

“Agriculture and Economic Development (A Case Study of Nong-Lwai Village)”.

Group Project

SUBMITTED FOR THE PARTIAL FULLFILLMENT
OF THE BACHELOR DEGREE OF ARTS IN GEOGRAPHY

Submitted By

Roll No

Name of the Students

A2013879

Sevenson Syiemiong

A2013889

Jubalisha Nongsieij

A2013886

Tebaries Nongphud

A2013888

Warristewdor Nongstang

Department of Geography


Nongstoin College, Nongstoin


CERTIFICATE



This is to certify that the students of Sixth Semester, Department of Geography, Nongstoin College, Nongstoin for the session 2022-23 has undergone a Group Project title on "Agriculture and Economic Development;(A Case Study of Nong-Lwai Village)". Of Nongstoin Block of West Khasi Hills District, Meghalaya under the supervision of the teachers of the Department of Geography.

This group project is an original work of the students and it has not been published in any form whatsoever. Hence, this report may be placed for evaluation and consideration.


(Shri D.Dkhar)
Supervisor


(Shri P.Dkhar)
Head of Department



ACKNOWLEDGEMENT

We would like to express our gratitude to our SUPERVISOR Shri Doni Bakor Dkhar, for his guidance and constant endeavour for which we could able to complete our project.

We would like to express our sincere gratitude and thanks to the Headman and all the people of Nong-Lwai village of Nongstoin Block of West khasi hills District of Meghalaya State for their support and Cooperation to conduct our project work including data collection and also seeking information relating to our project.

We also sincerely gratitude to our principal for permitting to us to visit Nong-Lwai village and at the same time providing financial assistance for undertaking this group project as per the partial fulfilment of the university curriculum.

Last but not the least; we would also like to thank God, the Almighty for his love and constant blessing that He showered upon us.

Dated: 05-05-2023

Place: Nongstoin College

CONTENTS



Page No

CONTENTS

Certificate

Acknowledgement

List of Map

List of Tables

Location Map

CHAPTER- 1: INTRODUCTION

1-6

- 1.1: Survey of Literature
- 1.2 Statement of Problem
- 1.3: Objective of the study
- 1.4: Data Based and Methodology
- 1.5: Data Based
- 1.6: Sampling Design
- 1.7 Sampling Size
- 1.8: Significance of the Study

CHAPTER-II:-BACKGROUND OF THE STUDY AREA

7-9

- 2.1: Geographical Setting
- 2.2 :Location of the study Area
- 2.3: Climate
- 2.4: Natural Vegetation
- 2.5: Socio-Economic Profile
- 2.6: Agricultural Scenario of NongLwai Village

CHAPTER- III: ANALYSIS OF AGRICUTURE AND ECONOMIC DEVELOPMENT.

10-15

- 3.1: Introduction
- 3.2: General Socio-Economic Structure of Nong-Lwai Village
- 3.3 Occupational Structure of Nong-Lwai Village

CHAPTER- IV: SUMMARY OF FINDINGS, SUGGESTIONS AND CONCLUSION

16-17

REFERENCES

18



List of Tables

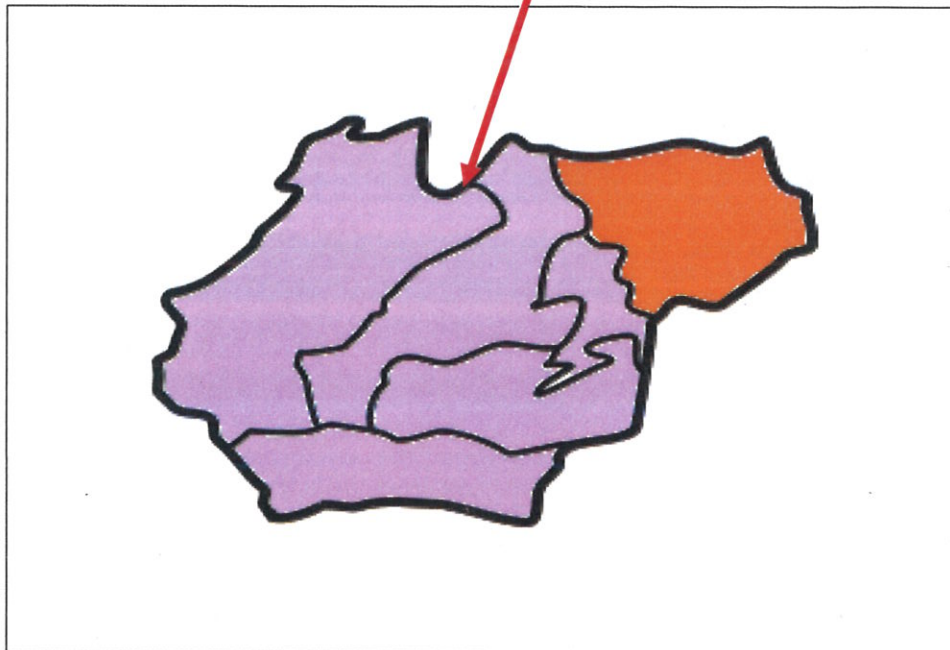
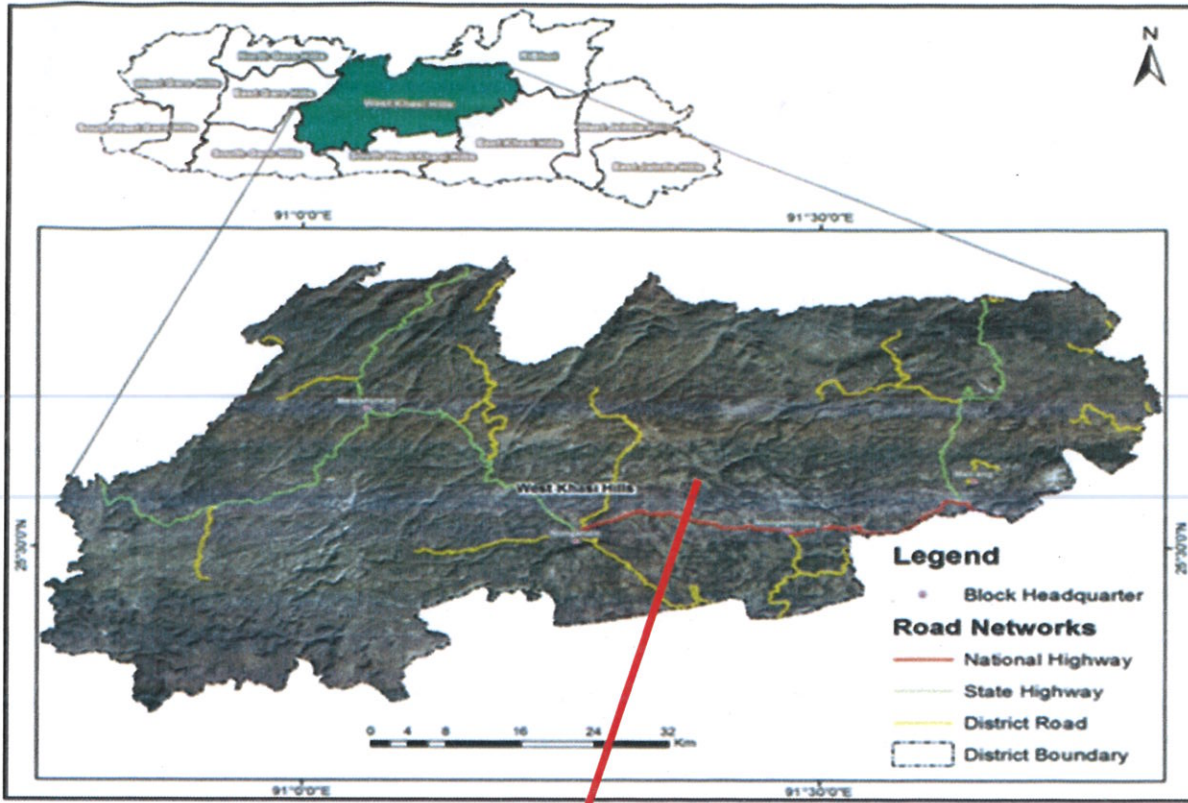
Table. No	Titles	Page. No
1.	Average Rainfall (mm) of Nongstoin	8
2.	Occupational Structure of Nong-Lwai Village	11
3.	Decision making process	12
4.	Division of Labour	13
5.	Reasons for taking up agricultural activities	14
6.	Animal husbandry and Livestock Rearing	14



