REVISITING TRANSITIONS IN SHIFTING AGRICULTURE IN NORTH-EAST INDIA: A CASE STUDY OF TWO VILLAGES IN MANIPUR

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DECLARATION

I declare that the dissertation entitled **"Revisiting Transitions in Shifting Agriculture in North-East India: A Case Study of Two Villages in Manipur"** submitted in partial fulfillment of the requirement for the award of the degree of **Master of Philosophy** of **Jawaharlal Nehru University** is my own work and has not been previously submitted for any other degree to this University or any other University.

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CERTIFICATE

It is recommend that this dissertation be placed before the examiners for evaluation.

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Dedicated to Apiko

For the Stories that Made our World

CONTENTS

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CHAPTER 1

INTRODUCTION

Shifting agriculture is an important economic basis of numerous hill communities in North-east India. It has undergone rapid changes since it came into colonial contact in the 19th century (Malik, 1991). While change has perhaps been an integral component of this agricultural system, the magnitude of change experienced in the last century or so has been unprecedented. Still, it continues to be the source of livelihood for thousands of households in the hills of North-east India and other tropical regions of the world. The nature and extent of dependence on the traditional system, however, is subject to debate.

Notwithstanding the socio-economic importance to the people who practice shifting agriculture, it has been severely criticized for adversely affecting environment. While the more recent findings have absolved the system from much of the blame, the debate continues in a significant way. Perhaps environmental questions may not be completely separated from shifting agriculture, though not without reason. In fact, the primary interest of the scientific community and policy makers in shifting agriculture can still be traced to its location in the tropical regions.

Ecological concerns have been the entry point for policy making with regard to shifting agriculture in most countries practicing this agricultural system. These drastic and visible policies have gone hand in hand with 'normal' policies of education, development, industrialization and establishing markets. These policies have so transformed the character of shifting agriculture that Harris-White et al. (2009) provides compelling arguments to explain it as a transition to the capitalist system.

It is in this backdrop that the present study situates itself. It seeks to study changes within shifting agricultural system as outcomes of various drivers of change both external and internal to the system. Changes are sought to be studied for the various components of

shifting agriculture including institutional bodies, land tenures, labor organization, agriculture and the society at large. This is preceded by formulating a framework where these components are seen as parts of a greater whole that are intricately linked and causally related. Changes in these components are then analyzed to see if these can also be understood as part of the transition towards capitalism.

1.1 Overview of Literature

The literature on shifting agriculture is very diverse and rich. Agriculturalists, geographers, soil scientists, anthropologists, historians, sociologists, political scientists and administrators have contributed to arrive at the present understanding of the system. A number of themes are covered by these studies: biodiversity in the field, productivity, soil characteristics under various stages of cycle, traditional technologies of soil and fallow management, institutions and property rights, gender, effects on the environment especially deforestation, the political economies of understanding the system etc.

A review of literature on such a subject therefore, poses an enormous challenge. The nature of the study also necessitates that certain themes are given more importance over others. In an attempt to be inclusive of major topics of debate while keeping the study in perspective, existing literature is broadly divided into the following heads. These are not strictly confined to studies done in the Indian context but include relevant works from other countries.

I. Perception of the system
II. The environmental consequences of shifting agriculture
III. Shifting agriculture in Transition in India

1.1.1 Perception of the system

The perception of shifting agriculture maybe broadly grouped into views of colonial and post-colonial state on the one hand and those of the ‘scientific’ community on the other and are reviewed accordingly.

Studies on shifting agricultural find their origin in the colonial era (Thrupp et al., 1997). In the Indian context, Bela Malik's (1991) masterful study of hill economies of the North-east reveals the deep-seated prejudices of the British rulers towards jhuming. The reluctance to recognize jhuming as a 'production system' was evident in their paternalistic leanings on the one hand, and calls for abolishing the system on the other. However, neither views were founded on a positive assessment of the system as a viable form of production. A section of officials did not encourage interventions for the reason that the administration would then have to provide for the people. However, the other end actively advocated its abolition. A representative of the latter view expressed by Baden-Powell is reproduced below:

> "The fact is that this cultivation is so wasteful that somehow or the other it must be put a stop to, just like 'suttee' or any great evil. It consists in destroying a large and valuable capital to produce a miserable and temporary return". (Malik, 1991: 130)

The logic of 'wasteful' as applied by the foresters is revealed in the writings of Verrier Elwin, notably 'The Baiga' (1931: 123-128). It is ironic though, that the destruction of forests for commercial purposes like logging was readily accepted. Malik (1991) further reveals that the response of the colonial administration was deeply embedded in the 'contemporary ideas and values' which placed a high value on intensive settled agriculture. The rulers placed a lower hierarchy not only on jhuming but also on the people who practice it. Hamilton (1948), writing for the 'Indian Forester' explained the need to 'settle' the aboriginals in an attempt to make out of them, "if possible, useful citizens" (p. 3).

Interventions were made to abolish and replace jhuming at various levels. These included reserving forests and imposing fines on those who cut forest for jhuming as well as encouraging farmers to adopt wet-rice cultivation. The experiences of Tripura are documented by J.B. Ganguly (1969) in "Economic Problems of the Jhumias of Tripura". Attempts to settle jhuming farmers were undertaken as early as 1930-31 AD (p. 66) by the Maharaja of Tripura and continued after independence in the 1950s (p. 70). In the

central regions of the country, such measures had been underway since the 1880s (Elwin, 1931: 114).

The colonial state saw shifting agriculture as wasteful, affecting the environment negatively and responsible for the low quality of life of the tribals who practice it. The newly independent Indian state adopted a similar stance. The National Forest Policy, 1952 spelled out its policy towards shifting agriculture as follows:

> "The damage caused to forests by shifting cultivation in certain areas must be guarded against. *To wean the aborigines, who eke out a precarious living from axe-cultivation moving from area to area, away from their age-old and wasteful practices*, requires persuasion, not coercion; a missionary, not an authoritarian, approach. Possibilities of regulating shifting cultivation by combining it with forests regeneration (Taungya) to the benefit of both should be fully explored; success in this direction largely depends on enlisting the co-operation of the cultivators and gaining their confidence and in showing consideration to their needs and wishes." (Italics mine) (National Forest Policy, 1952: 12)

The earliest policy adopted by the Indian state bears remarkable resemblance to that of the British rulers. It displayed considerable ignorance about the internal dynamics of the system. The National Forest Policy of 1988 which is considered a watershed policy spells out similar objectives in less obvious terms. It advocated discouraging shifting agriculture while calling for "suitably harmonized right land use practices" (p. 7). It encouraged "efforts to contain such cultivation within the area already affected" noting the negative effects of shifting agriculture on environment and productivity of land (p.7).

The government has been actively involved in confronting the challenges that it perceived in shifting agriculture. This can be gauged from the amount of Jhum control programs it initiated in various states (Das, 2006) and the numerous Task Forces constituted to study and provide insights into the system. A report of one recent Task Force, however, comes as a radical departure from past policies of the government. In fact, it stands as a defining moment of proactive policy making. The Task Force report of 2006 noted the multiplicity of drivers of change like increasing population pressure,

migration, changing market dynamics, industrialization that have transformed the system (p. 2). It did not espouse the 'one blanket fits all' policy adopted by earlier reports and policy documents. Instead it recommended that pilot projects be carried out across major communities to make room for the diversity of practices and farmer adaptations (p. 16).

The perception of the scientific community has not been uniform across both time and space. The period after the 2nd World War, when many former colonies were gaining independence, saw shifting agriculture being projected in a negative light. This period was marked by domination of colonial understanding of the system coupled with increasing concerns for the environment. Organizations such as the Food and Agricultural Organization (FAO) put forward views reflective of that period. For example, Forest Resources of the World, 1948 pointed to shifting agriculture and the use of fire as the chief threat and source of global forest destruction (FAO, 1948). A publication in 1957 identified shifting agriculture as the greatest threat to 'increase in agricultural production…conservation of production potential for the future…of soils and forests" (FAO, 1957: 1) The classic study by Nye and Greenland (1960) on soil conditions under different stages of shifting agriculture in Africa was motivated by widespread criticism of the system.

Stances of these organizations have changed considerably since. For example, the FAO in collaboration with International Work Group for Indigenous Affairs (IWGIA) and Asia Indigenous Peoples Pact (AIPP) brought out a volume titled 'Shifting Cultivation, Livelihood and Food Security' in 2015. This work draws on the UN Declaration on the Rights of Indigenous People, 2007 and emphasized the role of traditional agricultural practices in socio, economic and environmental conservation (p. vii). The World Bank produced a case study of Madagascar in 1994, noting the linkages between increasing population, intensification of land use and environmental degradation. It noted the negative effects of decreasing cycles while acknowledging the need for physical as well as financial infrastructural developments.

As pointed out earlier, the perception of the scientific community has been far from uniform. Researchers from different parts of the world continue to find arguments *and* evidences for or against shifting agriculture. Denevan (1978) wrote about the ecological problems that arise due to shifting agriculture. His findings implicated shifting agriculture for a host of ecological concerns ranging from destruction of tropical forests, modification of hydrology, natural disasters (p. 71), effects on (micro) climate change and loss of bio-diversity (p. 72). The temporary and permanent effects of 'long fallow' and 'short fallow' shifting agriculture are also discussed. Alternatives to Slash and Burn produced a report in 1992 that stated that shifting agriculture caused "about 70% of the deforestation in Africa, 50% in Asia and 30% in Latin America… Tropical deforestation is responsible for 18% of current global warming…" (ASB, 1992: 1). On the other extreme, one can find studies like that undertaken by Thrupp et al. (1997) that sought to deconstruct popular 'myths' and realities associated with shifting agriculture.

In the Indian context, P.S. Ramakrishnan has provided significant contributions in shaping the direction of discourse, more specifically on the relationship between shifting agriculture and the local ecology (Toky & Ramakrishnan, 1981; Mishra and Ramakrishnan, 1982; Ramakrishnan, 1984; 1987). Perhaps his most important work, 'Shifting Agriculture and Sustainable Development' published in 1992, offered detailed insights into the system. It traces the complex and intricate adaptations to local ecology including energy efficiency, soil fertility, weed dynamics and fallow management. Sachidananda's (1989) work also represents the gradual shift towards a more favorable and perhaps, more objective view of the system. It argued for promotion of 'scientific swidden cultivation' rather than it being replaced (p. 98).

1.1.2 The Environmental Consequences of Shifting Agriculture

It has been noted that differing opinions prevail over the effects of shifting agriculture on economic development, agricultural production and local ecology. There is, however, a definite shift in general understanding of its effects on the environment. This is not completely free of the political economy of 'seeing', which is explored in the subsequent

section. The contribution of shifting agriculture to environmental destruction, especially tropical deforestation is briefly documented.

Jeffrey Sachs (2005) points out that conventional wisdom explains environmental degradation in a series of causative chain. It generally starts with increasing population pressure and land use intensification leading to shorter fallows amongst small-scale shifting agricultural farmers on the forest margins. This leads to a host of environmental issues including deforestation and related problems. However, more recent studies have questioned this logic effectively.

A seminal work by Geist and Lambin (2002) attempted to understand deforestation on the basis of 'proximate causes' or primary human activities and the 'underlying driving forces' or social processes for 152 cases from Asia, Africa and Latin America. The proximate causes included infrastructure extension, agricultural extension, wood extraction and other factors. The underlying driving forces included demographic, economic, technological, policy and institutional and cultural factors (p. 143-144). They concluded that at the proximate level "shifting agriculture is not the primary cause of deforestation" (p. 146). Significantly, they posited that tropical deforestation is better explained in terms of "multiple factors and drivers acting synergistically rather than by single-factor causations variables" (p. 146).

The multiplicity of actors and drivers of tropical deforestation is echoed by various other authors. A study by Lambin et al. (2001) on causes of land use and land cover change also provides arguments in the same direction. The paper discounted popular 'myths' that population increase and poverty are the major drivers of land-use land-cover change. They argued that peoples' response to economic opportunities created by local and national markets and mediated by state policies lead to large scale changes in land use patterns. Tomich et al. (2005: 436) writing a concluding chapter for 'Alternatives to Slash and Burn' drawing from numerous case studies, noted that more attention should be paid to 'powerful macro-economic forces' that drive people to clear land. A study by Angelsen (1995) from Indonesia also questioned the 'share of responsibility' assigned to

shifting agriculture. His case study of Indonesia also outlined the multiplicity of factors involved in deforestation. This included market profitability of certain crops that influenced farmers' choices and the race for land rights due to increased land scarcity.

At the global scale, the discussion on deforestation appears to be heading towards a nuanced understanding of its causes, driving forces and outcomes. It is remarkable that contributions of small-scale farmers have been scaled down significantly while implicating larger economic forces. These findings have influenced how shifting agriculture is perceived. This is evident when one traces the evolution of general perceptions from the colonial times. At the same time, categories assigned by different groups with varying interests have had far-reaching effects on how the system is perceived. Thus, shifting agriculture is said to suffer from a 'split identity' (Darlong, 2001).

Dove (1983) argued that 'myths' of shifting agriculture perpetuated by the colonial and post-colonial states have worked to further their vested interests in Indonesia. He argued that reinforcing the dual notions of communal land holdings and destruction of resources were used as an excuse to extend state control over resources (p. 97). Fox et al. (2009) critiqued the approaches of South-east Asian states that have directly or indirectly led to the 'demise' of shifting agriculture. They point out that state policies have marginalized shifting agriculture significantly. Practices of classifying shifting agriculturalists as ethnic minorities, expansion of state forest departments and conservation, resettlement etc. have transformed the lives of farmers to a degree not experienced before. These policies find an echo in India where the government initiated jhum control programs in various states. Ganguly (1969), Sachidananda (1989) and Das (2006) amongst others have pointed out the limitations of such top-down approaches to effectively aid farmers.

1.1.3 Shifting Agriculture in Transition in India

This section focuses primarily on literature from the Indian sub-continent. The present time is one of unprecedented transition in shifting agriculture (Ramakrishnan, 2007). While change has been an integral component of this system, the time after independence

has seen much change. It is worth mentioning that the experiences of different states have varied considerably. Changes in Tripura, for instance is hardly comparable with any other state in the rest of India. Ganguly (1969) and Dasgupta (1986) points out that in-migration after India's independence and Bangladesh's independence transformed the demographic factors completely. This section traces the broad contours of transition in shifting agriculture in India.

An essential starting point is the jhum control programs initiated by the government in the first few Five-year plans. Colonization schemes were adopted in states like Tripura, Orissa, Bihar and Andhra Pradesh (Sachidananda, 1989: 78). Various other schemes that included providing capital for preparing wet-rice fields, purchasing bullocks, seeds and fertilizer to induce farmers to settle down were taken up in all the states. These schemes, however, were not able to achieve desired results owing to a host of reasons ranging from institutional, bureaucratic and cultural (Dasgupta, 1986; Sachidananda, 1989; Das, 2006; Task Force, 2006).

