tuikhur*/spring of about 18 which are located in different places. Community based organization functioning in the village includes YMA, MHIP, MZP, and MUP and there are 8 denominations functioning in the village. As the village is located on a hill top, the condition of the road is very poor especially during rainy seasons which heighten the problem of supplying their needs. Road metal started from the year 2015, covering about one- fourth of the distance recently. The nearest bank and higher secondary school are located in Chhingchhip village which is 20 kilometers away from the village. Chhingchhip is a place from where Hualtu road diverges from the National Highway NH 54.

**Figure 3.4. Social Map of Low Diversified (Hualtu) Village**

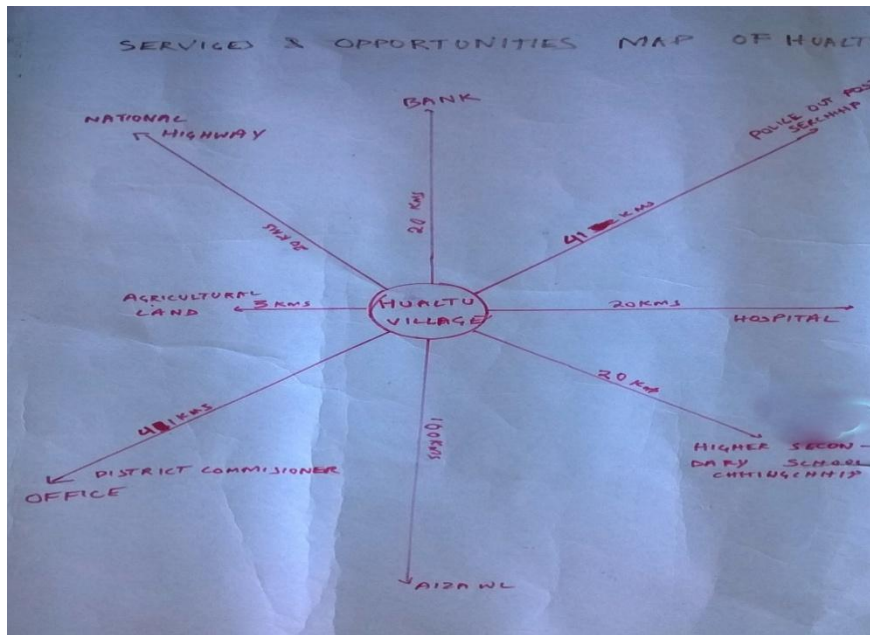


**Figure 3.5. Timeline of Low Diversified (Hualtu) Village**

TIMELINE OF HUALTU VILLAGE

1972	KHAW DIN KUM
1972	PRESBYTERIAN KOHHRAN DIN KUM
1973	PRIMARY SCHOOL DIN KUM
1975	MIDDLE SCHOOL DIN KUM
1979	SUB CENTRE DIN KUM
1987	ELECTRIC AWM KUM
1987	PHE AWM KUM
1991	HIGH SCHOOL DIN KUM
2000	FOREST DEPT. DIN KUM
2005	TELEPHONE AWM KUM
2007	PMGSY ROAD TAN KUM
2012	SUMO SERVICE TAN KUM
2013	COMMUNITY HALL HAWN KUM
2015	ROAD METAL KUM

**Figure 3.6. Services and Opportunities map of Low Diversified (Hualtu) Village**



### **3.2. Research Design**

The present study is cross sectional in nature and descriptive in design. It is mainly based on the quantitative data collected through pretested, structured household interview schedule to probe into the pattern and level of livelihood diversification and its impact on the living conditions of the household. In addition, the participatory methods were used to understand the social and ecological context of vulnerability in the sample villages.

#### **3.2.1. Sampling**

Unit of the study was household and all the rural households in Serchhip district, Mizoram constitute the population. A multi stage sampling procedure was followed to select district, block, villages and households. Serchhip district was purposely chosen as its population constitutes about 5.92 percent of the state population.

Under the district, livelihood (occupational) diversity index were computed for all the 32 villages. The villages were classified as Low (0.41 - 0.06) and High (0.41 - 0.75) in terms of the village level livelihood diversity index. Further, from each of the categories one village

each representing the low level of diversification (Hualtu with a diversity index of 0.36) and high level of diversification (Khumtung with a diversity index of 0.77) were selected based the average index of livelihood diversification.

**Table 3.1 Level of Occupational Diversity among the Villages of Serchhip**

Sl.No	Level of Occupational Diversity	Mean	S.D	N
1	High(0.41 - 0.75)	0.77	0.10	17
2	Low(0.41 - 0.06)	0.36	0.08	15
3	Total	0.57	0.23	32

Source: Computed

In both the selected villages, the list of households belonging to very poor(AAY), poor(BPL) and non-poor(APL) categories were obtained from the Village Council Presidents. In each of the category, systematic random sampling was used proportionately to select the household.

The overall sample size of the study was 131 households which covers 1 house in every 3 houses in the low diversified village (Hualtu) and 1 house in every 5 houses in the high diversified village (Khumtung).

### **3.2.2. Tools of Data Collection**

To conduct a livelihood research successfully and effectively linked to policy, it must include both quantitative and qualitative methods (see Murray, 2000; 2002). This is because livelihood is a complex and multi-faceted phenomenon and a combination of these methods will frequently yield greater insight than either used in isolation (see White, 2002). Accordingly, the present study used both quantitative and participatory methods for data collection.

Before conducting survey, a pilot study was conducted in the selected villages. Key informant interviews and participatory techniques like social map, seasonality diagram services and opportunities and timeline were used to understand the vulnerability context in the sample villages. The survey was conducted during the month of August, 2015. For

collection of quantitative data, structured household interview schedule was used in the study. It was pretested in the villages and modifications were made in the light of it. The final survey was then conducted on the sample households of the two villages.

### **3.2.3. Data Processing and Analysis**

The quantitative data collected through field survey was processed with the help of computer packages of Microsoft excel and SPSS. To measure livelihood diversification, Simpson index of diversity was used in the study. For analysis of quantitative data, cross tabulation, simple percentages, ratios, averages, and independent t test were used. For testing hypothesis, Karl Pearson's Product Moment Correlation Coefficients were used.

### **3.2.4. Limitations of the Study**

The main limitations of the study are that information given by the respondents may not be accurate relating to household living conditions and value of their assets. The reason is that households do not maintain their accounts on income and expenditure. The information may not be accurate. However, the researcher has put effort to built rapport with the respondent and tried to maximise the accuracy of information gathered to a greater extent as possible.

In this chapter, an attempt has been made to present the profile of the study area covering its physical, social and economic setting of the study area. The methodological aspects of the study were also presented. It highlighted the various aspects of the research design including the sampling, methods of data collection and data processing and analysis. It also outlined the limitations of the present study. Keeping these in mind, the next chapter presents the vulnerability context of the sample villages as well as the challenges and coping strategies adopted by households.

## CHAPTER IV

### RURAL VULNERABILITY CONTEXT AND LIVELIHOOD CHALLENGES

In the previous chapter, the profile of the study area and methodology were presented. This chapter attempts to present the vulnerability context of the study area and livelihood challenges and coping strategies adopted by the households. This chapter has been presented in four major sections. The first section presents the vulnerability context of the sample villages. The second section discusses the household livelihood challenges and coping strategies adopted while the third section is devoted to describe the rural livelihood promotion schemes that are currently implemented in Mizoram and the fourth section presents the pattern of utilization of major livelihood promotion programmes.

#### 4.1. Vulnerability context of the Study Area

In livelihood analysis, assessing vulnerability context is the first task which is also one of the components of Sustainable Livelihood Framework. Vulnerability refers to defenselessness, insecurity, and exposure to risk, shocks and stress and is not synonymous with poverty. It indicates an exposure to contingencies and stress, and the inability to cope with them. It has two sides: one is an external side of risks, shocks, and stress to which an individual or household is subjected to; and the other is of the internal side which is defenselessness- meaning a lack of means to cope without damaging loss. Loss can occur in many ways like becoming or being physically weaker, economically impoverished, socially dependent, and humiliated or psychologically harmed (Chambers, 2006). It is also defined as “a human condition or process resulting from physical, social, economic and environmental factors, which determine the likelihood and scale of damage from the impact of a given hazard” (UNDP, 2004).

Different components of the Vulnerability Context affect different people in different ways. Thus, natural shocks may have a more adverse effect on agricultural activity than on

urban employment. Likewise, changes in international commodity prices will affect those who grow process or export such commodities but have little direct effect on those who produce for, or trade in, the local market. Understanding the nature of vulnerability is a key step in sustainable livelihoods analysis.

Vulnerability affects different people in different ways which depends on the context and components of their vulnerability. In terms of livelihood analysis, the aim is to identify those trends, shocks and aspects of seasonality that are of particular importance to livelihoods rather than trying to develop a full understanding of all dimensions of the Vulnerability Context. It is essential to identify the impacts of these factors and how negative aspects can be minimized (see DFID, 1999).

This section attempts to identify the vulnerability context of the sample villages by using participatory method of seasonality diagram drawing inspiration from earlier studies (Lalrinkima, 2014). Seasonality diagram is a visual method which shows the distribution of seasonal varying phenomena (such as economic activities, resources, production activities, problems, illness/disease, migration, and natural events/phenomena) over time (see DFID, 2000). In this study, it covers the effects of seasonality regarding climate change, food security, workload, health status, availability of resources and other issues. It was taken from the month of January to December (annual) where the characteristics were divided into four levels viz., (i) “–“ represents null/not applicable, (ii) “1” represents ‘low’, (iii) “2” represents ‘medium’ and (iv) “3” represents ‘high’ (see Fig 4.1 & 4.2).

#### **4.1.1. Khumtung Village (High Diversified Village)**

The study reveals that rainfall gradually increases by the month of June where it reaches its maximum point in the month of July and August and declines by the month of September and shows no rainfall from November. The dry season reaches its peak from December till February where it declines and gradually increases again by the month of

October. The village experiences hot season during March to June and its maximum temperature occur in the month of May. With regard to shocks, landslides occur during rainy season and the village does not experience flood throughout the entire year. The two characteristics viz., agriculture and work load show a similar pattern which reaches its maximum from the month of February till May and declines after the following month and rise again when it reaches the month of September. Household expenditure and income also show a significant association which is high during the month of January to March as well as during November and December. Availability of food reaches its medium level of adequacy from January to April including the other month except the month of May to September with scarcity. In the case of health condition, people are vulnerable during February to April as well as in the rainy season. Shortage of water starts from January and then reaches its adverse condition by the month of February till April and rapidly falls in the subsequent month where it occurs again during rainy season. The village experiences transportation problems during the month of January to March and during rainy season. For animal husbandry, it is suitable during January where it gradually declines and then increases again by the coming month of September till the end of the year. Except during the month of June to August, there is not enough labour available in the village. PDS shows that supply is adequate from the month of January till April and falls gradually from May and then increases by the month of October where it reaches the adequacy level again in November (see figure 4.1)

The findings demonstrate that seasonality has a significant impact in rural vulnerability. As seen from the diagram, low rainfall is accompanied by drought which increases their vulnerability. On the other hand, heavy rainfall also raises the prevalence of epidemic diseases in the village. The occurrence of landslides is also high during rainy season. Household income and expenditure also have a significant association which



demonstrates insecurity regarding financial management. Lastly, when supply of PDS falls, the level of food availability also falls which result in insecurity of food in the village.