List of Figure

Figure.No	Titles
1	Nong-Lwai village
2	Agricultural Area
3	Interaction with the villager

LOCATION MAP OF THE STUDY AREA



Nong-Lwai Village



CHAPTER I- INTRODUCTION

Introduction:

Agriculture is the main occupation of the people of Meghalaya. About 83% of the total population of the State depends on agriculture for their livelihood. However, agricultural land is accounted as only 48% of the total geographical area of the State. The state offers scope for cultivation of a wide variety of agricultural crops because of highly diversified topography, altitude and climatic conditions. Rice and Maize are the major food crops. Important fruits grown are Orange, Pineapple, Lemon, Guava, Jack fruit and Bananas. Potato, Jute, Cotton, Areca nut, Ginger, Turmeric, Betel leaf, Betel Nut and Black Pepper are the chief commercial crops. Jhum or the Shifting cultivation and Terrace Cultivation are predominant in the State.

The ethnic communities of Meghalaya follow two major types of agricultural practices such as shifting cultivation or slash and burn agriculture and terrace or burn cultivation. Shifting cultivation is practiced in and around forests and terrace cropping is practiced in valleys and foothills and inside plantation forests.

These traditional systems of cultivation practices are well adapted to the environmental are well adapted to the environmental conditions and the traditional knowledge of indigenous communities growing cereals and other agricultural crops have enabled them to maintain an ecological balance. Enormous increases in human population have led to massive coverage of land under shifting cultivation. Besides shifting cultivation and bun agriculture, there are some other potential indigenous farming systems in northeast India developed by the tribal farmers using their ingenuity and skill. These techniques and systems have a sustainable agriculture base and are practiced since centuries in some isolated pockets of Meghalaya and other north-eastern states. Thus these farming systems make use of locally available resources and indigenous knowledge for their success.

Meghalaya produces a variety of agricultural crops such as food grains, commercial crops, horticulture crops etc. of the total agricultural land in Meghalaya, 62% is used for food grains, 25% for cash crops, 9% for horticultural crops and the rest 4% is used for raising miscellaneous crops. Rice is the most important food crop occupies about 44% of the total agricultural land. About 40% of rice is cultivated from the *Jhum* fields. Sung valley of the Jaintia Hills is considered as the fertile paddy fields of Meghalaya. Meghalaya produces three cropping seasons for rice, autumn rice, winter rice and spring rice. Winter cropping covers 67% of the total production. Maize is the next important agricultural food crop of Meghalaya. It is grown in about 8% of the cropped area and cultivated mainly in the plains of Garo hills, Mairang, Mawphlang in West Khasi Hills and Laskein block of Jaintia hills. Wheat is confined in some pocketsof the lower elevation of Garo hills of Meghalaya. Pulses are less important in the agricultural economy of the state. Pulses occupy 1.3% of the cropped

area and are confined only in some pockets of remote areas of the *Garo* hills. Potato, the most important commercial agricultural crop covers about 7% of the total agricultural area of the State. It was introduced in *Khasi* hills by David Scott in the early part of the 19th century and grown mainly in the terrace fields of the high altitudes of *Khasi* hills. Oil seeds are grown mostly in the plain areas of the *Jhum* fields of *Garo* hills. Among the Oil seeds, mustard, rape, castor, sesamum and soyabean are grown. Fibre crops, cotton and jute are grown in the *Garo* hills. Ginger is mainly grown in *Jaintia* hills and some pockets of *Khasi* hills. Sugar cane is confined only in plain areas of the state and grown in *Jhum*fields.