One of the most important reasons, according to Mishra, (2006) was the limited attention paid to institutional specificities. The failure of designing 'suitable' land-use technologies for the peculiar ecologies of the hills (Das, 2006) resulted in calls for 'hybrid-technologies' (Ramakrishnan, 2007; Suraj, 2008) to face issues in jhuming. It may be seen as a return to the call for 'scientific swiddening' given by Sachidananda (1989). This has been accompanied by efforts to diversify and encourage cultivation of cash crops (Ramakrishnan, 1992; Birthal, 2006).

Thus, transition in shifting agriculture in India may be characterized under two broad themes. First, there were efforts to promote more sustainable practices by combining traditional and scientific management practices. The widely acclaimed Nagaland Environmental Protection and Economic Development (NEPED, 1999) program was based on this framework. Some authors have also used it to classify shifting agriculture into 'traditional, modified, innovated or distorted' forms (Tiwari, 2007: 20-25). Second, diversification of economy in terms of land-use systems and crops grown is actively

encouraged (Task Force, 2006: 10, 12). In the words of Ramakrishnan (2007), this can "take the pressure off shifting agriculture" (p. 9). It presupposes the existence of market which is, of course, true in the present context.

The penetration of the market is seen by Harris-White et al. (2009) as an extension of the capitalist system. In an insightful study of 11 villages in Arunachal Pradesh, they offer a robust argument of the agrarian transition and its implications on institutions at the local levels. They posit that "institutional adaptation, continuity and hybridity" (p. 512) are integral to the emergence of the market economy. An older study by Mishra (1983) of the Nishing community of Arunachal Pradesh also remarked that traditional institutions continue to exist with "shades of the new economic basis" (p. 1837).

An overview of literature points out certain critical gaps in the research on shifting agriculture. Shifting agriculture has been addressed mainly on the basis of its close relationship with the environment. Mainstream Indian literature has centered on the agricultural production processes. Yet, few studies have explored transformations within the system in terms of nature and extent of changes in agricultural practices. Increasing privatization and alienation of once communal land as a result of adoption of settled agricultural practices have been reported (Fernandes and Borbora, 2008; Mishra, 2006; Task Force, 2006). Another limitation is that role of the state has been confined to that of an interventionist. Discussions in shifting agriculture are also barren as farmers are seen more as innovators than active social agents leaving the jhuming society practically unexplored. Possible redefinitions of gender roles in the advent of settled agriculture, quality of life etc. has not been addressed. The dynamic role of the market is also under-stressed. However, sticking to traditional explanations of population pressure and environmental degradation means that a nuanced understanding of shifting agriculture in its full complexity continues to elude the researcher.

1.2 Objective and Research Questions

The preceding discussion revealed the important themes that have been the subject of comment and debate. Certain gaps in literature were also identified. In fact, it is to be

lamented that despite being an area of considerable interest for the last few decades, far too many gaps continue to exist. This study attempts to fill a part of this gap by capturing widespread changes within the shifting agricultural system. It differs from other studies in that it endeavors to present these changes as part of a transition process that actively involves the state-driven capitalist market system.

The objective of the paper may be laid out as follows:
To explore a framework of understanding shifting agriculture that goes beyond the existing debates on environment and livelihood and locating it within the larger contexts of local specificities and state-driven market penetration. In particular the study focuses on issues related to land, labor organization, agriculture and the larger societal practices within which shifting agriculture is situated.

The following questions are of particular interest to the study:

1. What are the characteristics of institutions and structures that govern shifting agriculture? What are the mechanisms by which traditional bodies exert their relevance in the face of state and market forces that undermine their influence?
2. What is the nature of land ownership, distribution and usage amongst the villagers? Are these egalitarian or are there hierarchies in ownership and access to land?
3. What are the characteristics and specificities of agriculture in the study areas with regards to crop diversity, cropping pattern and market access? To what extent are non-traditional, market-friendly forms of agriculture accepted and practiced?
4. How essential is the socio-cultural setup to the functioning and sustenance of shifting agriculture? To what extent is shifting agriculture a ‘way of life’?

1.3 Database and Methodology

Data for the study was collected from primary field surveys conducted in two villages of Tamenglong District, Manipur. Prior to the field survey a pilot survey of five villages in the district was carried out in Puichi, Haochong, Pungmon, Karuangmuan and Kabuikhullen villages in July 2014. This was mainly based on logistical reasons and

knowledge of the local Inpui language. Key informant interviews were done with certain persons with 'extensive knowledge' about the village.

Haochong and Puichi villages were then selected for a combination of reasons. Both the villages practiced shifting agriculture quite extensively over large tracts of land. They are ancient villages (more detail in subsequent section) and had a number of old people with experiential knowledge about the system. Their location from the local market, Noney, and from each other also played a role for their selection for detailed field surveys. In addition, the villages of Puichi and Haochong are the largest Inpui villages in terms of households. Haochong village is also the 'Christian Center' for the Inpui community. It has also been recently declared as a Sub-Divisional Headquarter of Tamenglong district.

Detailed household surveys were conducted in the month of October, 2014. First, 'House-listing' of the entire village was carried out. 89 households of Puichi village and 98 households of Haochong village were house-listed. Stratified Random Sampling was used to select households for detailed interviews. The variables however differed in the two villages. In Puichi village where almost all households carried out jhuming, the variables were: i) practice of wet-rice and/or horticulture ii) ownership of *loukhun* (field-plots) and/or *taram* (land) and iii) quantity of paddy produced in the last three years. In Haochong village where jhuming is done at a comparatively smaller scale, the following variables were chosen: i) practice of jhuming ii) practice of horticulture with/without wet-rice and iii) ownership of *loukhun*. These variables were used to select 51 households in Puichi and 38 households in Haochong for detailed interview. The number of households interviewed in Haochong was lesser as the number of families primarily dependent on jhuming was much lesser.

Apart from the household interviews, key-informant interviews were conducted. These included the Chairman and Secretary of the village, members of *Thampei* (the traditional village council), the *Nampu* (village-owner) and *Tuikhunpu* (Spring-owner) of Haochong village, and a business-woman (middle-man). 6 persons were interviewed in Haochong (7 times, twice for one person) and 8 persons from Puichi (10 times, twice for two persons). Of the 14 people interviewed, 5 were women. These interviews were recorded with the

permission of the interviewee. These were very dynamic in nature as discussions were exemplified with stories and songs as well.

The field work also included visits to the jhum fields of Puichi village which were very close to the village. Thus, pictures of different stages of jhum, and of work in the field could be captured. Some of these pictures are included in relevant sections of the study.

1.4 Characterizing the Study Area

The two villages of Haochong and Puichi are situated in the Tamenglong Sub-division of Tamenglong District, Manipur. The two villages belong to the Inpui tribe which was recognized recently in 2011[1]. This community has a total population of around 11,000 people concentrated in 15 villages in Manipur and Nagaland (Alung Khumba, 2012). They speak a distinct language, a "Tibeto-Burman language of the Naga-Bodo subgroup of Naga group" (Devi, 2013: 469).

According to the Census of India 2011, Haochong village has 231 households with a population of 1235 persons. Puichi village has 146 households with a population of 783 households. Haochong village is located at 24º 53' 00.9" N and 93º 41'04.2" E. Puichi village is located close to Haochong at 24º 55' 27.3" N and 93º 42' 04.6" E. The two villages have an elevation of approx. 1300 m amsl. Haochong village is 14 km away from Noney, the nearest local market situated at National Highway No. 37. Puichi village is connected by the same road but it is a further distance away from haochong and measures 20 km from Noney. The capital city of Imphal is a further 40 km away from Noney. The two villages are also linked by a Kanchup-Tamenglong (KT) road which is only 47 km away from Imphal city though its condition is deplorable.

The two villages have sub-tropical monsoon climate with temperatures ranging from 4º C – 31º C and an average rainfall of 3135 mm[2]. They also receive pre-monsoon showers or 'norwesters' that help in the early sowing of paddy in the jhum fields. There are typical

[1] Constitution (Scheduled Tribes) Order (Amendment) Act, 2011. Bill no. 108 of 2011.
[2]These figures are an average for Tamenglong District as a whole. Data has been taken from http://tamenglong.nic.in/distinfo.html

seasonal winds that blow in this region. In the early part of spring, there is an easterly wind locally known as '*Tangmei*' that begins to blow in the afternoon. It affects the cutting of trees for jhuming. Another seasonal wind known as '*Taru*' begins to blow from west to east in the months of August and September. This wind often has harmful effects on the nearly-ripe jhum fields.

1.4.1 Historical Experiences

Haochong village is one of the oldest villages in the region. The earliest written records of the village are to be found in the Royal Chronicles of the *Metei* Kings *Cheitharol Kumbaba* and *Ningthourol Kumbaba.* The Meitei king Meidingu Naothingkhong (585 - 685 AD) (Singh & Singh, 1989: 5; Singh, 1967: 41) and Meidingu Irengba (906 - 996 AD) (Singh & Singh, 1989: 8; Singh, 1967: 75) came in contact with Haochong village. In fact, the name 'Haochong' is derived from a local legend[3] involving a *Meitei* King Pangkanba or Meidingu Nongdam Lairen Pakhangba (Alung Khumba, 2012). Haochong village appears to have been a strong and powerful village. It is said that during the reign of King Meidingu Naothingkhong (585 - 685 AD), the village planned to attack the Meitei kingdom. It prompted the King to personally come on his horse and pacify the villagers.

Haochong village also came in contact with the Britishers who built a Bungalow in 1919 in the village (Haochong Golden Jubilee Souvenir, 2009: 53). The village became a battlefield in the 2nd World War. The Japanese army set up camp in the village after defeating the British. The people of Haochong village served as potters and supplied ration to the Japanese. In 1944, British fighter planes came to bomb the Japanese-occupied village. However, it bombed a neighboring village called Tuilimon or Ijeirong village mistaking it for Haochong (Haochong Golden Jubilee Souvenir, 2009: 54).

Puichi village is said to be as old as Haochong village. It also had strong connections with the *Meitei* kings. There is a local account about a 'cloth tax' that was imposed on the

[3] '*Hao*' is a slang of the Meitei language that generally refers to the 'hill people'. '*Chong*' is also a Meitei word that refers to jump. In the legend told by the local people, the god-king Pakhangba 'jumped' across this village, and therefore it came to be known as 'Haochong'.

village during the reign of King Chingthan Lanhaba (1231 - 1242 AD) (Singh & Singh, 1989: 11). It is said that the amount of cloth tax imposed was so much that the male members had to light torches and hold it throughout the night for the woman to weave the cloth even during the night. A song is still sung that complains of this heavy burden:

> "*Chingthang Khomba, nakhaina sialao, Ei pwan kasa sinla.*
> *Ei batan pwan thou badingEi batane, bakum bathin pwan thouga mii ring la ye*."
> (Baninthoi, 1999:4)

The song may be translated as:

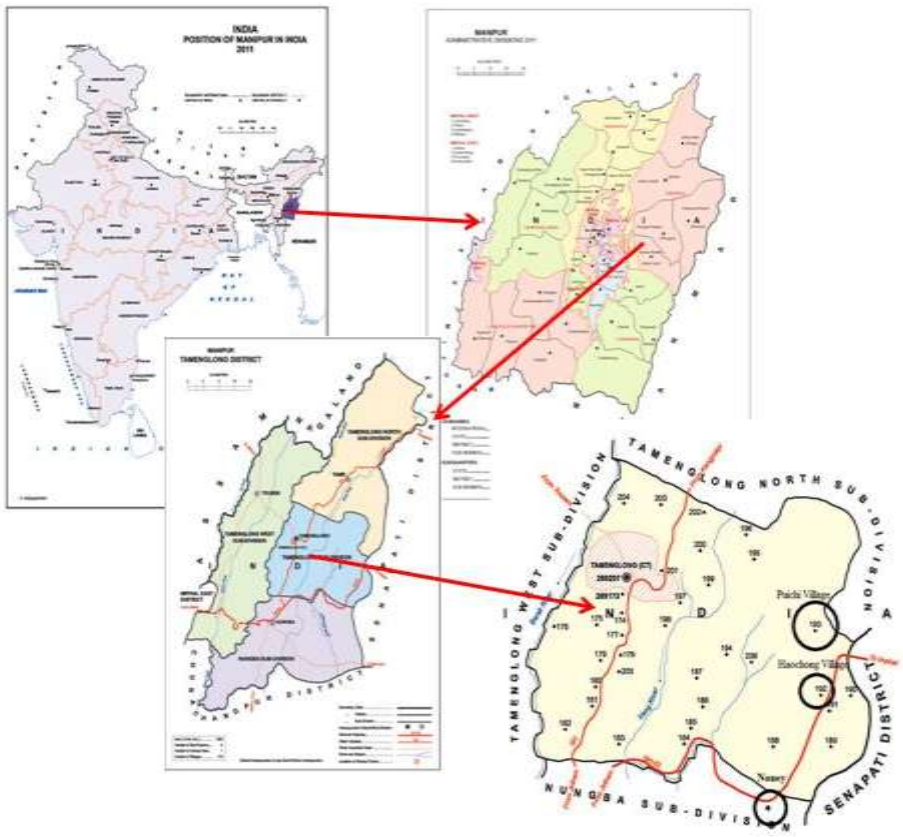
> "King Chingthang Khomba, your taxes are really burdensome. I have been deprived of my own well-decorated clothes. I hate the person who collects taxes. I hate this year-long collection of clothes; I can scarcely survive".

Numerous other accounts and songs reveal the close associations that the two villages had with the *Meitei* kings. Apart from historical reasons, it has much significance for the present study. It reveals that these villages were not totally isolated from the rest of the world. On the contrary, there were instances of interaction with people from different communities and even the Britishers and Japanese, in case of Haochong village. Moreover, farmers made annual trips (or more) to the Imphal valley to buy salt and agricultural implements. Later clothes, shoes, oil, lanterns etc were added to the list of goods bought from the markets, probably in the 20th century.

1.4.2 Introduction of Education

Introduction of Western education holds much significance in the two villages. In Puichi village, a collective initiative of the villagers established Western education in 1958 (Banimthoi, 1999). The first government school was established only in 1971/1972 and upgraded to primary school in 1994 which continues to function till today.

Fig. 1.1 Locating the Study Area



Source: Census Atlas, 2011.

In Haochong village, the first attempt to open a school was made by the British in 1921 which was opposed by the villagers (Haochong Golden Jubilee Souvenir, 2009: 66). Once again, a collective effort made by the villagers helped to establish a school (undated). In 1950 this was upgraded to lower primary and to Middle English School in 1957 by the government. A school managing committee ran a Junior High school upto Class VIII in 1963. A Government High School was finally established in the village in 1980 (Haochong Golden Jubilee Souvenir, 2009: 67).