**Figure 4.1. Seasonality diagram of High Diversified (Khumtung) Village**

SEASONALITY DIAGRAM OF KHUMTUNG VILLAGE

PARTICULARS	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPT	OCT	NOV	DEC
RAINFALL	-	-	-	-	1	2	3	3	2	1	-	-
DRY PERIOD	3	3	2	2	-	-	-	-	-	1	2	3
HOT SEASON	-	-	1	2	3	2	-	-	-	-	-	-
DROUGHT	2	3	3	3	1	-	-	2	3	2	1	-
LANDSLIDES	-	-	-	-	-	1	2	3	3	2	-	-
FLOOD	-	-	-	-	-	-	-	-	-	-	-	-
AGRICULTURE (WORK LOAD)	1	3	3	3	3	2	2	1	3	3	2	1
WORK LOAD	1	3	3	3	3	2	2	-	3	3	2	1
EXPENDITURE	1	2	3	2	1	1	1	1	2	3	3	3
INCOME	2	3	3	1	1	-	-	-	1	3	3	-
FOOD AVAILABILITY	2	2	2	2	1	1	1	1	1	2	2	2
PDS (PUBLIC DISTRIBUTION SYSTEM)	3	3	3	3	2	1	1	1	1	2	3	3
HEALTH PROBLEMS	-	2	3	2	-	-	1	1	2	3	-	-
TRANSPORTATION PROBLEMS	2	3	3	2	-	-	1	2	3	3	-	-
ANIMAL HUSBANDRY (WORK LOAD)	3	2	2	1	1	1	1	1	2	2	2	2
LABOUR AVAILABILITY	-	-	-	1	1	2	2	2	1	1	-	-

#### 4.1.2. Hualtu Village (Low Diversified Village)

According to the seasonality diagram, rainfall pattern gradually increases from the month of June and reaches its peak in the month of July and August and decreases rapidly in the next month. Dry season reaches its maximum in the month of January and decreases gradually after it and then occurs again by the end of the year. Regarding shocks, landslides occur during rainy season and the village does not experience flood since flat lands are negligible within the village area. The village experiences hot season starting by the month of March and reaches its maximum in the month of May and then gradually decreases in the subsequent month. The three characteristics viz., agriculture, work load and animal husbandry reveal a similar pattern which reaches its maximum level in the month of February and again in October and November. The characteristics of household expenditure and

income also show a similar pattern throughout the year. The prevalence of diseases could be observed from the first month of the year which gradually decreases after the following month and then rises again during the rainy season. As the village has a number of spring wells, scarcity of water could not be seen throughout the year. Regarding transportation, the village faces problems throughout the year which reaches its maximum during rainy seasons. The availability of labour is not sufficient in the village. It shows an increase during May to July but in medium level of availability. The supply of PDS and food availability also infer a similar pattern in the sample village (see figure 4.2).

**Figure 4.2. Seasonality diagram of Low Diversified (Hualtu) Village**

SEASONALITY DIAGRAM OF HUALTU VILLAGE												
PARTICULARS	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPT	OCT	NOV	DEC
RAINFALL	-	-	-	1	1	2	3	3	1	1	-	-
DRY PERIOD	3	2	2	2	1	-	-	-	-	-	1	2
HOT SEASON	-	-	2	2	3	2	1	-	-	-	-	-
DROUGHT	-	-	-	-	-	-	-	1	1	-	-	-
LANDSLIDES	-	-	-	-	-	2	3	3	3	2	-	-
FLOOD	-	-	-	-	-	-	-	-	-	-	-	-
AGRICULTURE (WORK LOAD)	2	3	2	2	2	1	1	1	1	3	3	1
WORK LOAD	2	3	2	2	1	1	1	1	1	3	3	2
EXPENDITURE	1	3	3	2	2	1	1	1	1	2	2	2
INCOME	2	3	2	2	1	1	1	1	2	1	2	2
FOOD AVAILABILITY	1	3	3	2	2	2	1	1	1	2	3	2
PDS (PUBLIC DISTRIBUTION SYSTEM)	2	3	2	2	2	2	1	1	1	1	2	2
HEALTH PROBLEMS (PROBLEMS)	2	2	2	1	1	-	-	3	3	3	2	-
TRANSPORTATION	2	2	2	2	1	1	2	3	3	3	2	2
ANIMAL Husbandry (WORK LOAD)	2	3	3	2	1	1	1	1	2	3	3	2
LABOUR AVAILABILITY	1	1	1	1	2	2	2	1	1	1	1	1

The vulnerability among the household is evident from the seasonality diagram where seasonality plays a significant factor in the village. Low occurrence of rainfall is accompanied by dry season while heavy rainfall also brings landslide which further affects the communication by means of roads, supply of basic necessities and rise in epidemic diseases. It can also be inferred that households are insecure in their financial condition as

income and expenditure show a similar pattern which means there is likely no proper household saving in the household. Food insecurity could also be identified in the village as the fall in supply of PDS is accompanied by the fall in food availability from other sources. In addition to this, during rainy season the village is not accessible at times as rainfall swamps most part of the road with the occurrence of landslide. This in turn leads to many problems for the villagers regarding import and export of goods as well as human transportation.

## **4.2. Livelihood Challenges and Coping Strategies**

In the present section, the livelihood challenges and coping strategies adopted by the sample households are presented into two sub sections.

### **4.2.1. Livelihood Challenges and Problems**

Livelihood challenges are the obstacles and constraints that people face in pursuing their livelihood activities and which hinder their social and economic growth. The present study identifies some of the challenges faced by rural households relating to their livelihood context.

On the whole, majority (56%) of the respondents describes irregularity of income is the major challenge (44%) faced regarding their livelihood. It was followed by low price of crops/ goods (39%), poor health and lack of livelihood option (24%), inadequate human labour (15%), poor quality of agricultural land and geographical location of village (12%), long distance of agricultural land (10%), educational expenditure for children (9%), consumption of crops by animals (8%), and poor conditions of road (5%). Although the overall pattern shows a variation between the low and high diversified villages, the main challenges i.e. irregularity of income and low prices of goods/crops show a similar pattern in both the villages (see table 4.1).

However, the main challenges faced regarding their livelihood context were almost all related to agriculture as it is the main source of income generating activity in rural areas

especially like in rural Mizoram. These challenges and problems were all inter-related to one another where it needs special attention and consideration in promoting rural livelihoods.

#### **4.2.2. Coping Strategies in Face of Livelihood Challenges**

Coping strategies refer to a set of learned behavioural responses that are effective in diminishing levels of stress through the neutralization of a potentially harmful or dangerous situation. The strategies vary depending on the ongoing assessments produced through a process of individual- environment interaction and through changes in the situation and changes in the individual (see Lazarus and Folkman, 1984; Miller, 1980).

Out of the 131 respondents, there were 72 respondents (55%) who state their coping strategies regarding livelihood challenges. It has been found that majority (50%) work hard to cope with their livelihood challenges. This was followed by praying (47%), economising (44%), borrowing (29%), withdraw from savings and assistance from relatives/ others (15%); extra labour and plan for new livelihood activities (11%). The pattern of distribution shows a variation between the low and high diversified villages where working hard comprises the majority in low diversified village and praying of high diversified village. The numbers of respondents were also lower (49%) in the low diversified village than the high diversified village (63%) (see table 4.2).

#### **4.3. Rural Livelihood Promotion Schemes in Mizoram**

Rural unemployment is one of the continuing challenges faced by Indian economy which is reflected in both past and current policies (see, Saleth, 1999). With this, the Government of India has launched various programmes to alleviate poverty and generate income opportunities. Although these programmes have many positive impacts, there are still many barriers in the process of implementation, and rural poverty still remains a challenge for policy makers and the government. The studies on these programmes do not bring out the

critical issues, the best practices and possible replicable strategies in livelihood promotion (see Mohanty 2013).

This sub-section describes the rural livelihood promotion schemes that are currently in operation in Mizoram.

#### **4.3.1. New Land Use Policy (NLUP)**

New Land Use Policy is a flagship programme of Mizoram which has been implemented since January 14<sup>th</sup>, 2011. It is a courageous and ambitious political vision adhered by the Government of Mizoram during Congress Ministry. The overall objective is to improve the livelihood of vulnerable groups mainly jhumia families in a sustainable manner through improved management of their resource base in a way that contributes to protecting and restoring environment. The total number of families to be aided through the project is 1, 35,000 families. The criteria of selection of beneficiaries is based on the household annual income where families with regular and sufficient income from the Government and public or private sectors were ineligible as well as those families running businesses or having steady income from other sources.

The broad and primary aims and objectives are as follows:

- Provide sustainable income to farming families who comprise nearly three-fourths of the total population of Mizoram by weaning them away from the destructive and unprofitable shifting cultivation practice
- Provide urban poor with livelihoods by encouraging small scale industries and petty trades
- Converging schemes funded by the Government of India (Centrally Sponsored Schemes) to NLUP for better utilization of funds and avoidance of duplication of works

- Land reclamation and forestation by introducing permanent farming systems and land reforms
- Environment protection and restoration through various means such as expansion of rain catchment areas for recharging rivers, springs and underground water, encouraging rearing of domestic animals and poultry for increased meat production to discourage hunting to protect the fauna etc.

The Cabinet Committee on Economic Affairs (CCEA) in 2010 has approved the final project of NLUP which comprises three components namely; management/capacity building component, development component and infrastructure component with a total outlay of 2,873.13 crores for the period of five years. Since it is a project the aim to promote sustainable livelihood, a trade is selected for such livelihood based where one family is allotted for one trade.

Different livelihood activities (trades) are carried out by eight line department which includes Agriculture Department, Horticulture Department, Sericulture Department, Fishery Department, Environment and Forests Department, Soil and Water Conservation Department, AH and Veterinary Department and Industry Department. Beside these, two other departments of Rural Development and Land Revenue and Settlement Department were designated as facilitating departments to provide infrastructure and expertise in the demarcation of lands allotted to beneficiaries respectively.

#### **4.3.2. Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA)**

In India, The National Rural Employment Guarantee Act, (NREGA) was passed on 23<sup>rd</sup> August, 2005 which became operational in 2006. It covers the entire country with the exception of districts having a hundred percent urban population. The Act was renamed as Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) in 2009. The

first implementation of NREGA in Mizoram started in Lawngtlai and Saiha Districts during the year 2006-07 and covered all the other districts in 2008.

The objective is to enhance livelihood security and improve the purchasing power of the rural people, whether or not they are below the poverty line. The Act provides a legal guarantee for one hundred days of employment in every financial year to adult members of any rural household willing to do public work-related unskilled manual work at the statutory minimum wage. It aims to provide-

- Strong social safety net for the vulnerable groups by providing a fallback employment source, when other employment alternatives are scarce or inadequate.
- Growth engine for sustainable development of an agricultural economy. By providing employment on works that address causes of chronic poverty such as drought, deforestation and soil erosion, the Act seeks to strengthen the natural resource base of rural livelihood and create durable assets in rural areas. Effectively implemented, NREGA has the potential to transform the geography of poverty.
- Empowerment of rural poor through the processes of a rights-based Law.
- New ways of doing business, as a model of governance reform anchored on the principles of transparency and grassroots democracy.

As per the instructions of Ministry of Rural Development, Government of India, relating to convergence of MGNREGA and other schemes for strengthening and improving the rural economy and rural livelihood, a State Level of Convergence Workshop was held in Mizoram on 19<sup>th</sup> March 2014. Rural Development Department as a pilot project for the year 2014-2015 has selected the following sectors for convergence, namely; rubber plantation with Soil & Water Conservation Department, silkworm development with Sericulture Department, pisciculture development with Fisheries Department and horticulture development with Horticulture Department.

#### **4.3.3. North-east Rural Livelihood Project (NERLP)**

The North-east Rural Livelihood Project (NERLP) was launched in March 2012 with the assistance of the World Bank. The main objective of the project is to improve rural livelihoods- especially that of women, unemployed youth and the most disadvantaged in the four North-Eastern states including Mizoram, Nagaland, Sikkim and Tripura.

The project will have three-pronged approach which includes social empowerment, economic empowerment and partnership and linkages. The design aims to empower poor households in rural areas to directly deal with the wide and diverse range of problems and constraints that hamper livelihood development in the region as well as positioning them to capture opportunities for livelihood improvement. It would provide direct support aimed at building organizations of the poor in supporting the poor to have assets, have voice and increase the scale that would allow the poor to help themselves in dealing with both Government and market failures. The project would also facilitate the establishment of critical partnerships that would provide value-addition to the organizations of the poor in achieving their objectives. The target will focus on household that rely heavily on jhum cultivation.

#### **4.3.4. Integrated Watershed Management Programme (IWMP)**

IWMP was launched in 2009-10 with the objective of bringing various programmes such as the Integrated Wastelands Development Programme (IWDP), Desert Development Programme (DDP) and Drought Prone Areas Programme (DDAP) under one common integrated program. The main objectives of the IWMP are to restore the ecological balance by harnessing, conserving and developing degraded natural resources such as soil, vegetative cover and water. The outcomes are prevention of soil erosion, regeneration of natural vegetation, rain water harvesting and recharging of the ground water table. This enables



multi-cropping and the introduction of diverse agro-based activities, which help to provide sustainable livelihoods to the people residing in the watershed area.

In the state of Mizoram, the government prepared a State Perspective and Strategic Plan (SPSP) which aims at developing sources of livelihood, enhancing income, rejuvenating wastelands, maximizing the productivity of agricultural land, recharging ground water, optimizing water usage and enhancing income in the rural areas, through participatory approach and is based on watershed areas. Unlike IWDP, this programme covers wastelands/dry lands as well as rain-fed areas. Further, while landless households were left out in other watershed programmes, IWMP will cater for livelihood intervention for landless households. The project costs are to be shared between the Centre and the State on 90:10 ratios.

#### **4.3.5. National Rural Livelihoods Mission (NRLM)**

The Cabinet meeting held on 26th June, 2010 approved the restructuring of the Centrally Sponsored 'Swarnjayanti Gram Swarozgar Yojana' (S.G.S.Y) and its renaming as the National Rural Livelihoods Mission (N.R.L.M), also known as 'Aajeevika'. The Framework for Implementation for N.R.L.M was approved by the Ministry on 9th December, 2010 and the scheme was formally launched on 3rd June, 2011. It is presently under implementation in a phased manner in various states of India.