The soil and climatic conditions are suitable for the production of horticulture crops. Pineapple, litchi, guava, mango, banana and jackfruit are grown at low altitude and orange, plums, peaches and pears are the major horticultural crops of high altitude.

Tapioca is one of the subsidiary food crops and is grown in western part of *Khasi* hills. Turmeric is famous for its quality and has a great demand. It is widely grown in the *Jhum and* Terracefield of *Jaintia* hills.

1.1 Survey of literature

The scientific inquiries based on systematic thinking and factual observations are a sound base of knowledge for research work to be undertaken. A critical and thorough insight of studies already conducted relating to topic of the problem, therefore, becomes imperative for conceptual clarity and methodological improvement in the research work to be conducted.

Salika (1999) while investigating the role of women in agriculture revealed that the proportion of females playing a major or equal role was highest in the selection of crop variety while in financial matters the involvement of women was relatively low.

Studies also shows that there is overwhelming economic contribution of women in productive as well as domestic activities especially in the hill region (Singh and Garcia, 1999). women contribution to the farm work as high as between 60 and 90% of the total farm task performed (Amali, 1998; Auta et al., 2000).Agricultural activities such as seeding, transplanting, weeding, fertilizer application, plant protection, harvesting, processing, storage, etc. were exclusively carried out by women only. Thus, they directly or indirectly influenced the course of agriculture by participating all above agricultural activities (Amali, 1998; Auta et al., 2000; Singh et al., 2004).

The study of women and work participation among the tribal of Northeast India is vital to understand as the culture, the condition of the environment differs from region to region. Hutton (1922) reveals how among the Lothal's women work side by side with men. Perry (1932) relates that Lothal's, women must do a great deal of work to perform. However, among them, overall work whether in the field or in the house are fairly divided between the sexes.

Dutta (1976) also mention about the equitable division of labour between the sexes among the tribe of Arunachal Pradesh. Nengnong (2011) further highlighted that women's activities even though

are limited in agricultural activities, extended beyond to non-farms activities where they also have to devote much of their time to family and household work.

Tuleja (2000) studied the contribution of female agricultural workers in family income and their status in Haryana. The study revealed that female agricultural workers contributed significantly in household income as all farms and the earnings were found most crucial for the landless and small farm households.

A study undertaken in thirteen villages of Bharmaur tehsil by Chauhan (2000) indicated women shared in farm and off - farm income to the extent of 27 and 12 per cent, respectively, giving an overall contribution of 24 per cent in the household income excluding their contribution as home maker. This pointed out to the fact that women contribution and role in agriculture even though seem insignificant in statistical values are worthy of giving fair recognition.

Apart from agriculture, livestock play an important role in supporting women and in improving their financial situation and women are heavily engaged in the sector. An estimated two-third of poor livestock keepers totalling approximately 400 million people are women (Thorton et.al, 2002)

According to agricultural development economics division the food and agriculture organisation of the United Nation (FAO), the time use studies present the precise breakdown of time use by farming activity. Five of the studies covering some cases have information on five common categories-Land operation fertilizer application, needing harvesting and storage. All studies with the exception of Bangladesh (where, for rice, women's time is nearly entirely spent on post harvesting activities) found needing to be predominantly female activities, followed by harvesting and fertilizers application. Women are typically involved in all other activities but did not provide a majority of labour; Women overwhelmingly provide the greatest proportion of household time spent on food processing and preparation. If these aspect of food preparation are include, Women's labour share could well exceed 60% in many African countries.

Women make up nearly 50 per cent of the world's population, comprise 33 per cent of the official labour force, perform about 70 per cent of working hours whilst receiving only 10 per cent of world's income and own even less than one per cent of world's property. Due to these statistical hard facts the relevance of women-based study has been felt inevitable today. Their importance as a workforce has been either neglected or misrepresented especially in developing nations. Many activities of women in economically gainful work are not given proper recognition both in terms of quantitative as well as qualitative aspects. As a matter of fact very little of their participation and assistance in agricultural and non-agricultural activities linked to production are evaluated (Chermont, 1987).

There has been emerging trends in relation to women participation in agriculture. Women are no longer stuck in the kitchen or doing just household chores or petty farm operations. Education and employment had helped to change the role performance, decision making and behaviour patterns, for

egalitarian relations. With education, the number of job-seekers among women tends to increase considerably and at a rate much faster than among their male counterparts (Alagh N.Sharma and Seema Singh, 1993).

1.2 Statement of problem

In the context of globalization, market economy and changing demographic situation, one of the main focuses is on agricultural development and its contribution to rural household economy. Majority of the people (79%) are living in small remote villages, where more than 90 percent of population are depending on agriculture for their livelihood. Due to the remoteness of the villages, households are forced to rely on their own agricultural production or on the locally-produced crops to meet their food requirements and improve household economy.

Agriculture is one of the biggest unorganised sectors where woman mostly take part in the activity. About 75% of the Indian female population is found in the rural families who belong to the small marginal farmer and landless agricultural labourers(census of India 2001) though woman primary activity is indulging in domestic work, greater emphasis is laid on women earning in the form of cash by working outside the four walls. In India, a significant portion of the women is below the poverty line (B.P.L). The fact is that labour force participation will increase with poverty, a large portion of rural women are under the pressure to participate in the labour force.