1.4.3 Advent of Christianity

The advent of Christianity into the villages marks a point in time that changed the characteristics of these villages for all time. Conversion to Christianity was opposed stiffly and led to persecution of the early converts. This included removing them from the village as in Haochong and staying in two different villages as in Puichi. Both villages are now, however, completely Christian.

In Puichi village the first Christian converts came to be in 1948 when 6 households were converted. However it took a long time before a full-fledged church could be established. This was established only in 1979. The village was divided into the Christian and non-Christian sections until 1993 when all the villagers were converted (Banimthoi, 1999: 8-11).

In Haochong village, the first Christian converts were 5 persons in 1927. These people were however, chased away from the village. In fact, they were not allowed to live in the main village; they were given different land to cultivate on which they established a village known as present day Pungmon. The next few years did not experience any conversion. The next set of people converted in 1950 and in 1959. The later period saw widespread acceptance of Christianity in the village and construction of Church in 1960. However, the whole village became Christian only in1995 (Haochong Golden Jubilee Souvenir, 2009: 76-80).

It may be noted that there are considerable number of years between the first conversions (or major group of conversions) and the last conversion in the two villages. This means that for long periods of time, different sections in the villages were following different practices. These years are important in the analysis for this study. These intervening years were the transition years that allowed for the current stable relationship between the church and other traditional institutions as noted in Chapter 3.

1.5 Chapterisation Scheme

This paper is organized in the following way. The present chapter presents a background to the study. It presents a brief literature survey and outlines the objective and research questions. It then focuses on the methodology and characterizes the study area.

The following chapter (2) outlines the framework that is followed in the study. It provides the structure on which the rest of the chapters can build their arguments. This is more theoretical and general while the rest of the chapters draw largely from experiences from the field.

Chapter 3 deals with the question of institutional bodies, land tenures and labor arrangements in the two villages under study. The continued relevance of traditional bodies is studied in their relation to land tenures that continue to be largely followed. Divergences and emerging contradictions arising out of different land use practices are also discussed. The differences in labor arrangements in the two villages and for different agricultural systems are of interest. Basis for collective action and an example of non-agriculture collective action is provided.

Chapter 4 details the agricultural practices in the two villages. It attempts to explain the resilience of shifting agriculture. It highlights diversity of crops in general, and rice in particular. It also attempts to link how agricultural practices are closely linked to the notions of property. This is explored in relation to rising privatization of wet-rice and plantation crops as opposed to field plots mainly for jhum.

Chapter 5 addresses the questions of societal change and continuity. This is an important aspect of the system that has been rarely studied. This chapter explores the imagination of the ‘Modern Jhuming Society’ and questions the oft-quoted ‘way of life’. It tries to explain that transitions in shifting agriculture also necessarily mean transitions in the society as well.

CHAPTER 2

THE SHIFTING AGRICULTURAL PRODUCTION SYSTEM

The trajectories of research on shifting agriculture in India have undergone considerable changes in the last few years. This has been informed by research at the global level and the national experiences of policy making and its outcomes. Shifting agriculture was seen as a major cause of global environmental destruction since it was first 'encountered' (Thrupp et al, 1997). Paradoxically, it was an important reason for encouraging more research on similar themes. Current research places much less blame on the age-old practice, if it does not absolve it completely (Geist & Lambin, 2002; Laurance, 1999; Tomich et al, 2005; Palm et al, 2005; Lambin et al, 2001). However, a consequence of continued research in this direction is that shifting agriculture came to be chiefly identified with its relationship to the environment. In other words, environment became an entry point to understand shifting agriculture.

The practical shortcomings of policies broadly based on the premise that shifting agriculture affected environment adversely became apparent in different parts of the world. In the Indian context, it was the failure of central and state sponsored jhum control programs (Ganguly, 1969; Das, 2006). Fox (2000) argued that blaming shifting agriculture was leading to greater deforestation in South-east Asia. The need to link macro-economic policies with changes in shifting agriculture has been highlighted (Barbier and Pascual, 2007; Tomich et al., 2005), stressing on the need to look at issues facing the system from a much broader perspective. The importance of traditional property rights, especially land tenurial rights has also been acknowledged in the South-African context (Diaw, 1997). Much of the literature has also pointed to the close social, cultural and religious linkages with shifting agriculture. 'Conventional wisdom' like the relationship between fallow length and productivity (Mertz et al, 2008; Bruun et al, 2006), productivity of shifting agriculture (Nielsen, et al 2006) are also being questioned afresh.

These shifts from the earlier strand of thought are highly significant. Collectively, they contribute to 'reconstruct' how shifting agriculture is understood. These have immediate political, social and economic consequences. Shifting agriculture has been studied on a narrative that is based almost essentially on its ecological relationship. Criticism, and interestingly, 'redemption' of the system, are both strongly based on evidences of its effects on environment. Contextualizing the emergence of environmental destruction as a criterion to judge shifting agriculture may help to appreciate the afore-mentioned divergences.

2.1 The Problem of Shifting Agriculture: A Colonial Construct

Environmental sustainability has become one of the most important issues of the present century. One of the strongest criticisms against shifting agriculture is the destruction of tropical forest. However, tracing the historical development of the environmentalist narrative reveals an inconsistency. Recent literature questions the 'share of responsibility' assigned to shifting agriculture as a cause of deforestation (Angelsen, 1995) while highlighting the non-linear, complex processes involved in tropical deforestation (Lambin et al, 2001; Ickowitz, 2006; Laurance, 1999). Thus, while agricultural production necessarily involves some form of environmental degradation, the blame on shifting agriculture has been scaled down considerably (Thrupp et al, 1997; World bank, 1994). Ironically therefore, shifting agriculture was critiqued much more in the past[4] when its cycle would generally have been considerably more and therefore more sustainable than now.

This can be attributed to new findings and evidences, which is true. However it also reveals that the geographies of power have played a defining role. Shifting cultivators have tended to be on the margins- political, economic and very often, geographical (Scott, 2009). They also constitute the minority population, often categorized as 'tribes' and seen as the 'other' by the powers that be: first colonial, and then the independent states (Malik, 1999; Fox et al, 2009; AIPP, 2009). There is a strong and undeniable link

[4] For example, the FAO Forest Resources of the World, 1948 reports: "The chief threat and source of damage arises, not from overexploitation for forest products, but from the practice of shifting cultivation and the uncontrolled use of fire…"

between distribution of power and the incomplete picture of shifting agriculture that the rulers preferred to see, impose and reproduce. The 'problem' of shifting agriculture is therefore, a colonial construct, which emerged during the colonial times (Hamilton, 1948). It should come as no surprise then, that the portrayal of shifting agriculture in a 'less-negative light' has also come at a time when voices from the 'inside' began to be heard[5] and traditional technologies began to be appreciated in a new light[6].

The negative view in which the colonial rulers and later the majority state tended to see shifting agriculture (Malik, 1991) was partial and incomplete. It was founded on a partial understanding of the system's relationship with ecology and denial of the social processes involved in it. It is a simplistic, uni-directional understanding where farmers exploit forest land without conserving it in any way. The role of the farmer is primarily seen in his/her relation to destroying environment and not as an active agent modifying landscapes. The complex societal structures that were closely bound to and perhaps even shaped by shifting agriculture were ignored altogether. The shifting agricultural farmer as an innovator would have been perhaps an outrageous claim and is not perceived as such.

Thus, the environmental lens from which colonial rulers approached shifting agriculture may be seen as a convenient construction to pursue its varied interests (Dove, 1983). In the first place, it concealed the fact that shifting agriculture is much more than a land use system, rather an economic system in its own right. Presenting it as a land use system was an important justification for replacing it with 'sustainable' forms of 'land use' which served its purpose. Secondly, it was able to generate much argument against shifting agriculture. It not only provided a hiding place for its unconcern for investing in the local farmers and farming systems (Malik, 1999) but also be absolved of the responsibility completely. Thirdly, in the name of protecting the environment, it was able to control and access resources which were otherwise withheld from it (Dove, 1983). Thus ecological

[5] 'Inside' voices include individual researchers from communities practicing the system as well as collective efforts like the Shillong Declaration of 2004; various publications by AIPP (Asia Indigenous Peoples Pact Foundation), IWGIA (International Work Group for Indigenous Affairs),IKAP (Indigenous Knowledge and People's Network).

[6] Interests in traditional technologies are reflected in efforts to determine and conserve GIAHS (Globally Important Agricultural Heritage Systems), TEK (Traditional Ecology Knowledge), TFK (Traditional Forest Knowledge) etc.

concerns were used as effective platforms to reduce and relegate shifting agricultural systems by generating opinion against it. These arguments then served as the basis of policy-making which was often used to establish control over resources, excluding farmers or dictating terms to them while exploiting the resources themselves[7]. The colonial practice of demarcating forests and exploiting it for its own purposes is a case in point.

2.2 Shifting Agriculture: A Space-Producing System

There is another way in which the colonialist-environmentalist perspective may be understood. While reinforcing the argument given above, it also explains the ready adoption of these views by the newly independent states. However, this requires that shifting agriculture be presented in a radically different way from how it has had been so far.

Shifting agriculture, especially in its traditional form, is a mode of production which is quite distinct from capitalism. As Lefebvre (1991) pointed out that 'every mode of production produces its own space', shifting agriculture also produced space. However, the nature of space produced by shifting agriculture was an anti-thesis to that produced by capitalism. Shifting agriculture was largely a self-sufficient system[8] where abundance of food or lack of it was largely negotiated through kinship and strong social relations. The villages functioned more or less as republics, owing no allegiance to any state (Scott, 2009). These had their own property rights regimes which were communal in nature but well-regulated by various institutional arrangements. Labor was mostly family based or exchange labor, to compensate for shortages during peak seasons. The diversity in social customs across communities and villages are also well known.

Thus, shifting agriculture produced spaces that were in direct conflict with capitalism. The market did not exist 'within' the system; labor was rarely employed but commonly

[7] See, for example, Verrier Elwin's (1931) account of the 'Baiga' (pg. 100-131). He has detailed the state's opposition to '*bewar*', reasons for doing so, as well as contrasting opinions from a few officials.

[8] Thrupp et al. (1997), Dove (1983) and others have shown that shifting agricultural farmers in many places have been anything but isolated; rather they have participated in the market. This does not negate the position of this paper that shifting agriculture is a mode of production different from capitalism.

shared or exchanged; the community played a major role in land management and very often 'owned' it in some way; social customs were also far from homogenous. This indeed was antagonistic to spaces produced by capitalism where market played the central role. It was incompatible with the economic system propagated by the state, either imperialist or neo-liberal. While shifting agriculture did not pose a threat to the world-conquering capitalist system, it nevertheless did represent a space that needed to be subjugated. In addition, the republican character of these villages gave impetus for the state to bring them under control, a process that is continuing under the majority state till date. It is therefore no coincidence that these marginal places are also seen as a security problem for the state, hindering national progress (AIPP, 2009). The South-Asian experience, at least, lends support for such reasoning (Scott, 2009).

It was therefore, not in the interest of the rulers to see shifting agriculture as a 'way of life', much less present the complexities and intricacies with which the system functioned. The environmental-ecological paradigm served as a far better entry point from which control could be extended and maintained, politically and economically. The ecological approach to shifting agriculture therefore is deeply stained with colonial colors. While environmental issues are indeed one of the concerns, the historical context in which these developed suggests that it was hijacked to fulfill the purposes of the powers that be. Consequently, these views seem to have strongly shaped the whole academic discourse around shifting agriculture, even until today.

2.3 Critiquing the Environmentalist Approach

The environmentalist colonial views of shifting agriculture may be differentiated from the present which have tended to be more technology oriented, especially in the Indian context. The colonial rulers saw it as 'wasteful' utilization of resource and actively propagated 'replacing' it to change the 'quality of life' of the people who practiced it (Elwin, 1931; Hamilton, 1948). This was also followed by the newly independent Indian state. The more recent view recognizes the diversity of practices, traditional ecological management and farmers' innovation. It also acknowledges the importance of traditional ecological knowledge (TEK) and traditional forest knowledge (TFK) in any conservation

effort (Ramakrishnan, 2007). There are also suggestions for a 'hybrid technology'- combining traditional and formal knowledge to address concerns in the system (Ramakrishnan, 2007; Suraj, 2008; Task Force, 2006). In fact, arguments for a 'scientific swidening' had been put forward in the 1950s by Verrier Elwin and later by Sachchidananda (1989). Indeed, these views are radically different from the colonialist view, and perhaps hold important keys to addressing the issues in shifting agriculture.

However, shifting agriculture cannot be seen only in its relation or effects to the local and global ecology. Neither should policies be confined to addressing only the ecological concerns. Research from different places wherein it is practiced have repeatedly pointed to the social, cultural and religious connections apart from the complex adaptations to the local ecology (Conklin, 1961; Nye and Greenland, 1960; Ramakrishnan, 1992). Others have preferred to call it a 'way of life' while this study sees it as a space-producing system. In fact, Conklin (1961) had called for a 'combined ethnographic and ecological approach' to study this system.

Indeed, issues in shifting agriculture, even if they are environmental in nature, are embedded in the structures that allowed it to function smoothly. The issues therefore are not only environmental- it necessarily involves land tenures, institutions and the highly complex interactions with the market, apart from others. Tackling these issues cannot be only at the technological level. Ignoring the human element and the different ways in which the farmer engages with socio-political, economic and ecological conditions may lead to failure, like in India, or further complications including threat of greater environmental destruction (Lim and Douglas, 1998).

For instance, commonly recommended policies like alternate forms of land use (wet-rice, terrace) or cultivation of different crops (horticulture/cash crops), addresses only a limited range of concerns. They generally do not provide answers for the 'resulting consequences' arising from their adoption. For example, the market is expected to play a central role in these policies. However market conditions are far from 'perfect' while farmers' interaction with market can also be anything but simple. Lim and Douglas

(1998) reported that the introduction of cash crops led to a general decline in sustainable agriculture as traditional methods of ecology management like soil conservation, selecting appropriate varieties of crops etc. were abandoned. The emergence of private land as a result of market entry and its immediate effects on equity have been raised by a few (Dasgupta, 1986; Mishra, 2006; Sengupta, 2013). The present study also finds that the entry of market has profound implications on tenurial rights.

In the Indian context, the emphasis on the environmental side of the story prompted a counter argument from a cultural basis. This later strand of thought asserted the legitimacy, efficiency and cultural grounding of the system (Shillong Declaration, 2004; Kherkhoff, 2004). It gained more force notably in the wake of government initiatives to stop shifting agriculture. As the Task Force (2006) notes, such a dualism of paradigms caused shifting agriculture in India to be 'trapped in a low-level and unstable equilibrium'. Bela Malik (2003) also argues that farmers found themselves caught between 'marginalization and traditionalism'. In this context, the concept of 'hybrid-technologies' may perhaps be seen as a middle ground between two extremes.