The mission has been designed to achieve the following 'Outputs' and 'Outcomes' during the 12th Five Year Plan period.

1. Universal mobilization of BPL households into an effective self managed and self governed institutions viz; Self Help Groups (SHGs).

2. Promotion of People's Institutions viz; Federation at Gram, Block and district level to facilitate the rural poor encompass the financial, technical, infrastructural, marketing and other constraints and risks.

3. Capacity building and training by setting up of a dedicated training institute viz; Rural Self Employment Training Institutes (RSETIs) for the training of targeted BPL youths. Also provisions will be made to create a Cadre of service providers, Community Resource Persons (CRPs) and Master Craftsmen and utilize their services for training of SHG beneficiaries.

4. Marketing and Infrastructure support would be provided by engaging professionals at various levels to draw up marketing strategies for the SHG products.

5. Convergence with programmes of different ministries in order to achieve synergy and maximizing livelihood opportunities for rural BPL poor through dovetailing of funds.

6. Promotion of placement based skill development activities for the rural youth using the services of premier national and state level institutions.

To implement the NRLM programme in Mizoram, the Govt. has formed a society called the Mizoram State Rural Livelihood Mission (MzSRLM) having a registration No.MSR 385 of 18.08.2011. It has a Governing Body under the chairmanship of the Hon'ble minister, Rural Development and Executive Committee chaired by the Secretary, Rural Development Department. There are four intensive RD blocks in Mizoram, The four intensive RD blocks are from Kolasib and Serchhip District. In each RD block, there are Block Mission Director, Block Mission Manager assisted by four Cluster Coordinators, Block Mission accountant and Computer assistant.

#### **4.4. Pattern of Utilization of Livelihood Promotion Schemes**

The central and state government has certain provisions to assist poor families in promoting their livelihood. For the study, MGNREGS (Mahatma Gandhi National Rural Employment Guarantee Scheme) and NLUP (New Land Use Policy) were used. However, almost every household (98%) have job card under MGNREGS while more than half (57%) were beneficiaries of NLUP (see table 4.3). Household not having job card under

MGNREGS belong to newly settler in the community while selection of NLUP beneficiary show bias in favor of the kinsmen and party men of the village.

This chapter has presented the vulnerability context of the sample villages and household livelihood challenges and coping strategies adopted by them. It has also discussed some of the important rural livelihood promotion schemes and pattern of utilization of livelihood promotion schemes in Mizoram. The next chapter presents the discussion of socio-economic structural bases of the sample households.

**Table 4.1 Livelihood Challenges and Problems**

Sl. No	Challenges	Livelihood Diversification				Total N = 131	
		Low n = 77		High n = 54			
		Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
1	No of Responses	41	53	33	61	74	56
2	Irregularity of Income	31	40	27	50	58	44
	Low price of Crops	28	36	23	43	51	39
3	Poor Health	13	17	18	33	31	24
4	Lack of Livelihood option	14	18	17	31	31	24
5	Inadequate Human Labour	15	19	5	9	20	15
6	Poor quality of Land	11	14	5	9	16	12
7	Geographical Location of Village	15	19	1	2	16	12
8	Long distance of Agri. Land	10	13	3	6	13	10
9	Education of Children	4	5	8	15	12	9
10	Consumed by Animals	6	8	5	9	11	8
11	Poor Conditions of Road	7	9	0	0	7	5

Source: Computed

Figures in Parentheses are percentages

**Table 4.2 Coping Strategies Adopted in face of Livelihood Challenges**

Sl.No	Coping Strategy	Livelihood Diversification				Total N = 131	
		Low n = 77		High n = 54			
		Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
1	No of Responses	38	49	34	63	72	55
2	Working Hard	34	44	31	57	65	50
3	Praying	29	38	33	61	62	47
4	Economising	30	39	27	50	57	44
5	Borrowing	20	26	18	33	38	29
6	Withdraw from Savings	6	8	13	24	19	15
7	Assisted by Relatives/Others	13	17	7	13	20	15
8	Extra Labour	9	12	5	9	14	11
9	Planning for new Livelihood	13	17	1	2	14	11

Source: Computed

Figures in Parentheses are percentages

**Table 4.3 Job Card under MGNREGS and beneficiaries of NLUP**

Sl. No	Characteristic	Livelihood Diversification		Total N=131
		Low n=77	High n=54	
<b>I</b>	<b>Job Card under MGNREGS</b>			
	Yes	75 (97.4)	54 (100.0)	129 (98.5)
	No	2 (2.6)	0 (0.0)	2 (1.5)
<b>II</b>	<b>Benefitted under NLUP</b>			
	Yes	50 (64.9)	25 (46.3)	75 (57.3)
	No	27 (35.1)	29 (53.7)	56 (42.7)

Source: Computed

Figures in Parentheses are percentages

## CHAPTER V

### SOCIO ECONOMIC STRUCTURAL BASES

In the present chapter, an attempt has been made to discuss the results of analysis of inter-village variation in the demographic, social and economic structural bases of the sample households and its members collected through interview scheduled. The two villages are categorized as low diversified village represented by Hualtu Village and high diversified village represented by Khumtung village. The chapter is presented in three broad sections. The first section describes the demographic structural bases of the respondents and members of the sample households. The second section describes the social structural bases of the respondent households, while the last section is devoted to the discussion on the economic structural characteristics of the sample households across the two villages.

#### **5.1. Demographic Structural Bases**

In the present section, the results of the analysis of demographic characteristics of the respondents and members of the sample households are discussed. The first sub-section presents the demographic composition of the respondents while the second sub-section deals with the demographic composition of the members of the sample households.

##### **5.1.1. Demographic Profile of Respondents**

In this sub- section, the demographic characteristics of the respondents viz., gender, age group, marital status and educational status were discussed (see table 5.1).

Gender is a pivotal social structural variable that governs human relations in every society which is more so in the Mizo society of patrilineal and patriarchal structure. Overall, there was almost equal distribution of gender among the respondents of male (50.4%) and female (49.6%). The distribution of gender among the respondents varies in the two villages where male respondents were higher (60%) in the low diversified and female respondents were higher (63%) in the high diversified village.

Age is an important demographic variable that connotes the vigor and productivity of an individual, subsequently the earning capacity. The respondents were categorized into youth (18-35), middle-aged (36-59) and old (60 and above). Half of the respondents (50%) belonged to the middle age group followed by youth (36%) and the remaining few (14%) of old age group. The same sequence could be observed in the low and high diversified village (see table 5.1).

Education is one of the basic needs of human beings. It is one of the components of human capital in the Sustainable Livelihood Framework as a determinant of sustainable development (see Carney, 1998; Scoones, 1998). The educational status of adult members has been divided into six categories viz. Illiterate, Primary (1-4), Middle (5-7), High School (8-10), Higher Secondary (11-12) and Graduate and above. Majority of a little more than two-fifth (41.2%) have access to education till Middle school which was followed by primary school education (30.5%). The remaining comprises of high school level (6.9%), higher secondary level (6.9%), Graduate (6.1%) and Illiterate (0.8%). However, the pattern of distribution was also similar in low and high diversified village except in higher secondary and graduate level of education (see table 5.1 ).

Marital status is another important demographic variable that denotes the prestige a person holds in traditional societies. Among the respondents, majority (77.1%) were married followed by unmarried (13.7%), widowed (7.6%) and divorced/ separated (1.5%). The pattern of distribution was also similar in both low and high diversified villages (see table 5.1)

### **5.1.2. Demographic Profile of members of Sample Households**

Overall, there was almost equal distribution of members of surveyed households across gender. A little more than half of the sample households were female (52%) and the rest were male (48%). The distributions of gender in the two villages were also almost of

equal proportion. The study inferred that the proportion of female members was slightly higher in both low diversified village (51%) and high diversified village (54%) than male members of (48%) and (53%) respectively (see table 5.2).

Regarding age groups, the sample households were categorized into six age groups viz. infants (0-1), children (2-13), adolescent (14-17), youth (18-35), middle (36-59) and old (60 and above). Majority (33%) belonged to youth groups followed by children group (26%) and middle group (21%). The rest constitutes one-fifth (20%) of the total surveyed households. The overall patterns of distribution of surveyed households show inter-village variation in the age distribution except in adolescent and youth age groups (see table 5.2).

Since a larger number of the surveyed household members belong to youth and children age groups, more than half (56%) of the sample households were unmarried (see table 5.1). It was followed by married (39%) and widowed (4%) and a few of divorced (1%). However, the pattern of marital status is similar in both the villages (see table 5.2).

Among adult members of the sample household, majority (33%) attended till middle school and primary school education of 26 percent. It was followed by one-fifth (20%) of high school education and higher secondary education (10%) and graduate education (9%). The remaining few consist of illiterates (3%). The mean years of adult education was slightly higher in high diversified village of 8.3 years and then low diversified village of 7.9 years. Subsequently, the overall mean years of schooling was worked out to 8 years (see table 5.3)

### **5.1.3. Structural Bases of Family**

Family is one of the basic institutions and its structure refers to the way in which it is organized according to roles, power and hierarchies. In this section, indicators like type, size, form and gender of head are discussed. The types of family were categorized into joint, nuclear and single or single parent families. Overall, more than half comprised a majority (56%) which belongs to nuclear family followed by joint family (28%) and single or single



parent family (15%). The pattern of distribution was similar in both the villages (see table 5.4) which also could be seen in earlier studies (see Chhangte, 2011; Lalruatkimi, 2012).

The size of family determines the availability of labour in agricultural pursuit and other allied activities of rural areas. Majority (57%) were of medium size (4-6 members) family while small (1-3 members) size family constitutes a little more than one-fifth (23%) followed by large (7 and above) size family of one-fifth (20%). The overall pattern of distribution of households by size of family differs in the two villages where the proportion of small and large size families equals in high diversified village but an increase in small size family in the other village. Similar finding was observed in earlier studies in Mizoram (Sailo, 2014)

The third indicator is the form of family which was categorized into stable, broken and reconstituted family. Overall, a larger number of families (96%) belong to stable family while the remaining (4%) belong to broken family. There were no reconstituted families in the sample households. The patterns of distribution of households by form of family were also very similar in both the low and high diversified villages (see table 5.4).

Gender of head of the household is another important indicator where it has significant implication for livelihood because most often, female headed households tend to be more vulnerable than male headed households (see Laltlanmawii, 2007). Majority of the sample households were male headed (85%) and the rest (14%) were female-headed households. A similar finding was evident in earlier studies in Mizoram (see Laltlanmawii, 2007; Zaitinvawra, 2014; Lalrinkima, 2014).

## **5.2. Social Structural Bases**

Social structure is the patterned social arrangements in society that are both emergent from and determinant of the actions of the individuals. It is the organized pattern of relationship of the people living in a society. The social structural characteristics of the

sample households discussed in this section include sub tribe and denomination (see table 5.5).

Sub- tribes of Lusei, Ralte, Hmar, Lai and Paihte were identified for the study where Lusei comprises a little more than two- fifth (42%) as a majority. It was followed by Hmar (26%) and Ralte (18%). The remaining constitutes a few of Lai (7%) and Paihte (6%). However the pattern of distribution by sub- tribes were almost similar in the two villages except in the lower distribution between Lai and Paihte tribes (see table 5.5).

All the sample households follow Christianity as their religion which was divided into several denominations. For the study, denominations have been classified into Presbyterian, Baptist, UPC- M, UPC- NEI, Salvation Army, Seventh Day Adventist, Roman Catholic and local denomination. Among the sample households, majority of a little less than half belongs to Presbyterian (45%). The remaining indicates diversity in their denominations rather than concentration in one denomination. It was followed by Salvation Army (14%), Seventh Day Adventist (13%), Roman Catholic (11%) and Baptist (11%). The remaining belongs to UPC- NEI (3%) followed by local denomination (1%) and lastly of UPC-M (0.8%).

#### **4.3 Economic Structural Bases**

In the present section, the economic structural bases are discussed at the individual and household levels.

The first economic structural variable i.e. dependency, shows that there were more dependents in the sample households. Overall, the larger more than half (54%) of the members were dependents, while the remaining (46%) were earner members. Both low diversified village and high diversified village shows equal pattern of distribution (see table 5.6). Overall, dependency ratio was 1.17 which suggest that for every earner there was one dependent. Similar level of dependency was found in earlier study (see Zaitinwawra, 2014)

The primary occupation of the earner members were predominantly cultivators. Similar finding was also observed in earlier studies (see Kanagaraj and Ralte, 2012; Zaitinvawra and Kanagaraj, 2008; Zaitinvawra, 2014; Lalrinkima, 2014). Overall, more than three- fifth (66%) depends on cultivation as their primary occupation, followed by government service (10%), animal husbandry and skilled labourer (8%) each, and business (6%). The remaining few (1%) constitutes of unskilled labour as their primary occupation. The overall pattern of occupational structure in the two villages demonstrates a more diversified occupation in the high diversified sample village (see table 5.6).