Women in rural households particularly the tribal women of Meghalaya have significant contribution to the economic development of the family and the society, even though they are at the low level of skills. Participation of women in agricultural activity constitutes to be one of the most important facts. Agriculture in the tribal economy being a family activity, therefore participation of all family members including the womenfolk is very important to provide free labour force to the family. In the hilly tribal areas of Meghalaya agricultural activity differs from region to region depending on the environment, the condition of the topography and ethnic variation.

In this region, education has fairly impact the concentration of women in agricultural sector, with a large percentage option out of the arduous task of farm operations. Even though with these demographic changes prevalent in most areas of Meghalaya, it is felt that there is still a need to identify the role and contribution of women in agricultural operations and give them due recognition of their contributions.

1.3 Objectives of the study

The present studies represent the following objectives;

1. To study and examine the division of labour as defined by economic, social and cultural parameters
2. To evaluate the distribution of workers as define by the categories
3. To understand how division of work assign to them on daily basis or on seasonal basis.

1.4 DATA BASED AND METHODOLOGY

The study is not an easy to produce without data and methods, therefore it involves lots of search for relevant document from textbooks, journal, magazines, statistical data, toposheet and lots of information that could be gathered from various agencies, which include government and non-government, traditional and even resource persons from the place will be taken for study.

The study as far as methodology is concern it is divide in to three phases:

- A. PRE-FIELD WORK-The data extracted from top sheets, statistical record and they are prepared in the form of relief map, drainage, temperature and rainfall graph etc. Students with the supervision of the teachers do this work.
- B. FIELD WORK PHASE- In the study area, collection of data, field observation, making a comparative study of the topography, soil, climatic socio-economic, cultural and demographic aspect such as population, occupation and agricultural practices of women are recorded and studied systematically. This work will be done by students, teachers along with the guidance of the informants from the study area.
- C. POST FIELD WORK- Using all data collected from maps and those from field study especially the agricultural pattern of women. The work participation of women and the activities are present in the study.

1.5 Data based

The required data for the present study is generated as follows:

1. Primary data- is collected directly from the field through interviewer schedule from households.
2. Secondary data is generated from District statistical handbook, 2015 of west khasi hills, journals, papers, and relevant information from government department publications.

1.6 Sampling design

Simple random sampling is employed for generating the required amount of data pertaining to the subject and to meets the requirement of the desired objectives.

1.7 Sample size:

For the current study a sample size of 54 households have been taken into consideration.

1.8 Significance of the study

This study will be helpful to ascertain the women's effective role in agriculture and related activities. The study will also help to identify the changing characteristics of agriculture in a developing rural economy. The time spending behaviour of rural women would enable extension workers to plan effective programmes for greater involvement of women to earn more income. The results of the study can be used in planning need based programmes to provide better opportunities to

farm women, specifically to tribal planners and policy makers and to those who deal with problems of women and agricultural development at village level.



CHAPTER-II

BACKGROUND OF THE STUDY AREA

2.1 Geographical Setting:

West Khasi Hills District lies between 25 degrees 10' and 25 degrees 51' N latitude and between 90 degrees 44' and 91 degrees 49' E longitude with a total geographical area of 3911 sq.km which is about 17% of the total area of the state. It is bounded on the north-west by Kamrup district of Assam, on the East by Eastern West Khasi Hills on the south by South West Khasi Hills and on the West by East Garo Hills and South Garo Hills District. Nongstoin is the district headquarters which covers an area of 76sqkm. The main occupation of the population in the district is agriculture.

2.2. Location of the study area:

The Nong-Lwai Village is located in Nongstoin C&RD Block, West Khasi Hills district, Meghalaya. The project area is located at a distance of about 10 kilometres from Nongstoin, the District Headquarter of West Khasi Hills district. The geographical location is between 25.509632° latitude and 91.341651° longitude. The area is located in the central part of West Khasi hills with general altitude of 890 to 1390 m Above Mean Sea level and forms part of the central upland zone of the Meghalaya plateau. This portion of the plateau consists of rolling uplands.

2.3. Climate:

The climate in the project area is humid subtropical which is directly influenced by the South west Monsoon originally from Bay of Bengal and Arabian Sea. The whole year can be divided into four seasons- summer, Monsoon (rainy), autumn and winter. The summer season extended from the last part of March to Mid May, is characterized by relatively high temperature, occasionally thunder storm and high wind velocity. The rainy season commence with the onset of south west monsoon in April/May and last up to October. The rainy season is followed by short autumn from Mid October to November with sharp declined of temperature then the winter season start which extends to the beginning of March. This is the coldest season of the year where winter is severe. The average rainfall in this area is about 3608 mm annually.

The climate of the district is mildly tropical in the northern and southern foothills, while in the central upland zone, the climate is temperate and places at medium altitude in the northern, western and southern parts of the district, experience sub-tropical climate. The

district is influenced by the South- West monsoon and rainfall is assured during summer, but differs greatly in intensity from area to area within the district. The South-West monsoon normally sets in the second week of June and extends up to second week of October. The district receives some share of rain from North-East monsoon from the third week of October till first week of December.

Table 1 :Average Rainfall (mm) of Nongstoin

	Jan	Feb	March	April	May	June	Total
Nongstoin	15.4	19.5	110.7	245.2	355.5	707.9	3608.06
	July	Aug	Sep	Oct	Nov	Dec	
	985.8	542.6	361.3	224.6	32.41	7.21	

Source: Directorate of Agriculture, Shillong,

2.4. Natural Vegetation: Natural vegetation of the project area is fairly poor due to tremendous biotics such as recurring fire hazard, timber, fuel wood and charcoal burning etc. The area consists mostly of degraded and open forest with scattered pocket of trees.

2.5. Socio-Economic Profile: The Socio-Economic set up of the people in the area is poor. The average Annual Income is about Rs 60000/- per family. The total population of the study area is 860 attributed to 130 families of which 406 are males and 454 are females. The average size of the family is 6. The entire population is tribal, predominantly belonging to the Khasi tribe. The village has lower literacy rate compared to Meghalaya. In 2011, literacy rate of the village was 70.20 % compared to 74.43 % of Meghalaya.