The environment as an entry point to shifting agriculture, while contributing in a significant way, has been unable to provide a holistic approach to tackle issues in the system. Further, it may be critiqued that the 'issues' it identifies are confined to the ecological. This led to the emergence of a counter-paradigm which asserted the 'way of life' and adaptation to a unique environment. Both these views, however, share a common underlying reasoning where environment is given primary importance. The ecology framework, while it may have considerably changed in the last few decades, still approaches the farmer primarily for his role in the environment. The cultural argument on the other hand, restricts farmers' adaptations *to* ecological constraints.

The lack of equally persuasive arguments in response to the ecological paradigm has hurt research on shifting agriculture more than anything else. It has led to the 'immediate' and 'visible' taking precedence over the temporal while blanketing out other more 'subtle' components which play no lesser role in the system. This paper suggests a different

framework where the farmer is seen as the primary actor whose actions have manifold effects which is not confined to environment.

2.3.1 Overlooked Themes: Need for a Paradigm

One of the criticisms against the ecology-centric approach is that it is color blind: it identifies only selective themes and issues while ignoring or sidelining a range of other subjects. Shifting agriculture is largely identified with environment rather than for any other reasons, like community management of resources, genetic diversity or the steady increase in inequality. Indeed these themes have also been explored but on a limited scale. Literature in common property resources management has seen little contribution from similar practices in shifting agriculture. The diversity in the shifting agricultural fields still remains undocumented to a large extent (Rerkasem et al., 2009). The steady privatization of communal lands (Mishra, 2006), often in the face of a penetrative market encouraged by the state has not got much attention from researchers in shifting agriculture. The resulting issues of social and economic inequality (eg. Ganguly, 1969; Dasgupta, 1986; Sengupta, 2013) have found little audience too. There has been no question raised on how changes in religion, as witnessed in many communities who have become Christians in the past century (e.g. Nagaland, hills of Manipur), affected the oft-quoted 'way of life'.

Too often, shifting agriculture in India, specifically in the North-east, has been analyzed outside of the state's macro-economic policies which are not directly related to the system. For example, government initiatives like the 'Look East Policy' (now 'Act East Policy'), 'Smart Cities' project and resultant development of communication network, market centers etc have huge implications for the shifting agricultural economy. The direct and indirect effects of large scale migration of people from the North-east to metro-cities for education and job opportunities have yet to be understood. Fieldwork for the present paper reveals that remittances from outside often play a significant role in shaping household characteristics within the agricultural system. Various other themes and questions related to shifting agriculture remain unexplored.

Malabika Dasgupta's observation (1986) that issues in shifting agriculture cannot be addressed adequately 'in isolation or within the existing framework' holds much significance. Cairns and Brookfield (2011) echo a similar opinion, that shifting agriculture in India has been based on an 'oversimplified model, in regard to external forcing that has also been oversimplified'. It is obvious that neither technocratic nor simplistic cultural adaptation approaches can adequately address these emerging questions. Indeed this unprecedented phase of transition in shifting agriculture (Rerkasem et al., 2009) is also a period of adaptations to rapidly diminishing land for agriculture and increasing ways in which land may be put to use. With the market being seen as an integral part of the production system, shifting agriculture has begun to take on a character different from the traditional one.

Perhaps, the discourse has to move beyond the debate that focuses on whether shifting agriculture should continue or not. Such an approach romanticizes the past without addressing present issues. New questions that pertain to long term development need to be asked even as immediate concerns of livelihood and environmental degradation are managed. In fact, the direction of research in shifting agriculture has to take a different course quite unlike the dualistic opposing paradigms of the past. Policy making has to re-define its priorities as well as methods of intervention. A radical re-imagination and conception of shifting agriculture is fundamental to such a change. It is imperative that such a perspective captures the internal contradictions and their resolution; the complex process of adaptation to external constraints, interventions and opportunities; the outcomes of such adjustments as well as the shifting agricultural farmer and his changing society.

2.4 Shifting (Jhuming) Agricultural Production System- A New Old Paradigm

Shifting agriculture has been commonly referred to as a 'system' even though there is a lack of clear definition of what the 'system' really is[9]. Terms like forest fallow system, land use system and agricultural system have also been used to refer to shifting

[9] Almost all researchers have referred to shifting agriculture as a system. For Example: Hamilton (1948), Nye and Greenland (1960), Conklin (1961), Boserup (1965), Sachchidananda (1989), NEPED (1999), Alternatives to Slash and Burn (2005).

agriculture. Ramakrishnan (1992) argued that it is an ‘agro-ecological system’, pointing to the local ecological conditions in which shifting agriculture is closely situated. Shifting agriculture as a ‘way of life’ also depicts a system, but with more emphasis on the intricate linkages that bind social life to the agricultural practices.

Perhaps the various terminologies point to different aspects that shifting agriculture exhibits as a distinct mode of production. While this characteristic of shifting agriculture is acknowledged, it has hardly formed a basis for an enquiry into the issues it faces. This paper builds on the fact that shifting agriculture *was* a self-sufficient production system. It proposes that the internal dynamics of this production system be explored to characterize traditional shifting agriculture and the society which practiced it. Further it argues that shifting agriculture in its present form may be seen as a production system undergoing transformation. Perhaps this can be a helpful lens from which a more complete picture of the complex processes involved can be derived. It is hoped that such an approach can bring to light emerging issues while keeping the long term considerations in perspective.

Before further discussion, it is necessary to distinguish between shifting agriculture and ‘slash and burn’ as has been used in recent literature (Ganguly, 1969; Laurance, 1999; ASB, 2005). They may be differentiated on the basis of history and association to a particular place. A shifting agriculture village or community generally has a long history over a place wherein it carries out the practice. In other words, these communities have been associated with the place, adapting to its unique ecology even as it transforms it. On the other hand, ‘slash and burn’ farmers do not have any historical association with the place. Some of these farmers ‘follow the trails of loggers deep into the forest’ (Laurance, 1999) or exploit the forest margins due to poverty, migration or as a result of some colonization program (Ganguly, 1969; ASB, 2005). One of the major differences apart from historicity is the technology with which the ‘slash and burn’ farmers and the shifting agriculture farmers are equipped with. It may be noted that number of years fallowed is not a criterion.

2.4.1 The Traditional System

Fig 2.1 is a graphical depiction of the 'traditional' form of shifting agricultural system. However this mode of production may no longer be found due to reduced length of fallows and the strong influence of the market. The agricultural society is nestled in the local environmental conditions. The production process involves shifting agriculture and is based on 'communal' ownership of land[10] and exchange/reciprocal and/or family labor. These components, especially land tenurial arrangements strongly influence the nature of institutions. Other components like ecological knowledge and social capital are essential to the functioning of the system though they perform very different roles. Social values and kinship relations strengthen social capital while playing a crucial part in organizing labor. There is little outside intervention apart from inter-village or inter-community wars, or the dangers posed by wild animals. Linkage with the market was minimal and had little influence on the production process.

The land-use system favored communal ownership and management in one form or the other. Institutions catered to sustaining such an ownership pattern, apart from various other political and religious functions. The production system ensured a relatively egalitarian community without much diversification of occupation. It also often required these communities to be situated away from each other or from other systems with a different practice. Labor was therefore largely family based, reciprocated or exchanged, especially at peak seasons. Gender relations were strongly influenced by the agricultural process, not only in terms of sharing labor but also in managerial capacities. Belief systems, mythologies, rites and rituals, and festivals were closely linked to agricultural practices. The aspiration of the farmers were situated deep within the existing social order, and is explored in detail in chapter 5. In brief, the mode of production determined to a great extent all the other aspects of life; it was especially so for communities with little influence from the outside.

[10] 'Communal' ownership of land is used to refer to the great extent in which community decides on the use of land, and not necessarily as being owned by the community. For example, selling of land outside of the community is a common restriction which the individual has to comply with (Fernandes, 2009). Land ownership and management varies widely across different communities.

The ‘space producing’ characteristic of this production system has been briefly hinted at in an earlier section of this chapter. While the ‘production of space’ is not a major thrust area of this study, the nature of space associated with this mode of production is clearly visible. Firstly, it can be observed in its geographical location *vis a vis* other communities or systems which also often resulted in its relative isolation. Secondly, it is visible in the landscape that it produces over different topographical specificities. Thirdly, spaces in the field are delineated amongst different crops and their relational differences between man and woman[11]. Fourthly, labor sharing and managerial differences between man and woman in the field also spill over to determine gender spaces in the family life, social life and even institutions. It is most likely that exchange labor arrangements which were based on trust, also aided in building up social capital which was essential for the working of this system. It is also interesting to note that ‘technology’ did not ‘belong’ to any single individual or group. Perhaps, this factor, along with ‘communal’ ownership of land was the basis of an undifferentiated society. Relative absence of hierarchy in social life and relatively equitable economic space amongst individual households was therefore a product of the economic system.

Characterizing the traditional production system is helpful in many ways. It establishes the ‘base’ over which new components are being ‘superimposed’, completely redefining existing relationships and giving rise to new ones. It also provides an image with which the present system may be contrasted with, not so much as to judge which is a ‘better’ system; rather, to appreciate the extent and nature of changes. The ‘production system’ approach helps trace and appreciate the complex causative cycle initiated when changes are introduced in one component.

2.4.2 The Modern System

The ‘modern’ shifting agricultural production system is much more complicated compared to the ‘traditional’ (Fig. 2.2) In fact, it is very much unlike the ‘traditional’ system. For example, components of the capitalist system, especially market is playing an

[11] For example, while the woman or wife pays more attention to vegetable crops that are an important part of daily diet, and with which she identifies herself strongly with, the husband/male does not give the same attention. His attention perhaps might be on whether the field is being attacked by wild beasts.

increasingly significant role. At the same time, 'modern values' of education and the 'higher merit' ascribed to it have quietly re-shaped the character of the agricultural society. Components of the traditional system have not yet been reduced to relics; on the other hand, they are interspersed with many new aspects. It is a production system undergoing massive transformation.

Fig 2.2 attempts to capture shifting agriculture in its present form, especially in the Indian context. It locates drivers of change in external interventions and internal demographic changes. The later has been the most commonly cited factor for decreasing jhum cycle and hence unsustainability. The system approach also attempts to describe resultant changes in agriculture, and consequently on the society and ecology. In doing so, the close linkages amongst different components are highlighted. Particularly, the intricate and causative relation between market, new agricultural practices and land tenures are explored. The tendency to promote inequity is noted. In brief, the 'production system' approach to shifting agriculture seeks to offer a balanced perspective on the unprecedented transition that it is going through. In other words, the 'production system' provides a framework where drivers of change, the resultant internal modifications and their outcomes can be placed in their proper contexts.

2.4.2.1 Drivers of Change

Shifting agriculture has been shaped by a combination of factors over a period of time. Perhaps it is more realistic to note the cumulative effect of these factors rather than studying them in isolation. Identifying drivers and effects of change is therefore not a straightforward exercise. However it is essential in deriving a balanced picture of shifting agriculture. First, the external forces that have induced changes in the production system are considered.

Much of the external factors can be linked to the government's policies. Firstly, there are drastic, visible interventions like jhum control and reserving forest. The later was actively pursued by the colonial British and its effects were most strongly felt then (Elwin, 1931). Jhum control essentially were programs where alternative farming methods like wet-rice,