As part of secondary occupation, the study inferred that most of the earning members have no secondary source of income. Similar inferences were also drawn from earlier studies (see Kanagaraj and Ralte, 2012; Zaitinvawra and Kanagaraj, 2008; Zaitinvawra, 2014). Majority (92 %) have no secondary occupation while the remaining few engaged in different occupational activities which comprise of animal husbandry and unskilled labour (3%) each, and the others in cultivators, business and skilled labourer. Regarding secondary occupation of the two villages, the study also demonstrates a more diversified secondary occupation in the high diversified sample village (see table 5.6).

The socio- economic reveals the class position of the household and can be construed as a reliable measure of social class in Mizoram (see Zaitinvawra and Kanagaraj, 2008). The socio-economic category are divided into three classes viz., very poor- AAY ( Antyodaya Anna Yojana), poor- BPL (below poverty line), and non-poor- APL (above poverty line).

The present study indicates that majority (66%) belong to non- poor class, while a little less than one-fifth (18%) belong poor class which was followed by very poor (15%). Similar finding was also evident in a previous study (see Zaitinvawra, 2014). Households belonging to non- poor class were higher in high diversified village than low diversified village. Similarly, the level of occupational diversification was also higher in high diversified

village than low diversified village from the previous finding. However, the pattern of distribution in the sample households by socio-economic category was similar in both the villages (see table 5.7).

Most of the rural families still practice shifting or jhum cultivation where certain initiatives were being taken to reduce it. A good example in Mizoram was the introduction of New Land Use Policy (NLUP). In the sample villages, it was found that majority (57%) practice semi-settled followed by shifting (22%) and non cultivators (21%). There are no settled cultivators as Land Settlement Certificate (LSC) is not available in both the villages. However, the pattern of distribution between the two villages shows that semi settled cultivators were highest in both the low and high diversified villages but there were much more households practicing shifting cultivation in the low diversified village (see table 5.7).

This chapter discussed the demographic, social and economic structural bases of the respondents and members of the sample households. Keeping in mind, the next chapter discussed the pattern of livelihood assets viz., natural capital, physical capital, financial capital, human capital and social capital and examined.

**Table 5.1 Demographic Profile of Respondents**

Sl. No	Characteristic	Livelihood Diversification		Total N = 131
		Low n = 77	High n = 54	
<b>I</b>	<b>Gender</b>			
	Male	46 (59.7)	20 (37.0)	66 (50.4)
	Female	31 (40.3)	34 (63.0)	65 (49.6)
<b>II</b>	<b>Age Group</b>			
	Youth (18-35)	30 (39.0)	17 (31.5)	47 (35.9)
	Middle (36-59)	36 (46.8)	29 (53.7)	65 (49.6)
	Old (60 and above)	11 (14.3)	8 (14.8)	19 (14.5)
<b>III</b>	<b>Education Status</b>			
	Illiterate	0 (0.0)	1 (1.9)	1 (0.8)
	Primary	26 (33.8)	14 (25.9)	40 (30.5)
	Middle	31 (40.3)	23 (42.6)	54 (41.2)
	High School	10 (13.0)	9 (16.7)	19 (14.5)
	HSSLC	6 (7.8)	3 (5.6)	9 (6.9)
	Graduate	4 (5.2)	4 (7.4)	8 (6.1)
<b>IV</b>	<b>Marital Status</b>			
	Unmarried	7 (9.1)	11 (20.4)	18 (13.7)
	Married	63 (81.8)	38 (70.4)	101 (77.1)
	Divorced/Separated	1 (1.3)	1 (1.9)	2 (1.5)
	Widowed	6 (7.8)	4 (7.4)	10 (7.6)

Source: Computed

Figures in Parentheses are percentages

**Table 5.2 Demographic Composition of Members of Sample Households**

Sl. No	Characteristic	Livelihood Diversification		Total N = 644
		Low n = 370	High n = 274	
<b>I</b>	<b>Gender</b>			
	Male	182 (49.2)	127 (46.4)	309 (48.0)
	Female	188 (50.8)	147 (53.6)	335 (52.0)
<b>II</b>	<b>Age Group</b>			
	Infant (0-1)	21 (5.7)	9 (3.3)	30 (4.7)
	Children (2-13)	115 (31.1)	51 (18.6)	166 (25.8)
	Adolescent (14-17)	26 (7.0)	20 (7.3)	46 (7.1)
	Youth (18-35)	121 (32.7)	94 (34.3)	215 (33.4)
	Middle (36-59)	67 (18.1)	71 (25.9)	138 (21.4)
	Old (60 and above)	20 (5.4)	29 (10.6)	49 (7.6)
<b>III</b>	<b>Marital Status</b>			
	Unmarried	216 (58.4)	145 (52.9)	361 (56.1)
	Married	138 (37.3)	113 (41.2)	251 (39.0)
	Divorced/Separated	5 (1.4)	4 (1.5)	9 (1.4)
	Widowed	11 (3.0)	12 (4.4)	23 (3.6)

Source: Computed

Figures in parentheses are percentages

**Table 5.3 Adult Educational Status of Sample Households**

Sl. No	Characteristic	Livelihood Diversification		Total N = 401
		Low n = 216	High n = 185	
	<b>Education Status</b>			
<b>1</b>	Illiterate	3 (1.4)	7 (3.8)	10 (2.5)
<b>2</b>	Primary	67 (31.0)	36 (19.5)	103 (25.7)
<b>3</b>	Middle	72 (33.3)	60 (32.4)	132 (32.9)
<b>4</b>	High School	38 (17.6)	43 (23.2)	81 (20.2)
<b>5</b>	HSSLC	18 (8.3)	22 (11.9)	40 (10.0)
<b>6</b>	Graduate	18 (8.3)	17 (9.2)	35 (8.7)
	<b>Average Years of Adult Education</b>			
	Mean	7.9	8.3	8
	Std. Deviation	3.6	3.7	4

Source: Computed

Figures in Parentheses are percentages

**Table 5.4 Structure of Family**

Sl. No	Characteristic	Livelihood Diversification		Total N=131
		Low n=77	High n=54	
<b>I</b>	<b>Type of Family</b>			
	Joint	14 (18.2)	23 (42.6)	37 (28.2)
	Nuclear	51 (66.2)	23 (42.6)	74 (56.5)
	Single Parent Families	12 (15.6)	8 (14.8)	20 (15.3)
<b>III</b>	<b>Size of Family</b>			
	Small (1-3)	17 (22.1)	13 (24.1)	30 (22.9)
	Medium (4-6)	47 (61.0)	28 (51.9)	75 (57.3)
	Large (7 and above)	13 (16.9)	13 (24.1)	26 (19.8)
<b>III</b>	<b>Form of Family</b>			
	Stable	74 (96.1)	52 (96.3)	126 (96.2)
	Broken	3 (3.9)	2 (3.7)	5 (3.8)
<b>IV</b>	<b>Gender of Head</b>			
	Male	70 (90.9)	42 (77.8)	112 (85.5)
	Female	7 (9.1)	12 (22.2)	19 (14.5)

Source: Computed

Figures in Parentheses are percentages



**Table 5.5 Social Structural Bases: Sub-tribe and Denomination**

Sl. No	Characteristic	Livelihood Diversification		Total N=131
		Low n=77	High n=54	
<b>I</b>	<b>Sub Tribe</b>			
	Lusei	32 (41.6)	23 (42.6)	55 (42.0)
	Hmar	23 (29.9)	11 (20.4)	34 (26.0)
	Ralte	14 (18.2)	10 (18.5)	24 (18.3)
	Lai	4 (5.2)	6 (11.1)	10 (7.6)
	Paihte	4 (5.2)	4 (7.4)	8 (6.1)
<b>II</b>	<b>Denomination</b>			
	Presbyterian	40 (51.9)	19 (35.2)	59 (45.0)
	Salvation Army	8 (10.4)	11 (20.4)	19 (14.5)
	Seventh Day Adventist	13 (16.9)	4 (7.4)	17 (13.0)
	Roman Catholic	10 (13.0)	5 (9.3)	15 (11.5)
	Baptist	1 (1.3)	13 (24.1)	14 (10.7)
	UPC- NEI	3 (3.9)	1 (1.9)	4 (3.1)
	Local Denomination	1 (1.3)	1 (1.9)	2 (1.5)
	UPC-M	1 (1.3)	0 (0)	1 (0.8)

Source: Computed

Figures in Parentheses are percentages

**Table 5.6 Economic Characteristics of Members of Sample Households**

Sl. No	Characteristic	Livelihood Diversification		Total N = 644
		Low n = 370	High n = 274	
<b>I</b>	<b>Dependent/ Earner</b>			
	Dependent	205 (55.4)	142 (51.8)	347 (53.9)
	Earner	165 (44.6)	132 (48.2)	297 (46.1)
	<i>Earner Dependent Ratio</i>	<i>1.24</i>	<i>1.08</i>	<i>1.17</i>
<b>II</b>	<b>Primary Occupation</b>	<b>n = 165</b>	<b>n = 132</b>	<b>N = 297</b>
	Cultivators	123 (74.5)	72 (54.5)	195 (65.7)
	Government Service	13 (7.9)	18 (13.6)	31 (10.4)
	Business	5 (3.0)	14 (10.6)	19 (6.4)
	Animal Husbandry	14 (8.5)	11 (8.3)	25 (8.4)
	Skilled Labourer	9 (5.5)	15 (11.4)	24 (8.1)
	Unskilled Labour	1 (0.6)	2 (1.5)	3 (1.0)
<b>III</b>	<b>Secondary Occupation</b>			
	None	157 (95.2)	116 (87.9)	273 (91.9)
	Cultivators	0 (0.0)	3 (2.3)	3 (1.0)
	Business	0 (0.0)	2 (1.5)	2 (0.7)
	Animal Husbandry	5 (3.0)	4 (3.0)	9 (3.0)
	Skilled Labourer	0 (0.0)	2 (1.5)	2 (0.7)
	Unskilled Labour	3 (1.8)	5 (3.8)	8 (2.7)

Source: Computed

Figures in Parentheses are percentages

**Table 5.7 Socio- Economic Category & Type of Cultivators**

Sl. No	Characteristic	Livelihood Diversification		Total N=131
		Low n=77	High n=54	
<b>I</b>	<b>Socio Economic Category</b>			
	Non- Poor (APL)	49 (63.6)	38 (70.4)	87 (66.4)
	Poor (BPL)	15 (19.5)	9 (16.7)	24 (18.3)
	Very Poor (AAY)	13 (16.9)	7 (13.0)	20 (15.3)
<b>II</b>	<b>Type of Cultivators</b>			
	Semi Settled	41 (53.2)	33 (61.1)	74 (56.5)
	Shifting	25 (32.5)	4 (7.4)	29 (22.1)
	Non Cultivators	11 (14.3)	17 (31.5)	28 (21.4)
	Settled	0 (0.0)	0 (0.0)	0 (0.0)

Source: Computed

Figures in Parentheses are percentages

## CHAPTER VI

### PATTERNS OF RURAL LIVELIHOOD ASSETS

The present study draws its inspiration from Sustainable Livelihood Framework (see Chambers and Conway, 1992; Scoones, 1998). The framework is used to understand the pattern of rural livelihood assets and their impact on rural livelihood diversification. The framework emphasizes a focus on people, their assets and activities, rather than on sectors and their performance which is the conventional point of entry to policy. It yields generalized statements of rural livelihoods particularly of the poor which can be taken up for evaluating different livelihood projects and reduction of rural poverty (see Ellis, 1999). The chapter discusses the pattern of livelihood assets of the sample households.

In the Sustainable Livelihood Framework, livelihood assets include different forms of capital such as natural capital, physical capital, financial capital, human capital and social capital (see Chambers and Conway, 1992; Scoones, 1998; DFID, 2000b). Livelihood assets serve as the basis for rural household survival and diversifying their occupational strategies. The framework reveals how sustainable livelihoods are achieved in different context through access to a range of livelihood resources such as natural, economic, human and social capitals which are combined in the pursuit of different livelihood strategies like agricultural intensification; livelihood diversification and migration (see Haidar, 2009).