2.6 Agricultural scenario of Nong-Lwai village

The study area has vast and fertile agricultural plain, annually replenish by floods of the river Kynshi, in the southern portion of the area where paddy, maize, potato etc cultivation are mostly carried out. Jhum cultivation is carried out on the slopes with slash and burn technique as an indigenous way of clearing the land. Fertilizers and manure are used only by few families. Kitchen farming is taken up by most households and form the major source of daily needs especially vegetables for the households. Apart from cultivation, livestock rearing is also an important activity in the area.

Crops: The crops cultivated in the area are rice, maize, potato, sweet potato and green leafy vegetables.

Livestock's: Livestock rearing is prominent in the area with cattle, pigs, and poultry as the allied activities.

Fishery: Fishery though is limited to small space is an emerging revenue earner in the area.

Bee keeping: Bee keeping is taken up by few households and is the source for natural honey and is used widely for medicinal purposes. Natural honey is also well sought in the market and fetches good price.

Horticulture: Orange mandarin, Peach, Plum, Papaya, Guava etc are widely grown.



CHAPTER III

ANALYSIS OF AGRICULTURE AND ECONOMIC DEVELOPMENT.

3.1 Introduction

The agriculture as well as the economic development in the tribal villages of West Khasi Hills district of Meghalaya is determined by the characters of the socio-economic status of the society. It can also be seen that the Pattern of work reveals the economic status of the women and the social system prevalent in the society. It can also be seen that in all societies of the world, women share the responsibilities be it in agriculture or in the household activities in equal term with men. It can also be seen that in the in the field of agriculture women participation is insignificant even though most of the work remain unrecognized, under value and unpaid, women are one of the crucial development forces in the world.

3.2 General Socio-Economic Structure of Nong-Lwai village

The nature and pattern of agricultural participation and employment in Nong-Lwai village is dependent on the nature of the environment in which they performed.

A study of the socio-economic structure of the village shows that women folk are dependent on agriculture as their source of livelihood. It is however pertinent to note that even though agriculture forms the basis of the economy of this village, the percentage of cultivators has drastically decline and the concentration of women in agriculture too has decline. This can be seen that if more and more women are participated in the agricultural activities yet most of their works is considered marginal, unrecognised and unpaid. As per the study, shows that participation of women has slowly decline over the years. Educational development can be attributed as one of the factor that has affect the migration of women form farms based activities to other well paid and well recognised activities.

Considering the resource base of the village, agriculture and horticulture forms the activities of most of the household. Paddy cultivation is still an important crop where most of the household still participated as their daily activities. The farmers cultivated paddy as a summer crop. During winter some households have resorted to the cultivation of vegetables. Broom is another agricultural activity where most of the farmers have adopted this type of cultivation. This also requires a lot of agricultural labour during cleaning, burning and harvesting. There are also a fair number of farmers who are doing pineapple cultivation as one of the main source of livelihood. Ginger cultivation is also one of the main sources of livelihood of the people of this village as people occupy acres and acres of cultivated land by shifting their cultivation from one year to another and then repeated to the same field after a cap of three to five years depending upon the fertility of the soil.

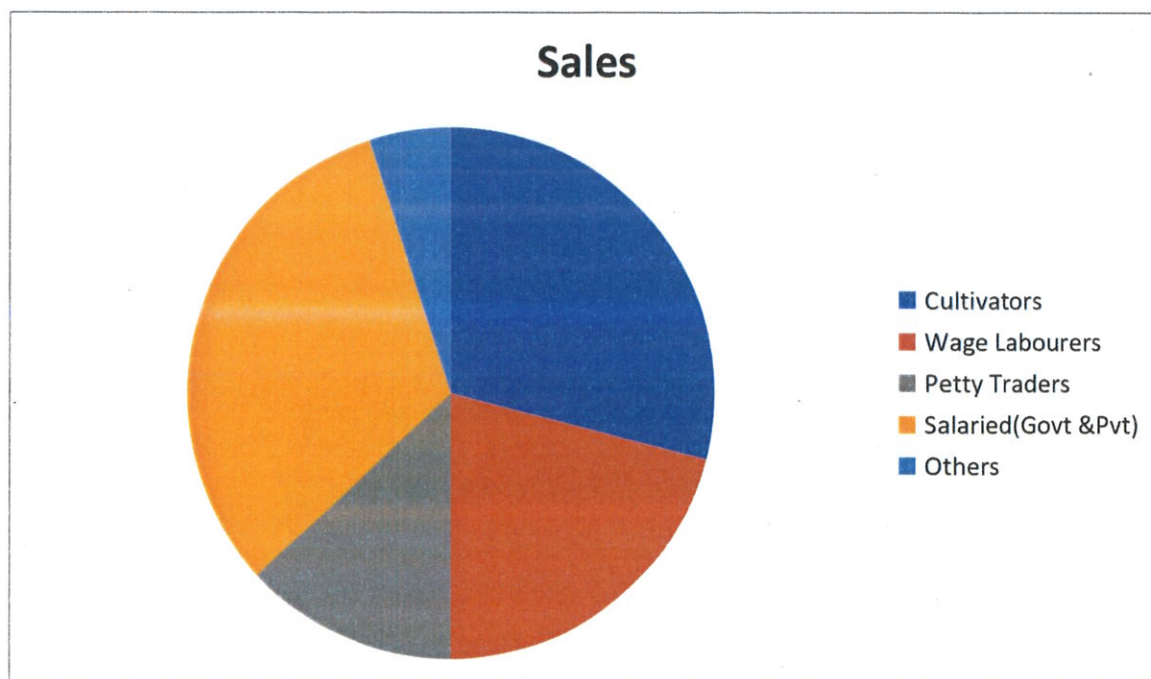
3.3 Occupational structure of Nong-Lwai village

The agricultural participation of women is greatly determined by the character and the socio-economic of the society. Further, the work participation rate of the occupational pattern of women in different economic pursuits certainly reveals the economic status of the women and the social system prevalent in the tribal hilly areas. Women economic contribution is immensely significant, and it also considered being one of the crucial development forces. It can also be seen that a large proportion of the economically active women especially in the hilly tribal areas like ours is engaged in agriculture and other allied activities. Agriculture employs three fourth of all economically active women they also make one third of the agricultural labour force and a little less than fifty% self-employed farmers.