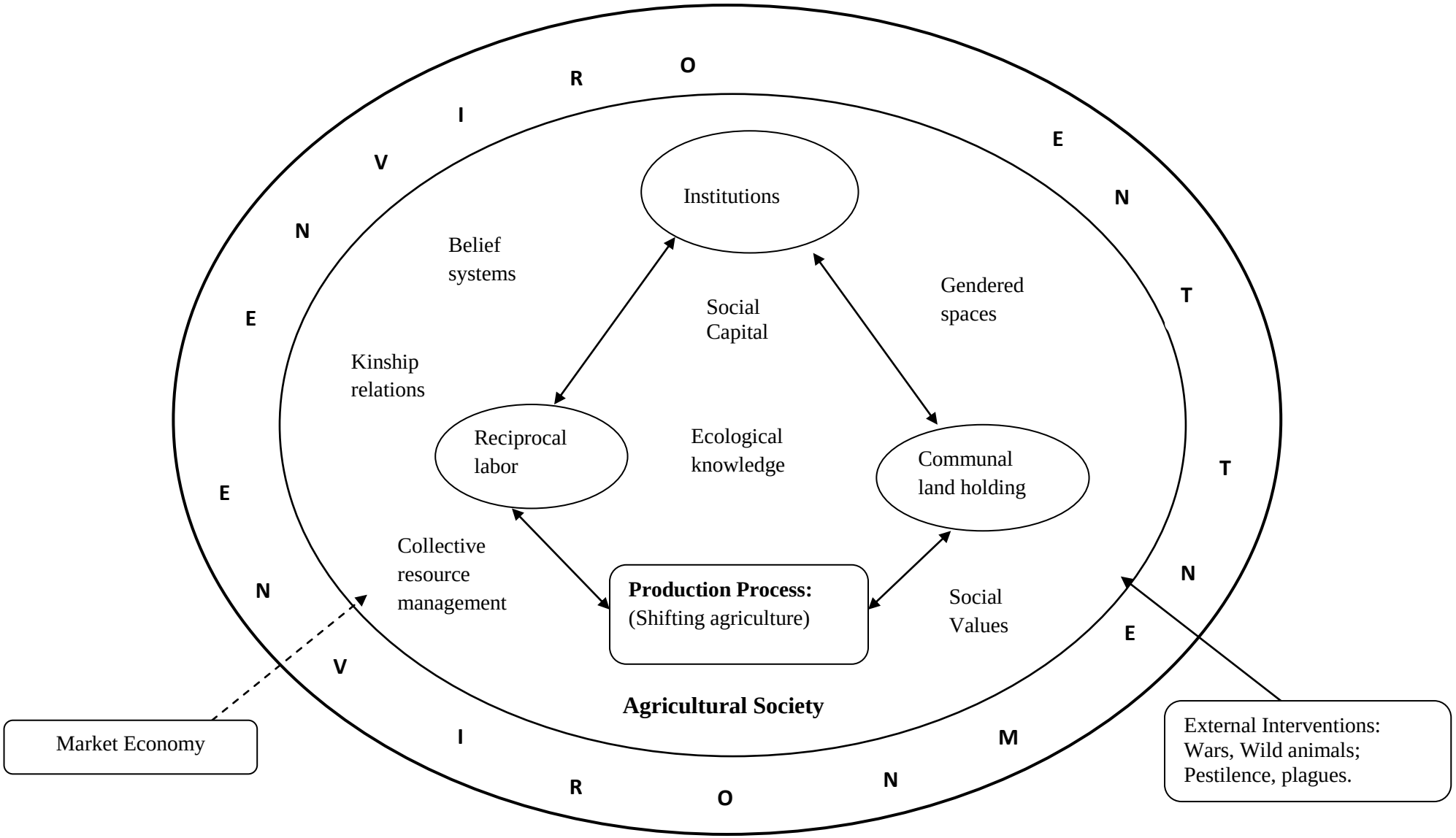


Fig. 2.1 Traditional Shifting Agricultural System

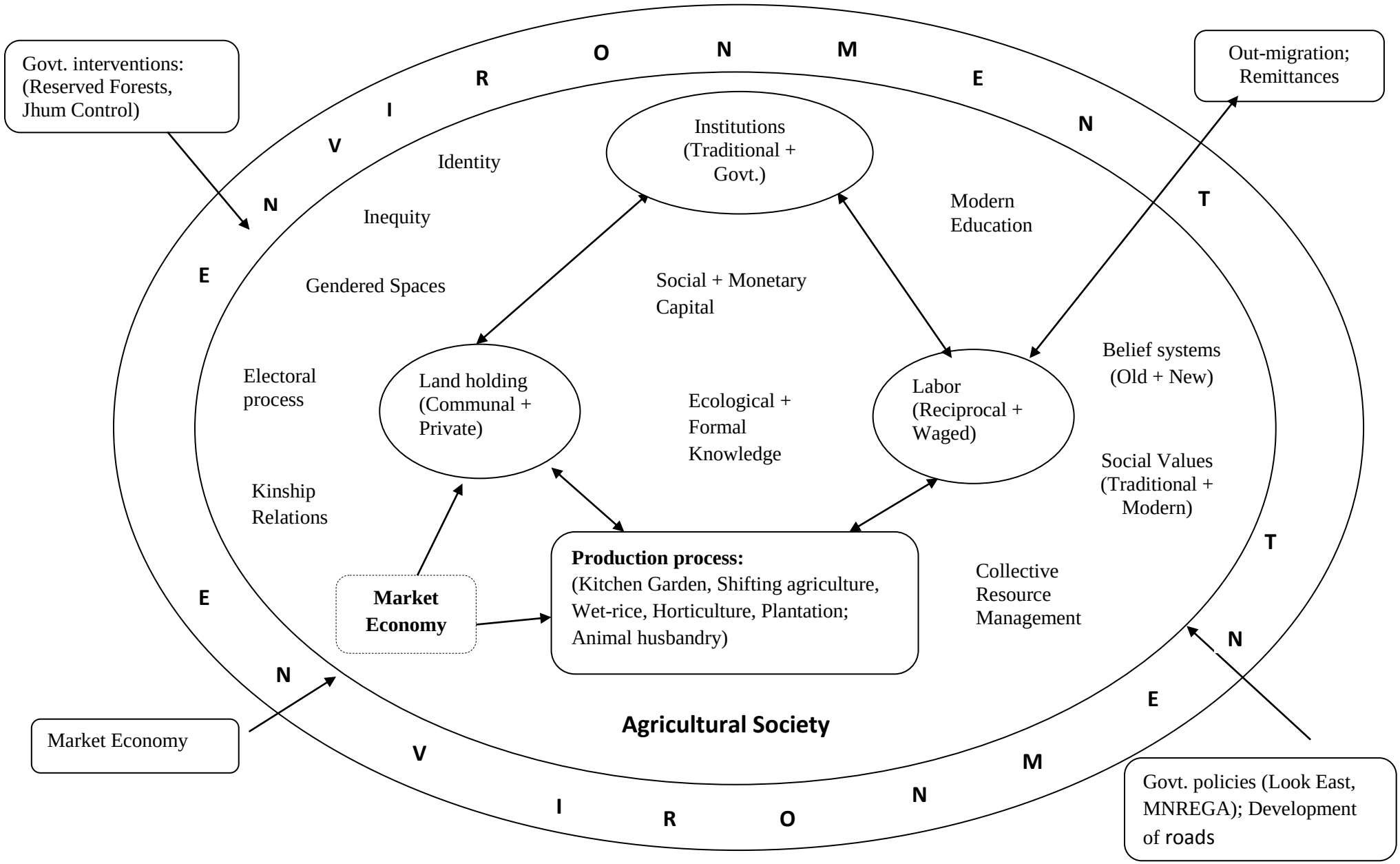


Fig. 2.2 'Modern' Shifting Agricultural System

cash crop cultivation, horticulture etc were encouraged with added incentives. However questions are raised if these policies achieved the desired outcomes (Das, 2006). Secondly, there are more subtle but far more influential policies like western education and developmental projects like making roads. While these are not directly related to jhuming, perhaps they have exerted a greater influence than the more obvious policies. The importance of roads extends far beyond linking isolated villages to the market which is the third and perhaps the most dynamic factor. Fourthly, macro-economic policies of the government like MNREGA (Mahatma Gandhi National Rural Employment Guarantee Act) have significantly shaped the economy of shifting agricultural villages[12], perhaps for the better. The Look East Policy which also includes making roads is also bound to transform many villages situated on or near the routes. A sub-project of this road passes through the two villages studied in this paper[13]. Evidences from the field suggest that the immediate impact of these roads is the compensation money which raises questions on earlier accepted notions of land rights and property rights in general. Other factors like the introduction of electoral politics have a more indirect effect. In fact, in the two villages surveyed, community decision rather than election, which is the government's norm, decide the members of Village Authority.

There are some states where certain outside forces have almost singularly shaped jhuming practices. For example, Tripura experienced a radical demographic transformation due to migration after India's independence and later that of Bangladesh's (Ganguly, 1969, Dasgupta, 1986). Tripura is perhaps the only state where population pressure, albeit from outside, has altered the whole dynamics of shifting agriculture, resulting in loss of land and even identity in the case of the *Reang* tribe (Sengupta, 2013).

The second important driver of change is internal, which has also been presented as the most significant in Indian literature: increasing population density (eg. Ninan, 1992;

[12] The impact of MNREGA has not been studied with regard to shifting agricultural communities. However insightful experiences from the field point to its obvious impact. For example, in Ijeirong village (between Puichi and Haochong village), it is learnt that funds from MNREGA were utilized to prepare wet-rice fields for almost every household of the village. This was done with active involvement of the Village Authority and *Thampei*.

[13] Construction of the 'Imphal-Kangchup-Tamenglong Road' in the two villages was yet to start in 2014.

Tiwari, 2007). While most scholars have not questioned the linear relationship between increasing population and reduced jhum cycles that this theory projects, this view needs to be subjected to certain qualifications. In the first place, population pressure alone does not lead to decreasing jhum cycle. It is a cumulative process where the government practice of reserving forest and encouraging growth of urban areas (Nongkynrih, 2008) play equally important roles. Secondly, it does not take into consideration that many families move out of jhum for a variety of reasons: government jobs, migration to towns and cities etc. Farmers in the North-east have diversified to take advantage of market opportunities (Birthal et al, 2006). Bose (1967) also reported that villages near markets were more diversified, 'agriculturally poor' and less dependent on jhum while the reverse was also true. Thirdly, this view is Malthusian in that it predicted that increasing population would lead to a decreased jhum cycle resulting in an 'ecological disaster'. Such a 'disaster' however, has not happened (Cairns and Brookfield, 2011). Finally, this much discussed relationship between population increase and decreased cycle has not been established in the context of North-east India. According to the Wasteland Atlas of India (2000, 2005 & 2010), the area under shifting agriculture has been declining. However, absence of data like the number of families practicing the system[14], means this popular theory is subject to debate.

2.4.2.2 Changes in the System

The most visible changes in the system appear to be in the agricultural component. It is accompanied by radical but less perceptible changes in the society which is dealt with later. While there is a general lack of data, literature points to two common features of change in agriculture, both of which are also closely related- diversification of the economy and greater linkages with the market. As pointed out earlier, the market is expected to play a central role in shifting agriculture. This is to be done by diversifying and as Ramakrishnan (2007) fittingly suggests- 'by taking the pressure off shifting agriculture'. The congenial agro-climatic conditions of North-east India to cultivate a variety of high value crops like vegetables, fruits, flowers and spices further encourages

[14]The number of families practicing the system was last provided in 1983 by the Task Force on Shifting Cultivation in India. This is quoted by the Task Force of 2006 and others like Tiwari, 2007.

diversification (Birthal, 2006). This study posits that changes in shifting agriculture are, in fact, a shift away from the traditional practice. In other words, changes in the jhuming system largely mean the introduction of new land use practices which are more 'settled' and market-friendly, rather than 'improving' jhum.

As Fig 2.2 depicts, production processes like wet-rice, horticulture, plantation, kitchen garden, animal husbandry etc are replacing shifting agriculture which used to be the most important economic activity. Adoption of these new land use practices have been made possible by bringing the market 'closer'. Diversifying economic activities also mean the gradual replacement of exchange labor by waged labor. Most importantly, a strong emphasis on private land ownership ensues. Consequently, individual farmer's decisions begin to gain more significance even as the hold of traditional institutions decline, both in scope and its ability to secure compliance.

Perhaps, 'innovation' of the present time is to do with scarcity of land on the one hand and opportunities with the market on the other. The market may therefore be seen as the main driver of change in shifting agriculture. In other words, the role of the state in bringing new land use practices in shifting agriculture has been limited and indirect. These have been largely induced by the market as farmers sought and are encouraged to build on opportunities provided by the market.

A radical social change that has got little attention accompanies the changes in agricultural practices. It is the redefinition of 'needs'. As Lim and Douglas (1998) highlighted, the 'perceived needs' of the farmers are increasingly bought from 'outside' the jhuming system. For example, getting modern education is considered a necessity, even though it means less working hands and greater expenditure. Thus, 'viability' of shifting agriculture is often judged by its ability to support these 'needs'. There is another aspect of change brought about by 'new needs'. It may be noted that needs and wants are also closely linked to ambitions and imaginations. Education, greater accessibility and other factors have transformed the society radically by redefining its 'needs' and 'imaginations'. In other words, the ambition of a child of a jhuming farmer is not in the

jhum field. His/her dreams are no different from many others from the rest of the country: to become an IAS officer, for example. Such ambitions are gradually becoming a reality too.

While success of this nature is a reason for much celebration, it is 'outside' of the jhuming system. It is also clear that jhuming agriculture has had little role to play except in providing the most basic necessities or perhaps more importantly as a source of motivation. Without taking anything away from the hard work, competition and excellence that IAS officers, doctors and engineers exemplify, these are 'successes' defined by the market-driven state. 'Needs and wants' as well as 'rich and powerful' were perceived in the context of the agricultural system in a radically different manner in the traditional jhuming system. (This is discussed in detail in Chapter 5). In embracing these new definitions, shifting agriculture as a unique 'way of life' may be equated with 'rural life'; where 'rural-ness' may be understood as being situated on the margins of a capitalist system. Shifting agriculture thus makes a transition from a 'production system' to 'agricultural production'. It puts on the character of a purely economic process, differentiated from social values and aspirations, and belief systems in cases where religion has been changed too. Needless to say, countless families, villages and communities, are undergoing this transition process. The degree of transformation and semblance to the traditional practice, however, would depend on the length of interaction with the market.

2.4.2.3 The Outcomes

The above discussion establishes that shifting agriculture in India is indeed undergoing an unprecedented phase of transition at multiple levels. New agricultural practices buoyed by market opportunities are encouraging private ownership of land (Mishra, 2006; Nongkynrih, 2008). At the social level, the aspirations of the new generation are located outside the shifting agricultural system. The historical inconsistency in the dreams of the fathers and their children are embraced for 'progress and economic development'. Shifting agriculture is then carried out purely as an economic activity. Whatever little associations it still has to traditional social values and belief systems are relics of an

increasingly blurred past. The capitalist annexation of shifting agriculture has thus been nearly completed.

This transition phase of shifting agriculture is one of much uncertainty. Shifting agriculture as a production system is in demise. However it has not yet been completely replaced by the capitalist system either. Thus, elements of both may be found to exist together: traditional and government institutions, private and 'communal' land holdings, traditional and 'formal' knowledge, social and 'monetary' capital, traditional shifting agriculture and other land use practices (Fig 2.2). However the 'coexistence of cultivation systems' (Boserup, 1965) is not a result of population change and technological innovation. This is a result of space-capture and superimposition of capitalist components.

The challenge of this transitory phase is therefore, unique. New land use practices are introduced and built on similar property rights regimes that existed with shifting agriculture[15]. In other words, these practices encourage private ownership of land in regions where the community had much control. It may be mentioned that one of the important process of privatization is monopolization by the tribal elite (Dasgupta, 1986). This results in internal alienation of land where the elite also owns most of the fertile lands (Shimray, 2008). As Nongkynrih (2008) argued, privatization in societies with a long history of communal ownership might lead to land getting concentrated in fewer hands accentuating inequalities. Therefore, encouraging market-oriented cropping systems without any regulations would exacerbate existing differences and inequalities resulting in social and economic inequalities.

While outcomes in general are yet to be fully comprehended across communities and villages, the question of equity in terms of ownership of capital or land seems to stand out (Ganguly, 1969; Dasgupta, 1986; Sengupta, 2013). In addition, a combination of strong market forces (Lim and Douglas, 1998), ill-defined property rights (Mishra, 2006) and

[15] New property rights regimes which may be more private in nature are built on land regimes where the community had much control, whether in terms of ownership or management.

weak institutions (Task Force, 2006) may also result in intensification of ecologically unsustainable production process for short term profits. These outcomes have significant repercussions for the society and ecology. The question of equity may be left unaddressed only at the cost of depriving the futures of many.

2.5 Summary

This chapter set out to propose a framework by which shifting agriculture could be understood. This was sought to be done as existing literature and their frameworks did not adequately capture the massive changes it was undergoing. This required a deconstruction of colonialist viewpoints which saw shifting agriculture from an environmentalist lens. Shifting agriculture as a unique mode of production is then presented as an alternative paradigm. Further, it is argued that shifting agriculture is a producer of space that is antagonistic to that produced by capitalism. The ecological entry point is thus critiqued as an attempt to capture space by the market-driven state. In addition, it provides only a partial picture of the changes within shifting agriculture. Policies formed from such analysis have failed in many cases while being unable to account for the consequences arising from such interventions.

Appreciating shifting agriculture as a different mode of production enables one to see the intricate links amongst different components. Agricultural practice, land use system and tenures are reflected on the institutions, social order, belief systems and imagination. This picture of the ‘traditional’ practice is set in the background to act as an image from which divergences in the present system may be compared with. The drivers of change in the ‘modern’ system of practice, the resultant changes in agriculture and society, and their consequences are analyzed. In doing so, the ‘production system’ framework brings to the fore subtle changes that have not got much attention. The transformation of shifting agriculture to a purely economic activity and the complete capture of shifting agricultural space by replacing its imagination may be emphasized. Inequity and increased ecological destruction are presented as possible outcomes.