#### **6.1. Patterns of Human Capital**

Human capital represents the skills, knowledge, ability to labour and good health that together enable people to pursue different livelihood strategies and achieve their livelihood objectives (see DFID, 1999; Goodwin, 2007). In this study, proportion of earners, number of earners and household mean years of adult education were taken as the indicators for the pattern of human capital (see table 6.1 )

The mean proportion of earners worked out to 0.5 which means half of the members of the household were earners (see table 6.1). Similar finding was also observed from earlier studies (see Zaitinvawra, 2014). It was slightly higher in the high diversified village (0.6) than low diversified village (0.5). Regarding number of earners, there was significant difference between the low diversified village (2.1 earners per household) and the high diversified village (2.6 earners per household). On the other hand, there was no significant variation in mean years of adult education. The overall mean years of adult education was 2.7 years per household which were same for both of the villages.

## **6.2. Patterns of Natural Capital**

Natural capital includes resources such as land, soil, water, forests and livestock which is directly linked to the occupation to generate food, shelter and income. It is very important to those who derive all or part of their livelihoods from resource-based activities (see DFID, 1999; Petersen and Pedersen, 2010). Larger landowners have diversify to accumulate, while the landless and near landless diversify to survive (see Hart, 1994). The present study uses land and livestock as the indicator of natural assets.

Hence, in the context of the study area, land as a natural capital is predominant for both the low and high diversified villages. Subsequently, the mean size of landholding was also larger in the high diversified village (5 Acres) than the low diversified village (4 Acres). The study found that there was no household having Land Settlement Certificate (LSC) in both the villages as it was not obtainable in the villages. The mean value of livestock was also higher in the high diversified village (Rs. 13820) than the low diversified village (Rs. 8101). Pig constituted the major portion (Rs. 7336 in value) with the share of 70 percent followed by poultry birds (27%) and Cattle (3%). Overall, the pattern of distribution was also similar in both the villages except in the value of Cattle where the high diversified do not possess it (see table 6.2). As regard with the mean value of the natural capital owned by the households, the

size of landholding was negatively significant at 5 percent level. Conversely, there was no significant difference regarding the value of livestock between the two villages. However, gross cropped area and crop diversification index were positively significant at 5 percent and 1 percent respectively (see table 6.6).

### **6.3. Patterns of Physical Capital**

Physical capital is an important indicator for the quality of life and living condition. It includes the basic infrastructure (transport, shelter, water, energy and communications) and the production equipment and means that enable people to pursue their livelihoods (DFID, 1999; Carney, 2002). In the study, physical capital comprises of house value, house plot, four wheeler, two wheeler, television, mobile phone, washing machine, LPG connection, sewing machine, iron box, and transistor/ radio.

Overall, the mean value of household assets (Physical Capital) worked out at Rs. 402073 which was higher in the high diversified village (Rs. 556596) than the low diversified village (Rs. 293707). This was also negatively significant at 1 percent level (see table 6.6). Among the indicators of physical capital, the major proportion comprises of the house value (59%) followed by house plot (22%), four wheeler (8%), two wheeler (4%), and others. These may not reveal the number of assets as it was calculated in terms of their value in Rupees. However, the pattern of distribution of the physical capital in terms of value was similar in both the villages (see table 6.3).

### **6.4. Patterns of Financial Capital**

Financial capital refers to the financial resources that are owned by the households which are readily available for consumption and productive purposes which sustain life (see Kollmair and Gamper, 2002). It is the most versatile of all the five categories of assets and the least available to the poor (DFID, 1999). In the study, the pattern of household saving and household debt were taken to understand the pattern of financial capital of the household.

Household saving was assessed in terms of saving in bank, insurance, self help groups; money lent to friends and relatives and cash in hand. The average household saving worked out at Rs. 88102 which is more in the high diversified village (Rs. 140435) than the low diversified village (Rs. 51400). However, this was negatively significant at 1 percent level (see table 6.6). Government saving comprises a majority (61%) followed by insurance (36%), cash in hand (2%), friends and relatives (1%) and self help groups (0.3%). The overall pattern of distribution was also similar in both the villages except in the case of self help groups which does not exist in the low diversified village (see table 6.4).

Household debt has been calculated in terms of debt in government bank, friends and relatives, and self help groups. The overall average debt was calculated at Rs. 11775 which was negatively significant at 5 percent level (see table 6.6). However, the mean calculated reveals that household debt was higher in the more diversified village (Rs. 22857) than the low diversified village (Rs. 4003). This demonstrated that household having more saving do not necessarily have lower debt than household with less saving (see table 6.5).

### **6.5. Pattern of Social Capital**

Social capital refers to features of social organization, such as trust, norms and networks that can improve the efficiency of society by facilitating co-coordinated actions (see Putnam, 1993). It means being a part of member or group, association or union which includes social relations and networks: their functioning, resources and material services provided benefits and relations between different groups. In the Sustainable Livelihood Framework, it means the social resources upon which people draw in pursuit of their livelihood objectives. In the study, social capital endowment of household is assessed in terms of household's members participation in the community and political as well as their civil and political affiliation.

The first dimension of social capital is household's community participation in voluntary works, Churches, Young Mizo Association (YMA), Mizo Women's Association or Mizo Hmeichhe Insuihkhawm Pawl (MHIP), Mizo Elders' association or Mizo Upa Pawl (MUP), Games and Sports, and Self Help Groups (SHGs). The participation of the household's members was rated in four point scale viz., always (3), mostly (2), sometimes (1) and never (0). Overall, there was significant difference between the two villages (see table 6.10). The mean calculated was highest in voluntary organization (2.5) followed by Churches (1.8), YMA (1.2), MHIP (0.6), Games and Sports (0.5), MUP (0.4) and Self Help Groups (0.1). The average rate of household's community participation was also higher in the high diversified village (1.1) than the low diversified village (0.9). However, the overall mean worked out at 1 which demonstrated that majority of the household's member participated sometimes in the Community Based Organizations (CBOs) (see table 6.7).

The second dimension of social capital is the pattern of political participation which refers to the political influence on people and vice versa (see Sailo, 2014). In the study, political participation was assessed in terms of the frequency of household's votes in general election, assembly and village council which was divided into three point scale viz., always (2), sometimes (1) and never (0). However, the mean calculated for household rate of votes worked out at 1.9 in all the cases which demonstrated that household's members in both the villages always voted in the general election, assembly and village council election (see table 6.8).

Affiliation to civil and political organizations is the third dimension of social capital which has been sub-divided into affiliation in Churches, YMA, MHIP, MUP, Games and Sports, SHGs, and Political party. It was further divided into four point scale viz., office bearer (4), executive member (3), members (2), sympathizer (1), and none (0). The affiliation in Churches was highest which was followed by YMA that is not so surprising for Mizo



society. Similar finding was also observed in earlier urban studies (see Sailo, 2014). The political and civil affiliation between the low and high diversified villages was also significant at 1 percent level (see table 7.10). However, the overall mean calculated (1.3) demonstrated that majority of the household's members were sympathizer of civil and political organization. The pattern of distribution was also similar in both the high and low diversified villages (see table 6.9).

This chapter described the patterns and levels of livelihood assets endowment of the sample households. In the light of this, the next chapter will present the household living conditions and level of livelihood diversification of the sample villages. The pattern of relationship between livelihood assets, livelihood diversification and livelihood outcomes will also be discussed.

**Table 6.1 Human Capital Differential**

Sl. No		Livelihood Diversification				Total N = 131		t
		Low n = 77		High n = 54				
		Mean	SD	Mean	SD	Mean	SD	
1	Proportion of Earners	0.5	0.3	0.6	0.2	0.5	0.3	1.77
2	Number of Earners	2.1	1.0	2.6	1.1	2.3	1.0	2.92**
3	Mean Years of Adult Education	7.9	2.7	8.1	2.7	8.0	2.7	0.32
4	Standard Deviation of Adult Education	2.0	1.7	3.0	1.6	2.4	1.7	3.40**

Source: Computed

\*\* P < 0.01

\* P < 0.05

**Table 6.2 Pattern of Natural Capital**

Sl. No		Livelihood Diversification				Total N = 131	
		Low n = 77		High n = 54			
		Mean	SD	Mean	SD	Mean	SD
<b>I</b>	<b>Area of Land Possessed in Acres with</b>						
	Periodic Land Pass(PLP)	3 (69)	1.5	4 (82)	2.5	3 (75)	2.1
	Temporary Pass(TP)	1 (18)	0.4	1 (17)	0.5	1 (17)	0.4
	Common Land(CL)	1 (14)	0.5	0 (2)	0.2	0 (8)	0.5
	Size of Land Holding	4 (100)	1.7	5 (100)	2.7	4 (100)	2.2
<b>II</b>	<b>Livestock Value(Rs)</b>						
	Pigs	4143 (51)	7530	11889 (86)	22327	7336 (70)	15844
	Poultry Birds	3439 (43)	4578	1931 (14)	4322	2818 (27)	4519
	Cattle	519 (6)	4558	0 (0)	0	305 (3)	3495
	Livestock	8101 (100)	11044	13820 (100)	23936	10459 (100)	17688

Source: Computed

Figures in parentheses are percentages

**Table 6.3 Pattern of Physical Capital: Household Assets**

Sl. No		Livelihood Diversification				Total N = 131	
		Low n = 77		High n = 54		Mean	SD
		Mean	SD	Mean	SD		
1	House Value	168052 (57.2)	132626	332222 (59.7)	296162	235725 (58.6)	229397
2	House Plot	73377 (25.0)	35922	111667 (20.1)	52977	89160 (22.2)	47504
3	Four wheeler	20779 (7.1)	100443	45926 (8.3)	133565	31145 (7.7)	115437
4	Two wheeler	9610 (3.3)	21487	25926 (4.7)	35316	16336 (4.1)	29041
5	Television	9091 (3.1)	4674	12704 (2.3)	5602	10580 (2.6)	5362
6	Mobile phone	6253 (2.1)	4453	12620 (2.3)	9667	8878 (2.2)	7719
7	Washing Machine	3753 (1.3)	5209	7889 (1.4)	5936	5458 (1.4)	5865
8	LPG connection	1379 (0.5)	2379	4870 (0.9)	1981	2818 (0.7)	2808
9	Sewing Machine	1045 (0.4)	1492	1746 (0.3)	1622	1334 (0.3)	1579
10	Iron Box	300 (0.1)	381	937 (0.2)	466	563 (0.1)	522
11	Transistor/ Radio	66 (0.0)	218	89 (0.0)	290	76 (0.0)	249
	Household Assets (Physical Capital)	293707 (100)	195757	556596 (100)	414113	402073 (100)	330442

Source: Computed

Figures in parentheses are percentages

**Table 6.4 Pattern of Financial Capital: Household Saving**

Sl. No		Livelihood Diversification				Total N = 131	
		Low n = 77		High n = 54		Mean	SD
		Mean	SD	Mean	SD		
1	Government	47338 (92.1)	52123	62370 (44.4)	117075	53534 (60.8)	85039
2	Insurance	1299 (2.5)	11396	74074 (52.7)	141668	31298 (35.5)	97731
3	Cash in hand	1726 (3.4)	4147	2463 (1.8)	2274	2030 (2.3)	3506
4	Friends and Relatives	1038 (2.0)	5756	972 (0.7)	2043	1011 (1.1)	4591
5	Self Help Groups	0 (0.0)	0	556 (0.4)	2212	229 (0.3)	1439
	Household Savings	51400 (100)	59730	140435 (100)	218338	88102 (100)	153155

Source: Computed

Figures in parentheses are percentages

**Table 6.5 Pattern of Financial Capital: Household Debt**

Sl. No		Livelihood Diversification				Total N = 131	
		Low n = 77		High n = 54		Mean	SD
		Mean	SD	Mean	SD		
1	Government	3247 (81.1)	23421	21574 (94.4)	58421	10802 (91.7)	42358
2	Friends and Relatives	756 (18.9)	2351	1135 (5.0)	1571	912 (7.7)	2067
3	Self Help Groups	0 (0.0)	0	148 (0.6)	787	61 (0.5)	508
	Household Debt	4003 (100)	23433	22857 (100)	58285	11775 (100)	42341

Source: Computed

Figures in parentheses are percentages

**Table 6.6 Differences in Natural, Physical, and Financial Capital**

Sl. No		t	Sig. (2-tailed)
1	Size of Land Holding	-2.16	0.03
2	Livestock	-1.84	0.07
3	Gross Cropped Area	2.50	0.01
4	Crop Diversification Index	6.29	0.00
5	Household Assets - Physical Capital	-4.86	0.00
6	Household Savings	-3.41	0.00
7	Household Debt	-2.56	0.01