Table 2: Occupational structure of Nong-Lwai village

Sl No	Type of work	percentage	
		No	%
1	Cultivators	11	29
2	Wage labourers	8	21
3	Petty traders	5	13
4	Salaried(govt & pvt)	12	32
5	Others	2	5
	Total workers	38	100

Source: Field survey, 2023.



The occupational structure among the workers in Nong-Lwai village is an indicator of the role played by them. The main workforce in this village is salaried class which accounts for 28 % male and 32% female. There is a small sizeable percentage (32%) of women engaging in tertiary and services sector.

Concentration of women in agriculture is only 29%. Over the years it is observed that there is a decline in the women cultivator and this decline is due to inadequate of productive employment opportunities in women family farm leading to the withdrawal of women from active cultivation. The increase commercialization in agriculture, underpaid work for women, better education etc can be seen as the main causes of the decline. Currently cultivation is carried out by daily wage labourers sourced out both from the village and from outside the village as well.

Table 3: Decision making process

Activity	Male	Female
Crop selection	1	1
Seed treatment	1	
Fertilizer selection	1	
Sale of produce	1	1
Storage of grain		1
Care of animals	1	1
Farm Investment	1	
Purchasing of land	1	1
Hiring of labour	1	
Crop selection	1	1
%	90	60

Source: field survey, 2023

The above table clearly indicates the larger role played by men in terms of decision making in relation to farm activities with 90% while women involves only on a part of the decision process with only 60 %. Decision making involves decision of investment to be made which will be determined by climate, market factor, financial and capital availability and family requirement. Decision making are largely made by the men as the head of the family in consultation with the women.

Sexual division of labour in the workforce is firmly rooted in socio-cultural traditions and has shown little substantial change over the last few decades. In almost all societies women and men have differing roles and responsibilities within the family and in society, experience different social realities, and enjoy unequal access to and control over resources. It therefore follows that gender is an

important social determinant of division of labour within every social group, across different castes, races, ethnic or religious groups.

Men and women perform different tasks and occupy different social and often different physical, spaces. The division of labour by sex is largely a social construct and gender ideology reinforces the notion that women's work at home is not real work for which men were reluctant to share their domestic and childbearing and rearing roles, upon which women dedicate an important part of their lives.

Table 4: Division of labour

Activity	Performed by men only	Performed by female only
Ploughing	1	
Field preparation	1	1
Seeding	1	1
Transplanting	1	1
Weeding		1
Harvesting	1	1
Carrying harvested crop	1	1
Thrashing	1	1
Husking	1	1
Preparation of food		1
Livestock maintenance	1	1
Kitchen gardening		1
Horticulture	1	1

Source: Field survey, 2023

The above Table reveals that there are not many differences in the sexual divisions of labour in the village even though much of the physical demanding work is taken up by men. It is seen that most of the pre-harvesting operations are taken care by men, especially ploughing the field. Farm animals and machinery are operated by men. Harvesting and other post harvest operations like manual thrashing, husking (manual) etc were largely taken up by women folks. Women and men also are engaged in livestock rearing. While kitchen gardening is solely the responsibility of women. It can be noted that women plays multiple roles and shoulders more responsibilities since in addition to farm works, they have to take care of household activities and family matters. Even though men also shares responsibilities in family and household works, a large portion of the women's contribution is unrecognised and hence unpaid or underpaid. Thus there is a need to broaden the awareness on

gender roles and educating women and the society on the need of equity so as to bring about a positive social transformation and bring about more participation from the women folks.

Table 5: Reasons for taking up agricultural activities.

Support family		Economic reason (income)		Tradition		Any other	
Nos.	%	Nos.	%	Nos.	%	Nos.	%
12	40	30	100	20	67	15	50

Source: Field survey 2023

**Total Household Surveyed-54 households

In regards to the reasons for taking up agricultural activities it can be seen agriculture as a source to support family and improve economic condition of households are the sole reason. This shows the fact that agriculture even though as shown earlier to be a declining source of occupation, it still maintain its importance as the source of bread provider for the rural families. 50% of the households maintain that agriculture and related tasks are taken up to diversify food production and food availability since most rural households are depending on agriculture for access to diverse food products.

Table 6: Animal husbandry and livestock rearing

Types	household	Owned*					Earnings/year**				
		1	2	3	4	5	1	2	3	4	5
Cattle	5	1	4				2	3			
Pigs	25	25						25			
Poultry	27		22		2	3	20	2			5
Fishery	3	3								1	2
Bee keeping	6	6					6				

*owned: (1)-less than 3; (2)- 3 to 6; (3)- 6 to 9; (4) – 9 to12; (5) – 12 above

**earnings/annum: (1)-less than 5000; (2)- 5000-10000; (3)- 10000-15000; (4) – 15000-20000; (5) – 20000 above

Types	household		Owned in %					Earnings/year in %				
	No's	%	1	2	3	4	5	1	2	3	4	5
Cattle	5	17	20	80				40	60			
Pigs	25	83	100						25			
Poultry	27	90		81		7	12	74	7			19
Fishery	3	10	100								33	66
Bee keeping	6	20	100					100				

Source: Field survey, 2023

Livestock rearing and animal husbandry are the main allied activities of agriculture and are widely undertaken by most families in the village. These occupations also provide more diverse food as well as more income to the family. Women are the major worker in these occupations since the males are more concentrated into works which are physically demanding. Except for activities such as fisheries and cattle rearing, where the male are the main worker, other activities such as piggery, bee-keeping, poultry rearing are the responsibility of the women workers. These activities can also be seen as one of the source of income. The generation of income from these activities helps in improving overall household economy.