While highlighting the non-linear, complex relationships between interventions and the various components of the systems, this chapter calls for a more wholistic approach in policy making. Encouraging new cropping practices should be accompanied by measures to strengthen local institutions and prevent land alienation. This chapter provides a structure on which the rest of the chapters, focusing on specific components, provide greater detail with insights from the field.

CHAPTER 3

INSTITUTIONS, TENURIAL SYSTEMS AND LABOR ARRANGEMENTS

Institutional diversity that characterizes shifting agricultural societies has become a subject of considerable interest. Apart from the important roles they play at the local economy, their varied adaptations in the face of state-sponsored market penetration are seen as 'the diverse pathways of the transition' towards market economy (Harris-White et al., 2009). Their importance, however, have been understated in mainstream literature which emphasizes on agriculture and its outcomes. Consequently, much lesser attention has been paid to the underlying (and overlying) structures that shape shifting agriculture, especially in India. This led to a mismatch between underlying 'institutional assumptions' of state policies and the local institutional realities (Mishra, 2006) rendering these policies largely ineffective.

The strong linkage between land tenures and land use practices, especially in the context of shifting agriculture, was stressed upon by Boserup (1965). They have not been subsumed into the capitalist economy despite decades of state-led advance of capitalism. A handful of scholars have pointed out that these non-market institutions continue to play highly significant roles today (for instance, Harris-White et al., 2009; Mishra, 1983). Far from 'custom' being replaced by 'contract', institutional 'adaptation, continuity and hybridity' characterize this period of transition (Harris-White et al., 2009). 'Traditional' shifting agriculture is found to co-exist with newer forms like wet-rice or horticulture. In the same breath, 'legal' institutions like the 'Village Authority' co-exist with the traditional village councils, as this chapter shows. The same hybridity is also witnessed in various labor arrangements across communities (Harris-White et al., 2009).

However, the existence of traditional and market institutions side by side in the Indian context is not triggered by what Boserup (1965) postulated- population increase and land

use intensification. While a normal demographic progression has indeed played a part, the case of the North-east India differs in a significant way. The current transition in shifting agriculture began with colonial contact and superimposition of capitalist modes of production and production relations. This is characterized by the establishment and gradual consolidation of state apparatus across the region alongside 'developmental' projects like road building, establishment of urban centers and the like. Market was, thus, brought by the state. Policy formulations also generally disfavored the 'traditional' production systems, and often resulted in drastic interventions to stop or replace them.

The last two decades or so have not seen the more visible interventions of the past. But this period has witnessed the rapid penetration of the market coupled with greater interest in the region for strategic and economic purposes, further strengthening state control. Thus agricultural transformation is market led, though strongly supported by the state. As this study argues in chapter 4, it is a transformation *away* from shifting agriculture *towards* greater market integration. This is a solution commonly offered by scholars and policy makers alike concerned with the subject. Indeed, market integration is projected as the way forward in shifting agriculture in the north-east. It is in this backdrop that the current transition is set.

It also serves as a useful entry point to this chapter. It is no easy task to characterize these institutions, however, as local specificities hinder comparability across communities and even villages. Still, attempt is made to derive a useful picture of institutional change and continuity in the villages under study. This builds into the framework that is followed, where agriculture is seen as a visible expression of various other 'internal processes'. Thus, it also serves as a background to the chapters that follow, especially agriculture.

The chapter makes an effort to highlight co-existence of institutions at different scales: the organizational level, land tenures and labor arrangements. 'Context specific operational meanings' (Mishra, 2006) that has arisen in access and usage of common property resources are also dealt with. It also draws attention to the unequal gender

relations at each level and how these are perpetuated and reinforced (or not) due to superimposition of the capitalist system.

3.1 Institutions that Govern

The two villages under study, Haochong and Puichi village, have striking similarity in terms of their institutional arrangements. This is perhaps due to geographical proximity over a long period of history. It is also likely that the shared language and (Inpui) ethnicity played a significant role. The influences of the *Meitei* kingdom of the valley can also be seen in both villages, especially at the organizational level. No distinctions are made therefore, except when necessary.

Institutional organizations in the two villages are delicately and inextricably bound together. This can be appreciated far more deeply when one traces their origins. For example, the 'Village Authority' (hereafter, V/A) is a legal body. It is strongly influenced and works in tandem with *Thampei,* the traditional village council. The moral basis of 'fair' working for both is largely based on the Biblical worldviews represented by the Church. By all accounts, one may safely assume that these three institutions of differing origins have been interacting with each other for close to five decades if not more[16]. The present state of harmonious relationship has certainly not been always the case. Accounts of persecution of the first Christian converts are still fresh as many are first-generation believers.

The circumstances in which these institutions adapted and transformed themselves may be kept in mind. As mentioned in the introductory chapter, these two villages were not much affected by the state-sponsored jhum control programs, except for the introduction of wet-rice agriculture in the 1970s[17]. The development of the church was not much

[16] Though Village Authority was established by law in 1956, the period from which it began to be implemented in the two villages is not clearly known. But it certainly was being followed in the 1970s. There is evidence to believe that prior to the 1970s, its functions were limited, even if it was present. For example, the abolition of *Taram* in 1960s in Haochong village was carried out by the *Ngaanchang*, the traditional administrative body. In Puichi village, the memorial stone of Tariti.

[17] Most of the elders who lived through the 1970s do not associate introduction of wet-rice with jhum control programs. Only a handful acknowledges that wet-rice came as a part of the program. They do, however, maintain that it did not affect jhuming much. This appears to have been true, at least in the short

influenced from the outside once it took root in the villages in the late 1950s. The British, who were stationed in Haochong village before World War II, facilitated the introduction of *Gaon Burah,* which transitioned to the Village Authority after Independence. The two villages did not witness drastic changes after the Village Authority became the norm for village administration[18]. The more significant elements of this period were the opening up of villages by roads and introduction and growth of education.

In a sense, therefore, interaction between institutions and resultant adaptations evolved in the absence of drastic interventions from outside. This may perhaps be the reason for relative stability of institutions and ability to ensure continued compliance from the community. While some institutions have withered away (and some have disappeared altogether), some new elements have emerged while other aspects have become stronger. This can also be linked to the policies pursued by the state. It is obvious that transition is an ongoing process, perhaps at a greater rate than in the past few decades when the market was 'far away'. The institutions (organizations) currently found in the two villages are presented in Table 3.1

3.1.1 *Kraanmi*, the Highest Institution

The *Kraanmi*, literally translated as 'men of war', is the supreme body in Puichi and Haochong villages, as in any other Inpui villages. It is a traditional body which actually means 'Military Council' (Khumba Alung, 2012) and consists of only adult males. It is the highest collective body (though only of males), to which a person or organization in the village is accountable. The decision of this body carries with it the utmost sense of urgency and seriousness. Under normal circumstances, this assembly meets only once, usually at the start of the year and is convened by the Village Authority.

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run. In the long run, as can be observed from field-work, wet-rice has changed the jhuming landscape considerably.

[18] The importance of the Village Authority was primarily in its relation to the state. It did not 'govern' the village; the traditional village council of *Thampei* commanded much respect and legitimacy in village affairs. Significance of the V/A increased manifold only after the state began to involve this institution in its development plans. A recent example would be MNREGS, where the V/A is involved in planning work to be carried out in the village, submitting reports, collecting and distributing wages to the villagers.

It is noteworthy that this institution has managed to retain its supremacy and relevance in the village administration. All other traditional bodies of specific purposes within the *Kraanmi*, except *Thampei*, have either faded away or been replaced. In the traditional set-up, the *Kraanmi* had six divisions (from the eldest to the youngest of age): *Thampei*, *Ingaanchang, Inlak, Khangbwan, Khangriak Kainu* and *Katang Inn*[19]. The *Katang Inn*, the boys' dormitory[20] where young unmarried boys spent a greater part of their pre-married life, formed the primary unit. A progression through the various stages culminated in the *Thampei*, a body with ritualistic significance. The traditional administrative body, *Ingaanchang*, has been replaced by the Village Authority. The ritualistic roles of the *Thampei* have also been taken over by the Church. In fact, the Church has also replaced the *Thampei* to decide when a person may be considered an 'adult'[21]. Despite these drastic changes in other bodies, the *Kraanmi* has evolved to remain the most powerful body in the village.

The *Kraanmi* performs some important functions in the village. Most importantly, it provides a place for people to express their opinions on all aspects of the village life. Thus, it holds all office-bearers accountable, including (especially) the Village Authority (V/A). In both villages, the Chairman, Secretary and other members of the V/A are not elected (as per law), but 'selected' by the *Kraanmi*. In addition, in Haochong village, the *Kraanmi* has set the tenure of these office bearers to 3 years only to enable accountability and transparency; it is 5 years according to the law and is duly followed in Puichi village. In both villages, the tenure of V/A office bearers are extended (or not) depending on the

[19]K Andrew Bariampan (2010) and K Alung Khumba (2012) have described this progression. A male youth became a part of one of the boys' dormitory and the *Kraanmi* after he is declared an 'adult' by the *Thampei*. He would progress to the stage of *Khangriak Kainu* (more a stage than a body) 3 years after his marriage. After 3 years in this stage, he would go on to become a member of *Khangbuan*, which is also for 3 years. The *Khangbuan* performed the role of 'supervisor' in the boys' dormitory. A person would then become a member of *Inlak (Tangsing)*. This group was known as the 'peacemakers' as they persevered to maintain peace amongst the various bodies. The next higher body was known as *Ingaanchang*, a body of 4 persons who took care of the village administration. The senior-most person from this group would join the *Thampei*, as and when vacancy arose. The number of years (tenures) spent in each group was not strictly followed. This seemed to be specially the case when a person transitioned from *Khangbuan* to the other groups.

[20] There were also girls' dormitories, known as *Tangaak Inn*. However they were not a part of the *Kraanmi*.

[21] The youth wing of the Church, the Baptist Youth Fellowship, admits young boys and girls into its membership after attaining a certain age. After this induction, they are considered as adults for all practical purposes like *Kraanmi* (for boys), for labor exchange and even for marriage.

opinion of the *Kraanmi*. The V/A also gives a report of the past year and plans for the year before the *Kraanmi*. While the *Kraanmi* meets annually, it may be convened by the V/A for matters which cannot be handled by the V/A and *Thampei* alone.

The *Kraanmi* is perhaps the only institution that has managed to consolidate its position in the face of legal (V/A) and religious (Church) competition. It may be observed that the *Kraanmi* has evolved to become a (limited) democratic platform wherein common concerns of the village can be shared. It has also ensured that mechanisms of accountability are established amongst different organizations of the village, both legal and traditional. This is perhaps the need of the hour as development funds are increasingly being utilized *via* the Village Authority. The resilience of the *Kraanmi* may be gauged from the fact that it invented new roles for itself which were also highly relevant to the society. The *Kraanmi* is set to play even more active roles in the future, especially on issues like land ownership.

3.1.2 Village Authority: Governing the Village

The Northeastern states of India are governed by administrative structures different from the rest of the country. These mechanisms are spelled out separately in the Constitution of India[22]. The Hill districts of Manipur are covered by two constitutional provisions. The Manipur (Village Authority in Hill Areas) Act, 1956 provided for setting up of a village council as a local body of self-governance. This was different from the traditional village councils and was to be formed by election. The Parliament also enacted the Manipur (Hill Areas) District Councils Act, 1971 for establishing District Councils in the Hill areas of Manipur, similar to the Sixth Schedule.

Legally, the Village Authority is the highest administrative body in the village. However, it is made accountable to the *Kraanmi*. The V/A works as a link between the district and

[22] Some of the states are covered by the Sixth Schedule which provides for the creation of Autonomous District Council. Sixth Schedule covers the areas of Meghalya; the hill districts of Tripura; North Cachar Hills, Karbi Anglong and Bodo Territorial Council of Assam. Arunachal Pradesh is covered by Article 371H and has adopted Panchayati Raj. Nagaland is covered by Article 371A; Mizoram is covered by Article 371G while Manipur is covered by Article 371C. (Report of the Committee on State Agrarian Relations and the Unfinished Task in Land Reforms, Govt. of India, 2009:235-236).

village. All government schemes and development funds are channeled to the village *via* the V/A, and are also utilized through them. The Village Authority has a Chairman, a Secretary, other secretaries (education, forest resources etc) and members. The legal process of forming the Village Authority is by election. But in both the villages, it is formed by an informal process of nomination and selection that involves the consensus and approval of the *Kraanmi*. Changes in tenures introduced by the *Kraanmi* have already been discussed. It has also meant that a single person can work for many terms if approved by the *Kraanmi*. For example, the current Chairman of Puichi Village is now in his 3rd consecutive term. There are some persons from Haochong village also who worked as village chairman for two or more consecutive terms in the recent past[23].

The role of the Village Authority has not been well defined except for developmental activities undertaken through them (Govt. of Manipur, 2007: 163). While this body was supposed to replace the traditional council, it has co-existed with the *Thampei* in the two villages under study. The V/A is not only accountable to the *Kraanmi* but is deeply influenced by the *Thampei* in its workings. It plays only a secondary role in jhuming, ensuring that *Thampei* decisions are complied with. Its most important role is in managing resources of the village including land, forest and water bodies.

3.1.3 *Thampei*: Regulating Jhuming

The *Thampei*, also known as *Thoupei*[24], the traditional village council, is one of the most important traditional institutions found in Inpui villages, including Puichi and Haochong. It is the highest judicial court of the village for all practical purposes, next only to the *Kraanmi*. It also decides on matters relating to jhuming and its operations. Before the coming of Christianity, the *Thampei* also performed certain religious duties. As much of the rites, rituals and festivals revolved around Jhum, the *Thampei* was involved in all of these. The Village Authority and Church have reduced the role of the *Thampei* to jhuming agriculture, and decision making only when it involves traditional laws and

[23] Interview with Ik. Keijibwanang, chairman of Haochong Village on 19th December 2014. Some persons who were village chairman for more than one term are Kh. Pouriang (2 terms) and Kataziba Inka (15 years).

[24] *Thampei and Thoupei* are used interchangeably. '*Thou*' translates as 'rites/rituals'. The term Thampei/Thoupei probably derived its origin as the persons in this body performed many rites and rituals.

Table 3.1 Characterizing Institutions Found in Haochong and Puichi Villages.