Source: Computed

\*\* P < 0.01

\* P < 0.05

**Table 6.7 Pattern of Community Participation**

Sl. No	Mode of Participation	Livelihood Diversification				Total N = 131	
		Low n = 77		High n = 54		Mean	SD
		Mean	SD	Mean	SD		
1	Voluntary Works	2.6	0.7	2.5	0.7	2.5	0.7
2	Churches	1.8	0.5	1.9	0.5	1.8	0.5
3	YMA	1.1	0.5	1.4	0.6	1.2	0.6
4	MHIP	0.7	0.5	0.6	0.6	0.6	0.5
5	Games and Sports	0.4	0.5	0.6	0.6	0.5	0.6
6	MUP	0.3	0.6	0.5	0.7	0.4	0.6
7	SHGs	0.0	0.0	0.2	0.8	0.1	0.5
8	Community Participation	0.97	0.24	1.11	0.30	1.03	0.27

Source: Computed

Figures in parentheses are percentages

**Table 6.8 Pattern of Political Participation**

Sl. No	Mode of Participation	Livelihood Diversification				Total N = 131	
		Low n = 77		High n = 54		Mean	SD
		Mean	SD	Mean	SD		
1	General Election (MP)	1.9	0.3	1.9	0.3	1.9	0.3
2	Assembly	1.9	0.3	1.9	0.3	1.9	0.3
3	Village Council	1.9	0.3	1.9	0.3	1.9	0.3
	Political Participation	1.9	0.3	1.9	0.3	1.9	0.3

Source: Computed

Figures in parentheses are percentages

**Table 6.9 Pattern of Political and Civil Affiliation**

Sl. No	Mode	Livelihood Diversification				Total N = 131	
		Low n = 77		High n = 54		Mean	SD
		Mean	SD	Mean	SD		
1	Churches	2.3	0.8	3.1	0.9	2.6	0.9
2	YMA	1.8	0.7	2.3	0.9	2.0	0.8
3	MHIP	1.6	0.7	1.8	0.6	1.7	0.7
4	Political Party	1.0	1.0	1.8	1.1	1.4	1.1
5	MUP	0.6	0.8	1.1	1.2	0.8	1.0
6	Games and Sports	0.4	0.7	0.9	0.8	0.6	0.8
7	SHGs	0.0	0.1	0.2	0.6	0.1	0.4
	Political & Civil Affiliation	1.1	0.4	1.6	0.4	1.3	0.4

Source: Computed

Figures in parentheses are percentages

**Table 6.10 Differences in Social Capital**

Sl. No	Form of Social Capital	Livelihood Diversification				t	Sig. (2-tailed)
		Low n = 77		High n = 54			
		Mean	SD	Mean	SD		
1	Community Participation	0.97	0.24	1.11	0.30	2.86**	0.00
2	Political Participation	1.9	0.3	1.9	0.3	0.64	0.52
3	Political Civil Affiliation	1.1	0.4	1.6	0.4	7.52**	0.00

Source: Computed \*\* P < 0.01

\* P < 0.05

## **CHAPTER VII**

### **LIVELIHOOD DIVERSIFICATION AND LIVING CONDITIONS**

The present chapter is divided into three sections. In the first section, the living conditions of the households are assessed into two sub-sections viz., annual household income and monthly expenditure of the household. The second section attempts to explore the level of livelihood diversification in the sample villages. It included different occupational activities adopted by the households and the proportion of income generated from such activities. An index of measurement will be used for its computation. The last section is devoted to the pattern of relationship among livelihood assets, diversification and livelihood outcomes which is divided into two sub-sections.

#### **7.1. Patterns of Living Conditions**

In the Sustainable Livelihood Framework the last dimension is livelihood outcomes (see Carney, 1998; Scoones, 1998). It is the goal to which people aspire, the results of pursuing their livelihood strategies. In the present study, livelihood outcomes are assessed in terms of living conditions of the household. The first section deals with the pattern of annual household income while the second section is devoted to the pattern of monthly household expenditure.

##### **7.1.1. Pattern of Annual Household Income**

Income of the household is the first indicator of living conditions of the household which is also a dependable measurement of economic development. The annual income of the household was analyzed from the sum of all income sources (see table 7.1). The various income sources of the household include government services, cultivation, skilled labour, animal husbandry, unskilled labour, and business.

Overall, the average annual household income worked out at Rs. 107218 which was significant between the low diversified village (Rs.73766) and high diversified village

(Rs.154917). The income from government service comprises the majority (50%) followed by cultivation (27%), skilled labour (12%), animal husbandry (6%), unskilled labour (3%), and business (2%). Similar finding was also observed in previous studies (see, Zaitinwawra, 2014). The pattern of distribution shows a variation between the low and high diversified villages. In the low diversified village income from cultivation (43%) was higher than income from government service (39%) which was contrary in the high diversified village where income from government service (57%) was higher than income from cultivation (17%). Subsequently, income from unskilled labour and business also demonstrated inter-village variation between the low and high diversified villages. The Simpson Index of Livelihood Diversification was also significant at one percent level between the low and high diversified village but not significant in the case of per capita household income. However, the per capita household income shows an average of Rs, 23122 in the low diversified village and Rs. 27463 in the high diversified village.

### **7.1.2. Pattern of Monthly Household Expenditure**

Household expenditure is one of the measures for living conditions and poverty. In the present study, the pattern of monthly household expenditure is taken which has been divided into food and non-food expenditure.

On the whole, the average monthly expenditure of household is Rs. 4501 which is lower for the low diversified village (Rs.3018) and higher for the high diversified village (Rs.6614). In contrary to earlier studies in rural Mizoram (see Zaitinwawra, 2014 and Lalrinkima, 2014), the share of non- food expenditure (69%) was higher than the share of food expenditure (31%) which also follows a similar pattern of distribution in the low and high diversified villages. However, the monthly household expenditure between the two villages was significant at one percent level. The average per capita household expenditure



worked out at Rs. 1021 which was also significant between the low and high diversified villages (see table 7.2).

## 7.2. Level of Livelihood Diversification

The level of diversification is conceptualized as the extent of diversification to which households derived their income from different source of livelihood activities. There are various indices to measure livelihood diversification like number of income sources and their share, Simpson index, Herfindahl index, Ogive index, Entropy index, Modified Entropy index, Composite Entropy index (see Shyani and Pandya, 1998). In the present study, the level of diversification was determined by computation of Simpson index of diversity. This index was adopted because of its simplicity, robustness and its wider applicability. The Simpson index of diversity is defined as:

$$S.I. = 1 - \sum_{i=1}^N P_i^2$$

Where N is the total number of income sources and  $P_i$  is the proportion of income of the i-th income source. The value of SID always falls between 0 and 1. If there is just one source of income the value of SID is zero. Accordingly, the higher the value of SID, the more diversified income sources of the household. In the study, the value between 0 and 1 was divided into different levels/ scales viz., 0.00 represents no level of diversification, 0.01 -0.32 represents low level of diversification and 0.33-0.75 represents moderate level of diversification.

The computation of SID shows that the level of diversification was not high in the sample villages. On the whole, it was observed that majority (42%) were moderately diversified. This was followed by not diversified (33%) and low diversified (25%). In the low diversified village, the results from the sample households indicates that 48 percent of the households were not diversified while 31 percent were moderately diversified followed by 21

percent of low diversified. Conversely, in the high diversified village, the study reveals that majority (57%) were moderately diversified followed by low diversified (31%) and not diversified (11%). However, high level of diversification was not found according to the scale used to measure the level of diversification (see table 7.3).

### **7.3. Relationship among Livelihood Assets, Diversification and Livelihood Outcomes**

The relationship between livelihood assets, livelihood diversification and livelihood outcomes was assessed using Pearson Correlation Coefficient. This section is divided into two sub-sections. The first sub-section presents the pattern of relationship between livelihood assets and livelihood diversification while the second sub-section is devoted to the pattern of relationship between livelihood assets, livelihood diversification and livelihood outcomes.

#### **7.3.1. Pattern of Relationship between Livelihood Assets and Diversification**

Regarding Simpson Index of Diversification, livelihood assets viz., the size of land holding and livestock had a significant positive effect on the level of livelihood diversification while gross crop area and crop diversification index had no significant effect on livelihood diversification. Household assets also had significant positive effect on the level of livelihood diversification while in the contrary, household savings and household debt had no significant effect on its diversification. The numbers of earners and standard deviation of adult education also had a significant positive effect on the level of livelihood diversification but not with the proportion of earners and mean years of adult education. This reveals that as education level deviates in the household, subsequently the level of livelihood diversification increases but not with the average years of adult education. Community participation and political civil affiliation also had significant positive effect on livelihood diversification but not with political participation (see table 7.4).

### **7.3.2. Relationship between Livelihood Assets, Diversification and Outcomes**

As regards annual household income, significant negative effects of gross crop area and crop diversification index could be observed but size of land holding and livestock had no significant effect. The significant negative effect shows income from farm activities was very low as compared to income from government employees in the sample villages. Conversely, physical capital and financial capital shows a significant positive effect on annual household income. The number of earners, mean years of adult education, and standard deviation of adult education also had a significant positive effect on annual household income while the proportion of earners had no significant effect on annual household income. Community participation and political civil affiliation also had significant positive effect but political participation had its significant negative effect on household annual income. On the other hand, household's level of diversification had no significant effect on their annual income. In the contrary, per capita household income, monthly household expenditure, and per capita household expenditure had all shows a significant positive effect on annual household income (see table 7.5).

The natural capital viz., size of land holding, gross cropped area and crop diversification index shows a significant negative effect on per capita household income. Conversely, household assets had no significant effect while household savings and household debt had significant positive effect on per capita household income. The proportion of earners and mean years of adult education also reveals a significant positive effect on per capita household income but in contrast to these, number of earners and standard deviation of adult education had no significant effect on per capita household income. Community participation and political participation had a significant negative effect on per capita household income but no significant effect on political civil affiliation. The level of diversification also had no significant effect on per capita household income. Annual

household income, monthly household expenditure, and per capita household expenditure, had all significant positive effect on per capita household income (see table 7.5).

As regards monthly household expenditure, the size of land holding, gross cropped area, and livestock had no significant effect while crop diversification index shows a significant negative effect. On the other hand, the physical capital and financial capital shows a significant positive effect on monthly household expenditure. The number of earners, mean years of adult education, and standard deviation of adult education also had a significant positive effect on monthly household expenditure but not with the proportion of earners. Similarly, community participation and political civil affiliation also shows a significant positive effect on monthly household expenditure but not significant in political participation. The level of diversification was not significantly correlated with monthly household expenditure. In terms of livelihood outcomes, annual household income, per capita household income and per capita household expenditure had all significant positive effects on the monthly household expenditure (see table 7.5).

Lastly, per capita household expenditure shows significant negative effects with the size of land holding, gross cropped area and crop diversification index except with livestock. Conversely, household assets, household savings, and household debt had a significant positive effect on the per capita household expenditure. The proportion of earners and mean years of adult education also show a significant positive effect on the per capita household expenditure but are not significant in the number of earners and standard deviation of adult education. Regarding social capital, political participation had a significant negative effect but not significant in community participation and political civil affiliation. The level of diversification also had no significant effect on the per capita household expenditure. The livelihood outcomes viz., annual household expenditure, per capita household income, and

monthly expenditure all show a significant positive effect on the per capita household expenditure (see table 7.5).

In this chapter, the living condition of the households was discussed by assessing the annual household income and household monthly expenditure. An attempt has been made to measure the level of livelihood diversification by using Simpson index of diversity. The pattern of relationship between livelihood assets, livelihood diversification and livelihood outcomes were also discussed. Keeping in mind of all the previous chapters, the next chapter summarises the findings of the study with the conclusion and suggestions for future research.