17% of the households surveyed undertake cattle rearing, 83% piggery, 90% poultry, 10% fishery and 20% bee keeping.

Poultry rearing and fishery are the major revenue earning activities with about 19% household and 66 % households earning above Rs.20, 000 annually from these activities. While bee keeping performed the lowest in terms of revenue earning since only few household undertake this activity. The contribution of women can be seen here to be prominent as the activities which are their responsibility such as poultry, piggery are the major revenue earner for the families. Thus we can conclude that the role of women in agriculture in improving household economy as revenue earners should be given due recognition even though in most cases such activities are considered as part of household chores and not given monetary benefits.

The participation of women with regards to the women of Nong-Lwai village shows that women has a very strong role and responsibilities to play right from the time they get up from bed till they retire to bed, and the responsibilities felt on them. In the agricultural aspects women had to devote their time to field management and resources. At home they had to take the care and responsibilities for the children and for the house and therefore women had a very little time for themselves and all the responsibilities are cantered on them which they cannot escape.



CHAPTER IV

4.1 Summary of Findings, Suggestions and Conclusion

Analysis of the different activities of agriculture in NongLwai village reveals that even though there are differences in terms of gender roles in division of labour, there is always a mutual cooperation between the sexes in almost all the activities. Both men and women are bread earners and are working side by side and this is perhaps one of the reasons to equalize the status of women in the tribal segment of the society.

It can also be seen that there is also a dichotomy based on sex with regards to the participation of work in agriculture. Women are engaged in the tasks which need a sustained efforts and endurance while men are engaged in the task which needs a physical strength. In agriculture women are needed everywhere right from the broadcasting of seeds, weeding, arranging, harvesting and threshing, winnowing of paddy, collection and transportation of vegetables crops etc. Women are also involved in the marketing of their daily produce.

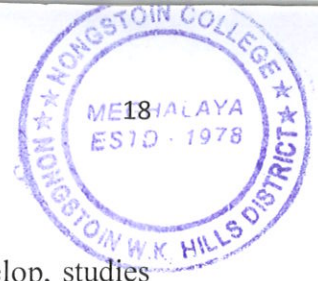
In contrary to the common notion that men are the only bread winner of the family, analysis in the previous chapter reveals that women also plays a crucial and equally equitable role in income generation, food production as well as shares responsibility in term of decision making of the family which are inherent characteristic of a matrilineal society.

It can also be seen that there is a short fall of participation of women in agricultural production and this is due to the diversion of women from agriculture to other activities.

Suggestions:

1. This sector requires further exploration because most of the income derived from this work frequently provides the very basis for family survival particularly among the extremely poor farmers.
2. Precise data collection is required especially for women engaged in home based production which in turn can be analyzed in a meaningful way for the benefit and economic uplift of the district in general and the tribal societies in particular.
3. Women play a major role in agriculture though as invisible worker. Thus there is a need for re-define the concept of 'worker' and monetary status should be given for these activities.
4. Education programs on such areas of home based farms and home based production should be incorporated in rural development programs so as to benefit the women workers. Time saving technologies and strategy should be made available for the women to enable them to manage between different activities at ease and at their convenience. Access to skill acquisition, skill training and skill up gradation will play dominant role in uplifting the rural economy of the village. Further, a growing realization of the need for a comprehensive process of development should also encompass women at the core of development programmes.

In conclusion, it is therefore suggested that unless attempt is being made for a sustainable rural development and other rural and environment friendly sustainable income specially meant for agricultural production, rural villages may experience distress migration into the urban areas and rural economy will decline eventually.



REFERENCES:

- *Amali, E, 1989. The role of women in agricultural development process. Develop, studies Reverse 2:52-60
- *Census of India; 2001
- *Chottopadhyay Manabendu (1982), "Rule of female Labour in Indian Agriculture" Social Scientist.
- *Data, Parul. 1976: "women in Arunachal and their status in the socio-cultural life" Resurun, Govt. of AP, Shillong.
- *Hutton, J.H. 1922: The Sema Nayas" Mac. Millan London.
- *Inventory of Agriculture 2015, WEST KHASI HILLS DISTRICT, icar
- *Mahajan, V.S. 1984: Changing role of women in rural economy in Assam:- Women contribution to India's economic and social development.
- *Jain, D. and Chand, M. 1882: Report on time allocation studies; its methodological implications, paper presented at technical seminar on women world and development, New Delhi.
- *Nengnong, D.D. 2011: "Women and work; A study in women's work in villages of Ri-Bhoi district of Meghalaya."
- *Parry, N.E. 1993:" The Lakhers" Firma KLM pvt.Ltd. Tribal institute, Aizawl.
- *Saito, K,A and D Spurling ,1992 . Developing agriculture extension for women farmer. Washington DC world Bank Discussion paper 156
- *Sivyard, R. 1985: Women a world report, Methuen London Ltd pp.56-57.
- *Sivyard, R. 1985: Women a world report, Methuen London Ltd pp.56-57.
- *Singh Bhagwan, pd, and Singh, Seema, Planning and plight of female Rural labour Market in India, in Alakh. Sharma and Seema Singh (ed) women and work changing scenario in India B.R. Publishing Corporation, New Delhi, 1993
- *Thorton P.K , kurska RL, Henninger N ,kristjaanson P.M Reid R.S, Altino F Odero A.N and Ndegwa T. 2002, rapping poverty and livestock in developing World [RL](Inter-nationallivestock research Institute), Nairobi, kenya , 124 pp.