Name	Composition	Formation	Functions	Jhuming related function	Gender sensitivity	Remarks
Kraanmi	Only males who are or have been a part of the Church's Baptist Youth Fellowship.	The supreme and highest decision making body. Annually, it is convened by V/A at the start of the year. In times of emergency, when decisions cannot be arrived at by the Thampei or V/A.		Traditionally participates in making fire-line.	No scope for women to participate, unless rules are changed.	A *Kraanmi* decision carries with it the utmost urgency and significance.
Village Authority (V/A)	A Chairman & Secretary; other secretaries and board members; advisors.	A constitutional body. Formed by nomination & selection. A term of 5 years. (3 years in Haochong)	Administrative, law and order functions; utilizes funds from government. Decides resource utilization of the village.	Ensures that the Thampei decisions are followed. Collects penalties upon non-compliance.	No scope presently, but there is no restriction for women to join.	Legally supreme. Yet, works under the *Kraanmi.* Strongly influenced by traditional norms.
Thampei	Eldest males of the three major clans in the village. Total: 7- 10	Natural 'age-based' selection. Until death, as long as their mental faculty is sound.	Highest court for traditional laws, norms and customs: includes Jhuming, marriages, births & deaths; crimes.	The repository of land tenures, boundaries. Decides the Jhum cycle.	No scope for women to participate, unless rules are changed.	Embodies the norms by which the people conduct themselves. Strongly influences all other institutions in the village.
Church	All people in the village. Pastor and Board of Deacons.	The Pastor & Board of deacons are selected through a General Body Meeting.	Embodies the Christian faith, distinct from jhuming; celebrates festivals.	Organizes some traditional festival with Christian undertones.	Gender sensitive. There is a separate 'Women Society' in the Church.	Has played a big role in promoting consciousness through education.

practices. However, understanding traditional institutions like *Thampei* from a functional point would be one-dimensional and incomplete. It commands respect from all the members of the village and strongly influences decision making at all levels, especially the Village Authority. In fact, the basis of authority or legitimacy of the *Thampei* is the respect and trust bestowed on the institution.

The *Thampei* consists of the oldest male members from the three major clans of the village- *Bariam (*or *Balang), Inka* and *Khumba*. Members of the *Thampei* are 'naturally selected' and retain membership until their death, or otherwise lose their mental faculties. However there are some norms that are designed for equal representation of the three clans, or to prevent extra representation from a single family[25]. In the traditional setup, there were usually 7 members with the following designations: i) *Tako*, the eldest male of the village ii) *Nampu*, the 'owner' of the village iii) *Khulakpa* iv) *Luplakpa* v) *Mantri* vi) *Khanglaak* vii) *Thampei Meiza*, the attendant[26] (Bariampan, 2010). Prior to the advent of Christianity, the *Tako* performed the role of priest and was involved in many significant rites and rituals. Needless to mention, the designations in the *Thampei* are now redundant. The oldest male members constitute this body which primarily decides on jhuming and culture-related issues.

The office of *Nampu*, the 'owner of the village' deserves a little elaboration. The *Nampu* in the Inpui context is not the 'chief' of the village as in other communities. The origin of this office was in the establishment of the village[27], wherein he called the village his 'own'.

[25] The *Thampei* needs to have representation from all the three major Inpui clans- Bariam, Inka and Khumba. In addition, two brothers from the same father may not be part of the *Thampei.* Only one of them, generally the older one, may be a part. Father-son duo also cannot be in *Thampei.*

[26] The terms *Khulakpa, Luplakpa* and *Mantri* are non-native words and show the deep influence of the *Meitei* kingdom. Efforts to trace native terms proved futile, suggesting that this system has been in practice for a considerable period of time.

[27] The story of how Haochong came into the present location goes like this: Two persons representing *Inka* and *Khumba* clan, ceremonially cleansed and equipped, went to search for a new location for the village. The persons and the day of search must have been pre-decided because the person representing the *Bariam* clan was sick and could not join the search, yet he was not replaced. After surveying the land, the *Khumba* person from a tree top pronounced a favorable opinion on the present location of the village. Upon hearing this, the *Bariam* person claimed of the village that would be established there as his own by cutting the soil with his knife. The *Khumba* and *Bariam* persons were displeased with this. Therefore, the Khumba person was made

'Owning the village' however, does not grant him much power over land as land ownership is semi-private as explained in the following section. While the *Nampu* by virtue of being one of the first residents of the village might 'own' a large area of land, the *Thampei* had the final say in issues of land usage and management, especially on jhuming.

The *Nampu* found his significance in the ritual of *Namtosanu*[28]. Haochong village has two other offices of purely ritualistic (past) significance. They are the *Tuikhunpu*- 'owner of springs' and *Tachipu*- 'owner of the seed'. The *Nampu* does not have equivalent offices In Puichi village. The offices of *Nampu, Tuikhunpu* and *Tachipu* are distributed amongst the three clans- *Inka, Khumba* and *Bariam* respectively. These are hereditary[29] and continue to exist, albeit, in the shadow of the past.

The *Thampei*, in consultation with the Village Authority decides the jhum cycle for the whole village, locally called *ramrainu*. In other words, *Thampei* decides on the contiguous area where fields would be located in the coming year (Pic. 3.1 & 3.2). This is done keeping in mind the size and number of families in the village and the number of years for which a particular tract of land has been fallowed[30]. Thus, individual families cannot 'open'

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the 'owner of Springs' while the Bariam person was made 'owner of seeds'. It appears that the *loukhun* and *taram* arrangements were already in place when this search took place.
Interview with Kh. Pouriang (ex-chairman), Ik. Keirijin (ex-Nampu), Ik. Keijibwanang (present Nampu and Chiarman), Kadijeiba Khumba (present *Tuikhunpu)* in July 2014.

[28] *Namto-sanu* was one of the most important rituals of the Inpui village, involving all the people of the village-young and old. It happened once in three or four years. On the day of this ritual, all activities in the village came to a standstill, fire was put off completely and all members of the village would symbolically 'leave' the village. As they left they would complain that no good thing was happening in the village- harvests are not good, people are not healthy, they die young- hence they are going in search of a new village. When everyone had left the village area and gone past the village area boundary, the *Tako* who stayed behind would call out to the people to come back, promising that all would go well hereafter. Then the people would shake the dust off their clothes and come back. Fire would be started afresh. The *Nampu* would pronounce a special blessing on a *mithun* which was slaughtered on this day. The *Tuikhunpu* would initiate the preparation of a pond from a spring. Likewise the *Tachipu* would bless the seed at the start of seed sowing season. These three institutions found their significance in these rituals.

[29] The hereditary principle for these three offices differs from other general norms. Inheritance is not in terms of 'father to son', but rather to the eldest male in the family-bloodline. For example, a person X has brothers Y and Z. Assuming a natural progression, in the event of X's demise, the office of *Nampu* will be taken up by the brother Y, and later Z. After Z's demise, the eldest son from amongst the three brothers will become *Nampu.* The emphasis on age and maturity is related to the ritual of *Namto-sanu,* where the *Nampu* pronounces a lengthy and special blessing for the village. This blessing has to be pronounced at one go without stutter or fumble and holds special significance for the overall well-being of the village.

[30] In Puichi village, there was an instance in which the *Thampei* borrowed land for the whole village from a neighboring village, because none of the available land was mature enough to be cultivated again.

any part of the forest for cultivation even if they 'own' that plot. While the family gets full usufruct rights over the piece of land it owns as and when it cultivates, *when* the plot of land can be cultivated is the prerogative of the traditional village council.

Individual households proceed to clear the plot it owns and prepare it for cultivation *only* after the *Thampei's* decision. Failure to comply with the *Thampei's* decision attracts a penalty in case of forest fire arising from burning of jhum. It is more preventive in nature rather than a punishment; in fact, the intrinsic value of shame brought by the penalty is greater than the actual value of the penalty[31]. In addition the family alone is responsible for preparing paths to the field and protecting it from straying cattle

The *Thampei* therefore, ensures continuity and consistency in terms of jhum cycle. There are many advantages in this practice. By actively discouraging individual families from 'opening' any part of the forest, fragmentation of the forest due to unplanned clearing and forest fire is prevented. This goes a long way in maintaining the jhum cycle. Land that is cultivated in one cycle is allowed to lie fallow without immature disturbance until the next cycle. Since contiguous tracts of land are cultivated, it becomes easier to locate or predict the next region where agriculture will be done the following year. Presently, the two villages allow a fallow period of around 8 to 9 years before returning to the same plot.

The *Thampei* also provided platforms for collective effort when need for such an effort presented itself. While building up social capital, it also got the necessary work completed. For example, in controlling fire and preparing road/path to the fields. The *Thampei* decided a day when the jhum would be burnt together by the whole village. Prior to the burning, the *Kraanmi* prepares *meilam* or 'fire-line' on the field boundaries (around 7-8 feet wide) to prevent forest fire. The *Kraanmi* also remain in standby for fire- fighting in case of forest fire[32]. Traditionally, making *meilam* was a festival in itself, where members of one

[31] The fine for causing forest fires from such unauthorized 'opening' of forest is to bring approx. 100 kg. of firewood to the V/A. Preventing forest fire while burning jhum means much labor for a single family in making fire-line, thus discouraging such a practice.

[32] This is not only to preserve forest on which they are dependent. Sometimes, the jhum fields are located quite close to the village. In such times, stopping fire from spreading is a matter of protecting the village itself.

dormitory competed against the other. In this way, questions of non-participation (except due to sickness) were negated. Preparation of roads to the field used to be undertaken by the whole village including both boys' and girls' dormitory. It was normally accomplished in a day except when the fields were too far away.

There is another element which does not seem significant presently but which might have played a crucial role in the evolution of the practice: security. It must be recalled that quite often villages consisted of only a few families. However, the benefits of staying together were obvious even if villages were big. The dangers posed by wild animals were real, especially for unarmed women and children. At the same time, inter-tribe wars were not uncommon. In such a situation going to the field or returning from it in groups was a necessity. Thus, the need for security, coupled with the benefits mentioned above might have led to the practice of agriculture over contiguous plots of land.

Several changes from the traditional way are observed. The *Thampei* still decides on the area where shifting agriculture will be carried out each year. However, it is reported that the size of fields significantly reduces when the fields are far away from the village. (The reverse is also true.) This is especially true of Haochong village, 2014 being one such year. A significant number also do not cultivate or grow only vegetables. This has implications on making the fire-line. It is learned that families who do not cultivate jhuming have gradually ceased participating in making fire-line. The *Thampei* has also allowed this to happen. Thus it is found that individual families or group of families share labor (not exchange) to make the fire-line.

The introduction of plantation and orchard farming has also led to new practices. It is reported that a family can 'open' any part of the forest it owns if it is meant for horticulture. While the mandatory fine is imposed if there is forest fire, the new practices have negated the factors that discouraged such a practice earlier. For example, an orange orchard is not prone to attack of domestic or wild animals. It is also observed that many families immediately convert the jhum field into a banana farm after cultivating paddy and other

(1) View of current jhum (left corner, yellow) and the first year fallow (center, light vegetation), which was cultivated the year before, in 2013. The whole village shifts its fields every year. Puichi: Oct. 2014.

(2) The central portion of the area cultivated by Puichi village in 2014. Notice that area cultivated is continuous except for small areas. Trees that have not been cut have gained much vegetation already.

crops in the first year. This has consequences for the jhum cycle as these farms can last for 4-5 years and much more in case of orange.

The *Thampei* plays a very important role in making jhum a sustainable practice at two levels. It has evolved ways in which the individual livelihood needs are inextricably bound to the collective need, ensuring that both are met. The significance of this local institution may be appreciated in this light. The new agricultural practices however pose a unique challenge to the *Thampei*. Ability to find ways to accommodate varying interests of farmers without compromising on the ecology would present perhaps the sternest test to the *Thampei.*

3.2. Land Tenurial System

Land rights constitute the most important component of property rights in an agrarian system. It is the basic resource from which livelihood is derived and is often linked to the identity of the people who utilizes it (Fernandes & Pereira, 2005). Land tenures in the context of shifting agriculture differ vastly from one community to another and even amongst villages of the same community. While land is generally said to be communally owned, the internal dynamics of access, usage and management are very diverse. In North-east India, the common feature shared by all tribes is 'the centrality of community on which was based the customary laws that governed individual ownership' (Fernandes & Borbora, 2008, p. 2). Private owners of land are limited by customary laws which forbade transfer of land to individuals outside the village; property rights over land are therefore 'preferential or limited' (Harris-White et al., 2009).

The villages of Haochong and Puichi share some of the features outlined above. Land is held in multiple layers of community and private control. Land is not under the control of either a 'headman' or 'village chief'. Instead land is 'owned' by individual households but 'managed' by the *Thampei*, especially for jhuming. The *loukhun* and *taram* are the two categories of pseudo-private land owned by households. Homestead belongs to the family as long as it remains a resident of the village. There are other categories of land under the Village Authority: village residential area, village forest, conserved village

forest and land reclaimed from other villages (often involving boundary disputes and lawsuits). Haochong village also has Revenue land 'set apart' by the village and 'given' to the government for setting up the Haochong Sub-divisional Officer's (SDO) office.

Table 3.2 summarizes the types of land and associated rights found in the villages under study. It may be noted that land is owned either by the family/household, Village Authority or government. The family owns the homestead it has been given by the V/A (or 'bought' from the V/A at a token price), the *taram* and *loukhun*. These are transferable with the consent of the V/A. However, in case a family leaves the village without prior arrangements (selling away its land etc.), these revert to the control of the V/A. It is noteworthy that the Village Authority has gained much power over land. However, the norms for access and management are derived from the traditional practices represented by the *Thampei*. Thus it continues to be the main driving force for all land-related interactions within the village.

Table 3.2 Categories of Land and Nature of Rights in Puichi and Haochong village

Category of Land	**Ownership**	**Nature of rights**
Homestead	Family	Transferable with permission of V/A.
Village Residential Area	V/A	Exclusive right of V/A.
Taram or 'Land'*	Family	Owner collects 'rent' from *loukhun* or field-plots during cultivation. Transferable within village.
Loukhun or 'Field-plot'	Family	Full usufruct rights during cultivation period. Transferable within village.
Village Forest	V/A	Exclusive right of V/A.
Revenue Land**	Government	Individuals can buy plot or *patta* from govt. and own it.

* *Taram* has been abolished in Haochong. It is applicable only in Puichi village.

** Only in Haochong village. Revenue land has been 'set aside' by the village for SDO office.

3.2.1 Ownership of *Taram* or 'Land'

Taram ownership may perhaps be understood as a partially developed form of landlordism. *Taram* is literally translated as 'land'. However, 'land' betrays the huge area that a *taram* comprises of- it may be as large as a small hill made up of 20 to 30 average-

sized field plots. At any time, it contains around 10 *loukhun* at the least. *Taram* ownership was practiced in both the villages until recently. However, Haochong village abolished this system of land ownership in the 1960s[33] and follows only the *loukhun* or field-plot system of ownership. Both tenurial systems continue to be followed in Puichi. The following discussion therefore pertains exclusively to Puichi Village.