**Table 7.1 Pattern of Annual Household Income**

Sl. No	Source of Income	Livelihood Diversification				Total N = 131		't'
		Low n = 77		High n = 54		Mean	SD	
		Mean	SD	Mean	SD			
1	Government Service	29026 (39.3)	87134	88204 (56.9)	137210	53608 (50.0)	114044	3.00**
2	Cultivation	31455 (42.6)	16088	25519 (16.5)	27022	29008 (27.1)	21392	1.57
3	Skilled Labour	7429 (10.1)	19434	20056 (12.9)	33621	12634 (11.8)	26843	2.71**
4	Animal Husbandry	4312 (5.8)	8081	10528 (6.8)	21423	6874 (6.4)	15320	2.32*
5	Unskilled Labour	1662 (2.3)	4967	4667 (3.0)	10627	2901 (2.7)	7917	2.17*
6	Business	260 (0.4)	2279	5945 (3.8)	12288	2603 (2.4)	8514	3.97**
7	Annual Household Income	73766 (100)	79589	154917 (100)	124698	107218 (100)	107938	4.54**
	Simpson Index of Livelihood Diversification	0.201	0.229	0.329	0.191	0.253	0.223	3.37**
	Per capita Household Income	23122	49457	32600	27463	27029	41945	1.28

Source: Computed

\*\* P < 0.01

\* P < 0.05

**Table 7.2 Pattern of Monthly Household Expenditure**

Sl. No		Livelihood Diversification				Total N = 131		't'
		Low n = 77		High n = 54		Mean	SD	
		Mean	SD	Mean	SD			
1	Food	895 (29.6)	527	2117 (32.0)	863	1398 (31.1)	911	10.05**
2	Non-food	2123 (70.4)	2049	4498 (68.0)	3763	3102 (68.9)	3099	4.65**
3	Monthly Household Expenditure	3018 (100)	2437	6614 (100)	4100	4501 (100)	3672	6.28**
4	Per capita Household Expenditure	723	665	1446	821	1021	813	5.55**

Source: Computed

\*\* P < 0.01

\* P < 0.05

**Table 7.3 Level of Livelihood Diversification**

Sl. No	Level	Livelihood Diversification		Total N = 131
		Low n = 77	High n = 54	
1	Not Diversified (0.00 )	37 (48.1)	6 (11.1)	43 (32.8)
2	Low (0.01 -0.32)	16 (20.8)	17 (31.5)	33 (25.2)
3	Moderate (0.33-0.75)	24 (31.2)	31 (57.4)	55 (42.0)
	Total	77 (100)	54 (100)	131 (100)
Simpson Index of Livelihood Diversification		0.201 ± 0.229	0.329 ± 0.191	0.253 ± 0.223

Source: Computed

Figures in parentheses are percentages

**Table 7.4 Livelihood Assets and Livelihood Diversification: Correlation Matrix**

Sl. No	Variable	Simpson Index of Livelihood Diversification 'R'
<b>I</b>	<b>Natural Capital</b>	
1	Size of Land Holding	0.17*
2	Gross Cropped Area	0.11
3	Crop Diversification Index	-0.13
4	Livestock	0.34**
<b>II</b>	<b>Physical Capital</b>	
5	Household Assets	0.19*
<b>III</b>	<b>Financial Capital</b>	
6	Household Savings	0.11
7	Household Debt	-0.06
<b>IV</b>	<b>Human Capital</b>	
8	Proportion of Earners	0.10
9	Number of Earners	0.41**
10	Mean Years of Adult Education	0.01
11	SD of Adult Education	0.25**
<b>V</b>	<b>Social Capital</b>	
12	Community Participation	0.27**
13	Political Participation	0.11
14	Political Civil Affiliation	0.35**

Source: Computed \*\* P < 0.01

\* P < 0.05

**Table 7.5 Livelihood Assets, Livelihood Diversification and Livelihood Outcomes:  
Correlation Matrix**

Sl. No	Variable	Living Conditions			
		Annual Household Income	Per capita Household Income	Monthly Household Expenditure	Per capita Household Expenditure
<b>I</b>	<b>Natural Capital</b>				
1	Size of Land Holding	0.03	-0.23**	0.10	-0.17**
2	Gross Cropped Area	-0.38**	-0.44**	-0.16	-0.46**
3	Crop Diversification Index	-0.41**	-0.39**	-0.26**	-0.50**
4	Livestock	0.09	-0.01	0.10	0.04
<b>II</b>	<b>Physical Capital</b>				
5	Household Assets	0.49**	0.11	0.49**	0.29**
<b>III</b>	<b>Financial Capital</b>				
6	Household Savings	0.54**	0.29**	0.33**	0.25**
7	Household Debt	0.43**	0.31**	0.28**	0.36**
<b>IV</b>	<b>Human Capital</b>				
8	Proportion of Earners	-0.03	0.28**	-0.16	0.33**
9	Number of Earners	0.19*	-0.14	0.25**	-0.13
10	Mean Years of Adult Education	0.48**	0.43**	0.38**	0.33**
11	Standard Deviation of Adult Education	0.31**	-0.02	0.38**	0.09
<b>V</b>	<b>Social Capital</b>				
12	Community Participation	0.18*	-0.20**	0.43**	-0.02
	Political Participation	-0.41**	-0.51**	-0.12	-0.30**
13	Political Civil Affiliation	0.31**	-0.02	0.47**	0.16
<b>VII</b>	<b>Livelihood Strategies</b>				
14	Simpson Index of Livelihood Diversification	-0.01	-0.15	0.13	-0.06
<b>VIII</b>	<b>Livelihood Outcomes: Living Conditions</b>				
15	Annual Household Income	1	0.65**	0.69**	0.58**
16	Per capita Household Income	0.65**	1	0.25**	0.68**
17	Monthly Household Expenditure	0.69**	0.25**	1	0.62**
18	Per capita Household Expenditure	0.58**	0.68**	0.62**	1

Source: Computed \*\* P < 0.01

\* P < 0.05



## CHAPTER VIII

### CONCLUSION AND SUGGESTIONS

The present study intends to assess rural livelihood diversification from a Sustainable Livelihood Perspective in rural Mizoram. This chapter presented discussion on the results of data collected through quantitative and participatory methods. In the first section, the summary of the study is presented while the second section presents the conclusion. The third section highlights the implication of the study for policy, social work practice and scope for further research.

#### **8.1. Summary of Findings**

The findings of the present study are summarised into four sections. The first sub-section presents the vulnerability context and livelihood challenges of the sample villages. In the second sub-section, findings of the socio economic structural bases are discussed. The third sub-section deals with the pattern of livelihood assets of the sample households while the last sub-section is devoted to the pattern of livelihood diversification and living conditions.

##### **8.1.1. Rural Vulnerability Context and Livelihood Challenges**

Vulnerability refers to defencelessness, insecurity, and exposure to risk, shocks and stress and is not synonymous with poverty. The present study attempts to identify the vulnerability context of the sample villages by using participatory method of seasonality diagram. Seasonality diagram is a visual method which shows the distribution of seasonal varying phenomena (such as economic activities, resources, production activities, problems, illness/disease, migration, and natural events/phenomena) over time.

In the high diversified village, seasonality has a significant impact in their vulnerability. It has adverse effect like drought period, prevalence of epidemic diseases as well as landslides. These further bring problems for cultivators and businessmen in pursuing

their livelihood activities. There is also not enough labour in the village during preparation of land for cultivation and period of sowing and harvesting which increases their vulnerability. Household income and expenditure show a similar pattern which implies that household's saving will be less in the village. The expenditure was more during the period of children's admission to school and Christmas time.

In the low diversified village, seasonality also shows significant aspects in the village. Low rainfall is accompanied by dry season while heavy rainfall also brings landslide which further affects communication by means of roads, supply of basic necessities and rise in epidemic diseases. The income and expenditure also show a financial insecurity as income and expenditure shows a similar pattern which likely means there was no proper household saving in the household. The fall in supply of PDS is accompanied by the fall in food availability from other sources which results in food insecurity. Lastly, during rainy season the village is not accessible mostly a time as rainfall swamped most part of the road with the occurrence of landslide which further posed problems for the villagers regarding import and export of goods as well as problems in human transportation.

Rural people faced certain obstacles and constraints in pursuing their livelihood activities and which hinder their social and economic growth. As regards challenges in the sample villages, irregularity of income is the major challenges faced in overall. It was followed by low price of crops, poor health, lack of livelihood option, inadequate human labour, poor quality of agricultural land, geographical location of village, long distance of agricultural land, educational expenditure for children, consumption of crops by animals, and poor conditions of road. The challenges regarding irregularity of income and low prices of goods show a similar pattern in both the low and high diversified villages.

Coping strategies refer to a set of learned behavioural responses that are effective in diminishing levels of stress through the neutralization of a potentially harmful or dangerous

situation. On the whole, majority of them states that they work hard to cope with their livelihood challenges. It was followed by praying, economizing, borrowing, withdrawals from savings, assistance by relatives/ others, extra labour, and plans for new livelihood activities. Praying comprises the majority in the high diversified village while work hard comprises the majority in the low diversified village. It was also observed that the numbers of respondents were lower in the low diversified village than the high diversified village.

### **8.1.2. Structural Bases of Rural Households**

The demographic characteristics of the respondents and members of the household viz., gender, age group, marital status and educational status were discussed in this subsection. Among the respondents, it was found that males were a little more than females and the proportion of females was higher in the high diversified village. As regard to age, majority of the respondents belong to middle aged group (36-59) and the pattern of distribution also shows the same sequence in both the low and high diversified villages. As regard to educational status, majority of the respondents attended till middle school and only a few were illiterates. The marital status of the respondents shows that most of them were married and the pattern of distribution was also similar in both low and high diversified villages.

Among the members of the sample households, the study revealed that females outnumber males in both the low and high diversified villages. As regard to age, majority belongs to youth aged group (18-35) and the pattern of distribution shows inter-village variation between the low and high diversified villages. Since the larger number of the household members belongs to youth and children aged groups, majority of them were unmarried which also shows a similar pattern of distribution in both the villages. As regards adult educational status, majority of them attended till middle school and the least comprises of illiterates.

In this study, to present the structural bases of family indicators like type, size, form and gender of head are discussed. As regards to type of family, a predominantly majority of the sample households were of nuclear family where the overall pattern of distribution was similar in both the low and high diversified villages. The size of family revealed that majority of the households were of medium (4-6 members) size family followed by small (1-3 members) size family, and large (7 and above) size family. Regarding form of family, it was found that most of the sample households lived in stable families where the remaining very few lived in broken families. It was also found that more than four fifth of the households were male headed while the remaining few comprises of female headed households.

The social structural characteristics of the sample households were presented by discussing the sub-tribe and denomination. In the study, sub-tribe viz., Lusei, Ralte, Hmar, Lai and Paihte were found among the sample households where majority of them belongs to Lusei followed by Hmar, Ralte, Lai, and Paihte. All the sample households follow Christianity as their religion which is divided into different denominations. The study found that there is a diverse denomination among the sample households where Presbyterian constitutes mostly half of the households. The other denomination includes Salvation Army, Seventh Day Adventist, Roman Catholic, Baptist, UPC- NEI, UPC-M and local denomination.

Under the economic structural bases of the sample households, dependency, primary occupation, secondary occupation, socio-economic status and type of cultivators are discussed. The first economic structural variable shows that more than half of the members of the sample households were dependents where the dependency ratio revealed that for every earner there was one dependent. Overall, majority of the earners members were predominantly cultivators followed by government service, animal husbandry, skilled labour, business, and unskilled labour. Regarding secondary occupation, 92 percent of the earners

members have no secondary source of income while the remaining comprises of animal husbandry, unskilled labour, cultivators, business, and skilled labour. However, both primary and secondary occupation demonstrated a more diversified occupation in the high diversified village than the low diversified village. With regard to socio-economic status, majority of the sample households registered under non-poor class followed by poor class and very poor class. It was found that households belonging to non-poor class were higher in high diversified village than low diversified village. The type of cultivators shows that semi-settled cultivators were highest followed by shifting cultivators and non-cultivators. However, there are no settled cultivators as Land Settlement Certificate (LSC) is not available in both the sample villages and there were much more households practicing shifting cultivation in the low diversified village.

### **8.1.3. Patterns of Rural Livelihood Assets**

Livelihood assets serve as the basis for people's survival, sustenance as well as development which includes different forms of capital such as human capital, natural capital, physical capital, financial capital, and social capital. The sustainable livelihood framework emphasizes a focus on people, their assets and activities, rather than on sectors and their performance which is the conventional point of entry to policy. It yields generalized statements of rural livelihoods particularly of the poor which can be taken up for evaluating different livelihood projects and reduction of rural poverty (see Ellis, 1999).

In the present study, proportion of earners, number of earners and household mean years of adult education were taken as indicators for the pattern of human capital. The first indicator of proportion of earners shows that there was no significant difference between the low and high diversified villages where the overall mean revealed that half of the members of the household were earners. Number of earners as the second indicator shows a significant difference between the two villages where it was significantly higher in the high diversified

village. The third indicator of mean years of adult education worked out at 2.7 years per household with no significant difference between the low and high diversified villages.

Regarding natural capital, the present study used land and livestock as the indicator of natural assets. In the sample villages, the mean size of land holdings was 4 Acres where significant difference was observed between the villages. The overall pattern of distribution was similar in both the villages and the size of land holdings was also larger in the high diversified village. As regards the mean value of livestock owned by the sample households, significant difference was not observed between the villages. The households of high diversified village had owned the higher value of livestock than the low diversified village.

Physical capital is the third indicator of livelihood assets which includes house value, house plot, four wheeler, two wheeler, television, mobile phone, washing machine, LPG connection, sewing machine, iron box, and transistor/ radio for the present study. Overall, significant inter-village variation was observed between the low and high diversified villages. House value had the highest value of physical assets possessed in both the villages followed by value of house plot.

The fourth indicator, financial capital, denotes the financial resources that are owned by the household for consumption and productive purposes. The present study assessed the pattern of household saving and household debt to understand the pattern of financial capital of the household. The household saving shows a significant difference where it was higher in the high diversified village than the low diversified village. Similarly, household debt also shows inter-village variation where it was higher in the more diversified village than the low diversified village. This inferred that households having more savings do not necessarily have lower debt than household with fewer saving.