Appendix-4.2
HOUSEHOLD SCHEDULE (QUESTIONNAIRE)

1. Respondents Name

Date of survey -----

--	--

2.

Name of the village	Block	Subdivision

3. Demographic and Social Structures

Sl.NO	Relation to the head of the family	Age	Educational status	Marital status	Family Type\size	Occupation

4. Occupational structure

Sl No	Type of work	Number of days					No. Of workers				
		1	2	3	4	5	1	2	3	4	5
	Family No										
1	Cultivators										
2	Wage laboures										
3	Petty traders										
4	lumbering										
5	Salaried(govt&pvt)										
6	Others										

Q5. Is agriculture your main occupation?

(1. Yes [] 2. No[]).

Q6. Apart from agriculture do you do some other work for earning?

(1. Yes [] 2. No[]).

Q7. (If yes in Q7) Then what do you do apart from farming -----.



List of Figure

Nong-Lwai village

Figure 1: Nong-Lwai village

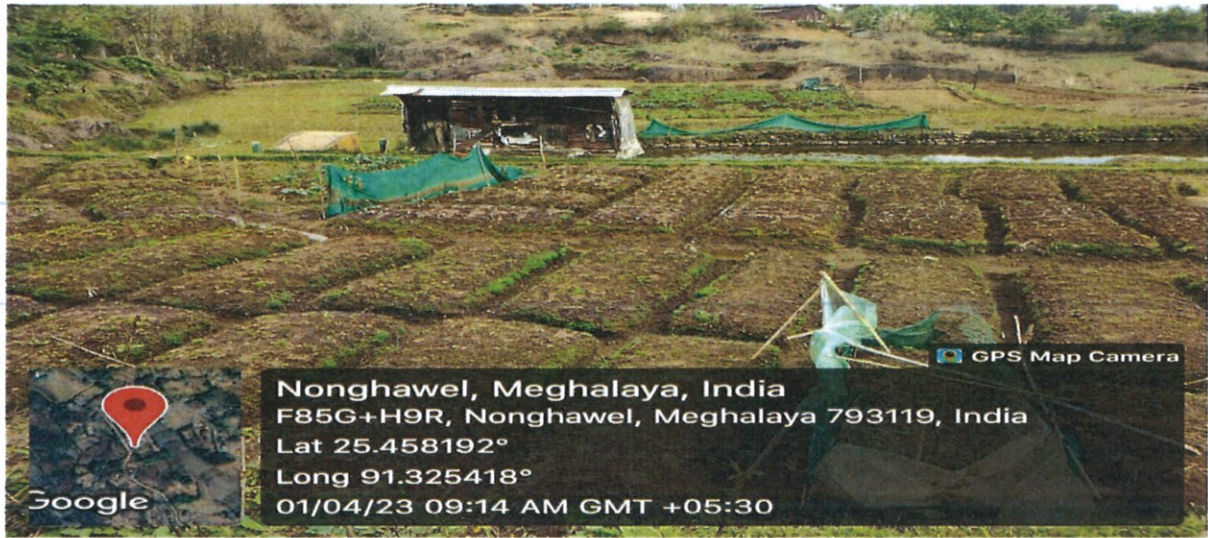




Figure 2: Agricultural Area

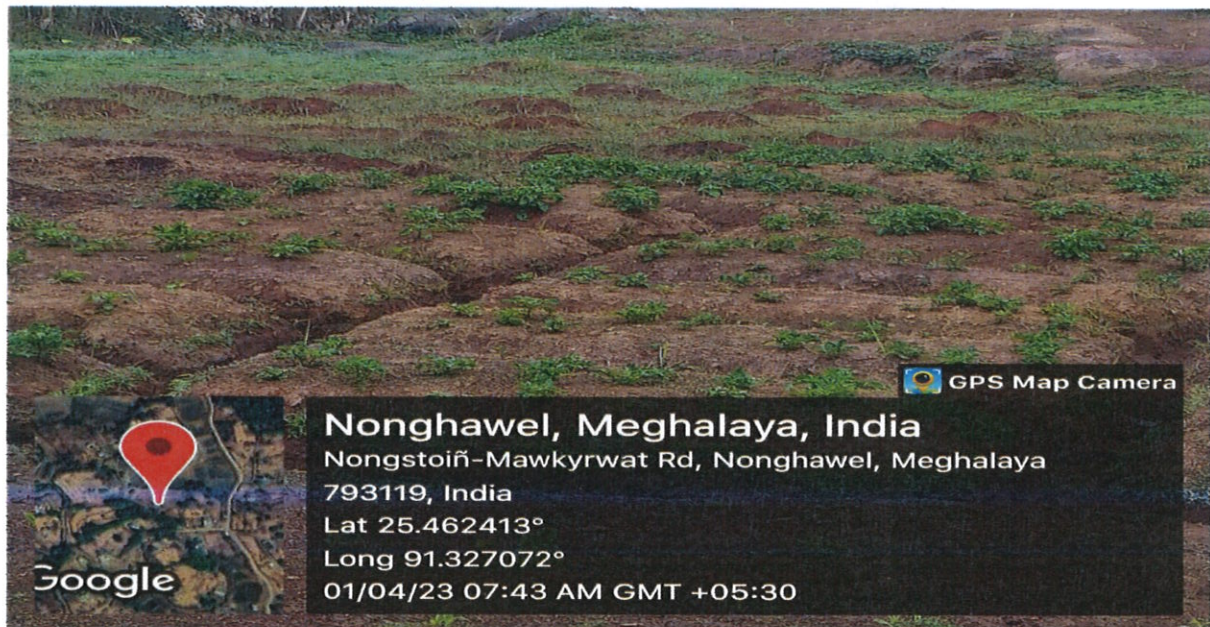




Figure 5& 6: Interaction with the villager