In this study, social capital as the last indicator was assessed in terms of household members participation in the community and political as well as civil and political affiliation.

The household's community participation was significantly higher in the high diversified village than the low diversified village. The overall mean demonstrated that majority of the household's member participated sometimes in the Community Based Organisations. As regards political participation, inter-village variation could not be observed. The mean calculated for household rate of votes suggested that household's members in both the villages always voted in the general election, assembly and village council election. The third dimension of affiliation to civil and political organisation shows a significant difference which was higher in the high diversified village than the low diversified village. The overall mean calculated suggest that majority of the household members were sympathizer of civil and political organisation. However, the pattern of distribution of the affiliation to civil and political organisation was also similar in both the high and low diversified villages.

#### **8.1.4. Pattern of Livelihood Diversification and Living Conditions**

The patterns of living conditions are assessed in terms of the annual household income and monthly household expenditure. As regards to annual household income, the sums of all income sources were taken which inferred that the average annual household income was Rs. 107218 on the whole. The overall pattern of distribution of the income sources shows a variation between the low and high diversified villages where income from government service was highest in the high diversified village while income from cultivation was highest in the low diversified village. However, the mean annual household income was significantly higher in the high diversified village. The monthly household expenditure revealed that the average monthly household expenditure is Rs. 4501 which is significantly higher in the high diversified village than the low diversified village. The share of non-food expenditure was higher than the share of food expenditure which also follows a similar pattern of distribution in both the villages.

In order to study livelihood diversification, it is a vital thing to measure the level of diversification which is conceptualized as the extent of diversification to which households derived their income from different source of livelihood activities. The present study uses Simpson index of diversity as its measurement which revealed that majority of the sample households were moderately diversified followed by not diversified and low diversified. However, high level of diversification was not found according to the scale used to measure the level of diversification.

The pattern of relationship between livelihood assets, livelihood diversification and livelihood outcomes was assessed using Pearson Correlation Coefficient. The size of land holding and livestock had significant positive effect on the level of livelihood diversification while gross crop area and crop diversification index had no significant effect on livelihood diversification. A significant positive effect was also observed between household assets and livelihood diversification while in the contrary, household savings and household debt had no significant effect on its diversification. The numbers of earners and standard deviation of adult education also had a significant positive effect on the level of livelihood diversification but not in the proportion of earners and mean years of adult education. Community participation and political civil affiliation also had significant positive effects but not with political participation.

As regards annual household income, significant positive effect was observed with gross crop area and crop diversification index but not with the size of land holding and livestock. The significant negative effect shows income from farm activities was very low as compared to income from government employees in the sample villages. Physical capital and financial capital shows a significant positive effect on annual household income. All the indicators of human capital except proportion of earners also had a significant positive effect on annual household income. Community participation and political civil affiliation also had



significant positive effect but political participation had its significant negative effect. Per capita household income, monthly household expenditure, and per capita household expenditure all show a significant positive effect but no significant effect was observed in household level of diversification.

In terms of per capita household income, significant negative effect was found with the size of land holding, gross cropped area and crop diversification index. Livestock and household assets had no significant effect while financial capital shows a significant positive effect on per capita household income. The proportion of earners and mean years of adult education also shows a significant positive effect but conversely there was no significant effect in the number of earners and standard deviation of adult education. A significant negative effect was observed between per capita household income and community participation as well as political participation but no significant effect on political civil affiliation. The level of diversification also had no significant effect on per capita household income. The level of diversification also had no significant effect on per capita household income while annual household income, monthly household expenditure, and per capita household expenditure, had all significant positive effect on per capita household income.

Regarding monthly household expenditure, the size of land holding, gross cropped area, and livestock had no significant effect while crop diversification index shows a significant negative effect. Physical capital and financial capital show a significant positive effect. All the indicators of human capital except proportion of earners also had a significant positive effect. Similarly, community participation and political civil affiliation also show a significant positive effect but not significant in political participation. Annual household income, per capita household income and per capita household expenditure had all significant positive effects on the monthly household expenditure but not with Simpson index of livelihood diversification.

The natural capital viz., the size of land holding, gross cropped area and crop diversification index shows significant negative effects with per capita household expenditure but not with livestock. Physical capital and financial capital had a significant positive effect with the per capita household expenditure. The proportion of earners and mean years of adult education also shows a significant positive effect on the per capita household expenditure but no significant effect with the number of earners and standard deviation of adult education as well as with Simpson index of livelihood diversification. Lastly, annual household expenditure, per capita household income, and monthly expenditure had significant positive effect on the per capita household expenditure.

## **8.2. Conclusion**

Livelihood diversification as a strategy for promoting rural development or poverty eradication is yet to take off to be successful although the government of Mizoram is striving hard for it. The state government has implemented New Land Use Policy (NLUP) since January 14th, 2011 to promote livelihood diversification which focuses the jhumia families thereby carrying out the project by different line departments. Besides this, different organisations have been undertaking several projects to promote livelihood in the state. In the present study, the sustainable livelihood approach was used to understand the pattern of livelihood context in rural Mizoram. The study probed into the level of livelihood diversification in rural Mizoram of two selected villages and explored the patterns of livelihood assets as well as the determinants and impact of diversification of livelihood.

In the state, in spite the government put efforts; most of the households could not be diversified in their livelihood activities. Diversification of livelihood has been effected by employment in government sector due to higher income. Neither industrialization nor developmental service sector has contributed to livelihood diversification. Agricultural development through crop diversification and on farm diversification has not taken place. So,

even in the more diversified village, we could observe that most of the households have only a moderate level of livelihood diversification. As increase in livelihood assets has a significant effect on livelihood diversification along with the living conditions, immediate concern of the government policy needs to focus on promotion of rural development by increasing the rural household access to human, natural, physical, financial, and social capital.

The results of Simpson index of diversity used to determine the level of livelihood diversification showed that the livelihoods in the sample villages were moderately diversified followed by not diversified and low diversified. Comparing the two villages, the high diversified village has greater human, natural, physical, financial and human capital than the low diversified village. Further, household income and expenditure was also higher in this village and was less vulnerable than the low diversified village. Moreover, the results showed that household living conditions and mean years of adult education were also higher in the high diversified village than the low diversified village.

Overall in both the villages, the majority of households depend on cultivation as their primary occupation but annual household income was highest from the source of government service. This demonstrated that income from cultivation is very low in rural areas. The main challenges faced by households in terms of their livelihood were irregularity of income and poor health. With this, the main coping strategy adopted by households was working hard followed by praying and others. The seasonality diagram of the sample villages also shows that seasonality has adverse effects on the rural people which are accompanied by drought period, prevalence of epidemic diseases, landslides, and problems regarding import and export of goods as well human transportation.

The present study has drawn its first hypothesis from the Sustainable Livelihood Framework (see Scoones, 1998; Chambers and Conway, 1992) and earlier studies which used

different capitals to determine the factors of livelihood diversification (see Okhere & Shittu 2013; Khatun & Roy 2012; Datta & Singh, 2011). It reads that ‘the volume of livelihood assets viz., human, natural, physical, financial, and social capital endowment of household is directly related to its level of livelihood diversification’. According to the results of correlational analysis, among the different forms of livelihood assets endowed by households, natural capital viz., size of land holding and livestock had contributed positively to household level of livelihood diversification while gross crop area and crop diversification index had no significant effect. The physical capital also had significant positive effect on household level of livelihood diversification while financial capital had no significant relation. Further, the human capital viz., number of earners and standard deviation of adult education had its significant positive effect to household level of livelihood diversification but in contrary, proportion of earners and mean years of adult education had no significant effect. Similarly, social capital viz., community participation and political civil affiliation had significant positive effect on the livelihood diversification while political participation had no significant effect. As most of the livelihood assets have significant positive effect on livelihood diversification, the first hypothesis that ‘the volume of livelihood assets viz., human, natural, physical, financial, and social capital endowment of household is directly related to its level of livelihood diversification’ has been validated.

The second hypothesis was based inspiration of earlier studies (see see Israr et. al. 2014; Babatunde & Quaim, 2009; Sujithkumar, 2007). It reads that ‘level of livelihood diversification of household is positively related to its household income and expenditure’. As the relationship between livelihood diversification of household on the one hand and household income and expenditure on the other hand, the second hypothesis has been rejected. Thus, livelihood diversification does not have any significant effect on living conditions, poverty or rural development in Mizoram.

### **8.3. Suggestions**

The present study is a comparative assessment of two villages which aims at offering suggestion for policy makers, planners, voluntary organisations as well as social workers at multilevel concerned with livelihood promotion. Therefore, in this section suggestions for promotion of rural livelihood diversification and scope for future research are presented in two subsections.

#### **8.3.1. Promotion of Rural Livelihood Diversification**

Livelihood diversification has been recognized as a key strategy for survival and promotion of sustainable livelihood in rural areas. The rural households diversify by adopting a range of activities and enhancing their incomes which help them to cope with and recover from stress and shocks and reduce their vulnerability. Further Sailo and Zaitinvawra in their studies on livelihood in Mizoram also mentioned that livelihood diversification is an important coping mechanism for household survival (see Sailo, 2014 and Zaitinvawra, 2014). So, the promotion of livelihood diversification has become an important strategy for enhancing rural livelihoods as well as reducing rural poverty though it has to emerge as a key contributor to development at household level. In the light of these, the following suggestions are put forward to promote livelihood diversification in rural Mizoram:

##### **1. Effective Implementation of livelihood promotion schemes**

Although it was evident that the state flagship program (NLUP) has supported the households in diversifying their livelihood and coping with their livelihood problems, a more effective criteria for selection of beneficiaries, trade selection, monitoring and evaluation would enhance the effectiveness of this program in promoting sustainable livelihoods.

##### **2. Promoting farm diversification**

The study inferred that agriculture is the mainstay of rural economy. It was found that the crops produced were mostly of the same kind that leads to problems in marketing. Hence,

crop diversification is necessary to ensure availability of market and livelihood sustainability. Further, high value crops could be cultivated based on market availability and crop suitability in the particular area. However, the average annual household income from cultivation worked out only at Rs. 29008 which was only Rs. 2417 per month. Beside this, livestock also contributed positively to household level of diversification. Hence, promoting farm diversification is necessary for rural livelihood promotion.

### **3. Promotion of Human Capital**

It was observed that most of the members of sample households depend only on one income source due to lack of skills and livelihood opportunities. Improving the quality of education and skill development trainings could enhance the livelihood prospects and their ability to diversify livelihood options. However, many studies have considered that improving human capital is one of the effective means of diversifying rural livelihood.

### **4. Promoting Social capital for development**

The results of the study revealed that social capital in terms of community participation and political civil affiliation has contributed positively to household level of livelihood diversification. The importance of social capital in socio-economic development is still neglected in Mizo society. Civil society organisations, social workers and government organisations need to emphasis on use of social capital for reducing poverty and unemployment as well as rural vulnerability. However, forming cooperative societies would also become very effective in promoting livelihood diversification.

### **5. Better infrastructural Facilities**

It was observed that infrastructural facilities were inadequate in terms of road, market, electrification, storage facilities, and water supply which hold back the development of their livelihood activities. Therefore, infrastructural facilities must be improved to mitigate the problems of rural livelihoods and ensure livelihood diversification.

## **6. Promoting Health Care Facilities**

The study found that most of the people have health problems which hindered them to pursue their livelihood activities and generate other income sources. There is a need to revamp the health care system which would enable them to recuperate from their health problems and engage them to different livelihood activities. .

## **7. Promotion of Financial Inclusion**

The study revealed that irregularity of income is the major challenge faced by rural households and most of the households do not have savings. So, there is a need to revamp the financial system in the rural areas. This could be done by choosing appropriate micro- credit provision which would provide loans and encourage household savings. There is also a need to form organisations that would ensure its sustainability and inclusiveness with proper monitoring and evaluation mechanism.

## **8. Promotion of Livelihood by CBOs**

In Mizo society, CBOs like the YMA and MHIP have great influence in the society. The involvement of these organisations in undertaking livelihood diversification promotion at grass roots level would be effective in the state.

### **8.3.2. Suggestion for Further Research**

Keeping in mind of the present study, some research suggestions are put forward:

1. The flagship programme of Mizoram i.e. New Land Use Policy (NLUP) can be taken up for study. Its role in promoting livelihood diversification may be explored.
2. Although the study did not identify a high level of rural livelihood diversification it is still considered as an important strategy for rural survival in many developing countries, a study focusing on the motivations and constraints of rural livelihood could be undertaken.
3. As income from agriculture is still very low in rural Mizoram even after continuing effort, the study on rural agricultural practices and market linkages can be taken up for study.