Taram is generally owned by a household but it can also be jointly owned by two or more households. The *taram* owner does not have any access rights to the land he owns- he only has the right to collect a form of flat rent from the *loukhun* owners, locally known as *Rampon*. It is given in kind (paddy) if the amount of harvest is greater than 3 *pot* (75 tins or 570 kg)[34]. The quantity of *rampon* is fixed by the *Thampei* from time to time. Presently, the quantity of rent is fixed at 2 *tins* of paddy, equivalent to 14 kg (approx.) irrespective of land cultivated or amount of harvest. It is collected on a specific day along with members of the *Thampei* and Village Authority after the harvest. Farmers, both *loukhun* owners and borrowers, bring the required quantity of *rampon* to the specific *taram* owners. In the traditional practice, part of the paddy collected by the *taram* owners was gifted to the *Thampei*.

The rent collected by the *taram* owners is different from the more widely understood notion of land rent. While it accrues to the *taram* owners, the quantity is decided by the *Thampei* and not the owners themselves. Moreover, there is no grading of rent based on the amount of harvest. The *rampon* is better understood as a 'token rent'. *Rampon* originates from *Taram-pon*, which is literally translated as 'decoration of *taram* or land'. Harvest of the field is that which 'decorates' the land, a part of which is given to the

[33] The causes behind the abolition of *taram* ownership shed important light on its nature. The *taram* owners were responsible for making roads in the territory of land that belonged to them. The owner alone was also responsible for any kind of accident, including deaths that happened on their land. This kind of responsibility is attached to a landlord. It is said that in the 1960s one such case of accidental death arose where the *taram* owner was not able to decide alone. It led to a series of events which culminated in the abolition of *taram* ownership by the K*raanmi* of Haochong village.

[34] The local way of measuring quantity of paddy/rice is as follows:
1 *Tin* = 7½ kg (approx)
1 *Khawlwang* = 2½ tins (approx) = 19 kg
1 *Pot* = 10 Khawlwang = 190 kg
1 *Gam* = 100 Khawlwang = 1900 kg

'owners' of the land who then gifts it to the *Thampei* who blesses the land. Boserup (1965) mentions a similar kind of practice found in China. In this system of 'coexistent' rights, the landlord is attributed with 'ownership of land' and the tenant with 'ownership of the surface or the use of the land'. Similar explanations were given by the elders of Puichi village. Perhaps, one can see it as an undeveloped form of landlordism. However, the *taram* system of land ownership appears to be losing its significance as well as appeal amongst the farmers of Puichi.

The rights of the *taram* owners end with collecting a small amount of paddy as rent from the *loukhun* owners. They do not have any right to interfere in the functioning of *loukhun* located in 'his land'. He does not have the power to 'evict or withdraw' the rights of a family from its field-plot either. The *taram* owner is also a *loukhun* owner and pays *rampon* to other *taram* owners during different jhuming cycles. It is possible that the *taram* owner does not have field-plots in his *taram.* On the other hand, his field-plots may be located within the *taram* of other farmers. The shifting nature of agriculture means that different *taram* (or group of *taram)* is cultivated every year. Thus, a *taram* owner receives rent in some years while in some other years he gives rent to other owners.

3.2.2 Ownership of *Loukhun* or 'Field plot'

Loukhun, literally translated as 'field-plot' refers to the plot of land where jhuming is carried out. It is privately owned by households though its usage is regulated by the village council. It is the primary unit where labor is invested and work is carried out. It is the most important resource that a family can own. In the past, families owning a large number of *loukhun* were considered to be rich. It continues to be a significant factor in the present context, especially as new agricultural practices are super-imposed on the existing structure of *loukhun* ownership. This system of land use is found in all old Inpui villages in the hills. Similar practices are reported in various other tribes in the North-east (Harris-White, 2009; Fernandes & Borbora, 2008).

A family may own any number of *loukhun* in different regions within the village boundary. It does not bear any connotation of size or quality of land in terms of fertility or slope. It can be a huge plot of land or relatively small. The average size of a *loukhun* is however, enough to produce adequate food to feed an average-size family of 7 to 8 members for a year. *Loukhun* is owned by the family, not by individuals- especially in the absence of written land title deeds against any single individual. However, there is a definite male-bias in the way *loukhun* ownership is understood as the line of inheritance is from father to son. Women consider themselves to be the owners when they were gifted with *loukhun* at the time of their marriage[35]. However, these are exceptions to the rule; the practice has also lost its appeal as *loukhun* become scarce.

Loukhun can be transferred but strictly within the village. A family moving away from the village can also leave *loukhun* to its relatives or sell it with prior consent of the V/A and Thampei. It can also be bought from Village Authority if plots become vacant for any reason. There are village forest areas which the V/A can sell for *loukhun* even at the present time. It is found that the prices of these plots are decided annually by the V/A. Depending on the area, slope, soil quality and resource (forest), and distance from the village, the current price of loukhun in Haochong village ranges from Rs. 300 to 500[36]. While the V/A does not intend to create profit out of these resources by selling them at a high price, one needs to understand the 'price' of *loukhun* in the light of certain local conditions and practices. First, *loukhun* can be borrowed without any price for jhuming purposes. Second, the *loukhun* available for sale are not suitable for wet-rice cultivation. Third, while these may be suitable for plantation, the far distance from the village may act as a deterrent.

Usage and management of *loukhun* is of particular interest to this paper. Mishra's (1983) description of land use proves helpful: "During the period of cultivation, and before being

[35] For example, Mrs. Bt. Katazinang from Haochong village and Ms. Bt. Thiunilu, 82 yrs of Puichi village. It may also be noted that *loukhun* was also given as 'bride-price'. In such cases, the grandfather (the father of the bride, who received the 'bride-price') would gift *loukhun* to his grandson. Interview with Late. Bt. Namdijinang, 78 years of Puichi village on 8th July, 2014.

[36] Separate Interviews with Kh. Nampi, Secretary of V/A; Ik. Keijibwanang, Chariman of V/A; Kh. Pouriang, ex-chairman of V/A and present member of *Thampei.* Corroborated from interview with Kh. Aggai who has bought *loukhun* from the V/A in the last few years.

abandoned to the forest, a plot or field remains under the exclusive possession of the family. After it has been abandoned, it becomes the common property of the village." (p. 1842). A similar situation is observed in Puichi and Haochong village. Before and after cultivation, while the plot of land is still 'owned' by the family, it is under the control of the *Thampei*. During the non-cultivation years, it becomes a common property resource as non-timber forest products (NTFP) can be extracted by any member of the village. The *Thampei* not only decides when the plot of land can be 'opened up' but also imposes fines if non-authorized opening leads to forest fire. Thus, the significance of 'owning' a *loukhun* was realized once in 10 years or so when the *Thampei* would demarcate a certain region for jhuming for a particular year.

If a family owned *loukhun* in the region defined by the village council for the year, it would go ahead and prepare the plot. However, a family without a *loukhun* in that region would have to 'ask' from someone who has more than one plot, or who has a plot large enough to accommodate the needs of another family. Thus, lending and sharing of *loukhun* takes place every year[37]. The plot returns to the owner after the agricultural processes for the year are completed. There is no 'rent' paid to the *loukhun* owner for borrowing the land; rather *rampon* is paid to the *taram* owner in case of Puichi village. A family needing a plot approaches one who has more than is needed in that particular year. Sometimes a 'token price' is charged when plots are borrowed - more as an indicator of ownership rather than the value of the plot *per se*.[38] This is the only price paid, no part of the harvest is given to the lender. Often, amongst relatives and clan members, mere agreement by word of mouth is all that is needed.

The family which cultivates a particular plot of land- either by ownership or by borrowing it from someone has full usufruct rights over that plot for the agricultural calendar. The right to collect firewood from that plot or sell it is an important built-in right that comes with access to the plot. The family also has access to all the produce from the field- some important crops like chilly continue bearing fruit well into the

[37] According to Boserup (1965), this is one of the stages in the evolution of private ownership of land.
[38] It is indeed a token price- a kilo of sugar or Rs. 100 or one day's labor is the 'price' of borrowing a loukhun. In the olden days wine was also brought by the borrower.

following year. In the same breath as 'fresh' plots, a family can borrow the second year jhum plot too, i.e., that plot where someone has already cultivated in the first year of jhum. The practice of 'lending' and 'borrowing' land is central to the sustainability of the jhuming system. This may be attested by the fact that only one family from Puichi reported *cultivating less area than it could have* due to non-ownership of loukhun.

It needs mention that families lending *loukhun* in a particular year find themselves borrowing *loukhun* in some other years. Depending on the number and distribution of *loukhun* owned by a family, it may be a lender or borrower in certain years or jhum cycles. Perhaps this mutual cost/benefit is the basis for the practice of not giving rents to the owner while borrowing *loukhun*. It is further reinforced by the norm that a *loukhun* owner cannot deny a needy family from cultivating the *loukhun* which the owner himself/herself is not cultivating, if the plot falls within the area demarcated by the *Thampei* for cultivation.

Certain departures from the traditional practice have become quite visible with the introduction of new agricultural practices. The practice of wet-rice and horticulture are built on the existing system of *loukhun* ownership. However, these are more permanent in nature. In addition, they require considerable investment while also giving good returns. The concept of borrowing and lending *loukhun* is not applied to wet-rice or horticulture. Moreover, families can open the forest without permission from the *Thampei* for the purpose of wet-rice or horticulture. This has led to greater control being vested in the private household than in *loukhun* for jhum. The processes involved in this change and implications are further discussed in the following chapter on agriculture (Chapter 4).

3.2.3 Evolution of *Taram* and *Loukhun*

In the light of the preceding discussion on the centrality of land ownership patterns, a brief attempt is made to trace the possible ways in which these institutions might have evolved. It is possible that they evolved within the millennial long histories of the two villages. It is equally possible that these institutions were a part of the community prior to its settlement in the present area. The similarities (and dissimilarities) in land tenures across communities spread over different geographical spaces seem to support as well as

question the later. The present 'reconstruction' is based on the assumption of the former. The motivation behind this endeavor to trace the evolution of land tenures is two-fold. First, to argue that while one can celebrate these institutions, they need not be idealized. This is based on the premise that the tenurial systems of *loukhun* and *taram* also had an embedded basis of inequality which is being exploited by the capitalist system.

The present system of land tenures of Haochong village[39] is interpreted in the light of Boserup's (1965) theory of population change and innovations. Haochong village is one of the oldest villages in the region (Chapter 1). Five 'daughter' villages have been established from its erstwhile area- Makhwam (Marangjing), Ijeirong (Tuilimon), Nungtek- I, Nungtek- II and Pungmon village (Haochong Golden Jubilee Souvenir, 2009). One of the important factors behind the formation of new villages seems to have been the long distances to the field. Pungmon village, however, was formed as a result of persecution for converting to Christianity. It is said that Haochong village reached a maximum number of 250 households in its old location. Apart from interactions with the *Meitei* kings of the valley and surrounding villages from time to time, the village was insulated from the forces of market that could influence its land use pattern.

Shifting agriculture was therefore, the only mode of production followed for a long period of time. It is most likely that the earliest settlers of the village cultivated adjacent plots. Cultivating fields close to one another would allow the small village to pool scarce labor in preparing roads, in exchange labor as well as for the important purpose of security from men and animals. Thus, fields would move in contiguous areas in a definite pattern. This is an important premise to this theory. One may further argue that such cooperation amongst farmers is possible even in the absence of some regulating institutions like the present day *Thampei*. In reality, however, it is the *Thampei* that has come to institutionalize and codify the norm of land marking for cultivation.

[39] For the present purpose of tracing the evolution of land tenure, only Haochong village is considered. Both the villages seem to have existed for almost the same time period according to local stories. However Haochong is considered mainly due to availability of written sources, history of a large village and the formation of daughter villages.

A natural growth of population in the village to a maximum of around 250 households would have led to a slow but steady intensification of land use. Boserup (1965) posited that such intensification would lead to shortening of jhum cycle followed by adoption of more sedentary practice of agriculture[40]. Increased population pressure on land would lead, not only in decrease of jhum cycle but also in identification of certain plots of land to specific households. The latter, which Boserup calls a 'specific right' to cultivate a particular plot of land (*loukhun*) would have taken perhaps a long time to develop.

As long as abundant forest land was available, a family would have no particular interest to return to the same plot in the next cycle (or ask for the same plot to be assigned to them). However in the scenario of steadily increasing population and pressure on land, a family might want to return to the plot of land it cultivated earlier (Boserup, 1965). This can be expected especially if the plot was a good one. In fact, in the face of increasing scarcity families may begin to attach individual values and claims to plots of land on the basis that these plots had been cultivated by them earlier. Boserup adds that families might 'hasten to cultivate those plots of land' lest it 'loses' the plot to others. In this way, particular plots that families cultivate repeatedly over a few cycles may come to be identified with a particular family.

It is possible that these practices got widespread approval from the villagers. Giving space to other families to return to a plot they cultivated earlier also meant the same right being extended. In fact, associating plots of land to specific families on the basis of past cultivation might have helped to settle competing interests and claims. It is worth mentioning that the villagers prefer the *loukhun* arrangement to searching for new plots every year. They opine that searching for new plot every year involves not only more labor, but also lead to more conflict amongst villagers[41].Thus, over a period of time, the practice of *loukhun* might have concretized and become a part of the village. The fact that

[40] The adoption of sedentary agriculture in the villages (wet-rice), however, has not been as a result of internal innovation, but of external influence.

[41] The question of origin of *loukhun* does not elicit much enlightening response on the process of its development. They simply state that 'unclaimed' plot that a person cut would belong to him/her. However, this supports the present theory that plots began to be associated with families by virtue of their cultivating the plot repeatedly over the cycles.

four daughter-villages follow the same land tenurial system seems to lend further support to this theory.

The evolution of *loukhun* might have been much more complex than is suggested in the above discussion. It is possible that many other factors other than agriculture played a role in its development. The theory presented here best serves only as a broad outline based on a similar line of argument given by Boserup (1965). However, given the possibility that jhuming played an important role in the development of *loukhun* tenurial system, a further inquiry for basis of inequality may be made.

Shifting agriculture depends largely on family labor which determines the size of the field. In the scenario where plots begin to be slowly associated with the families who cultivate them, the female headed households, orphaned families or smaller families are at a distinct disadvantage. Over different jhum cycles, at different areas, they would cultivate smaller plots. On the other hand, larger families would be able to cultivate more land, and in the process, 'own' more land over different areas. The larger families are more likely to stay in the village without migrating to other villages too. Thus, in the course of a generation or two, larger families stood to gain while smaller families would lose out both in terms of numbers as well as the quality of plots.

The preceding discussion does not provide a complete explanation for present patterns of *loukhun* ownership (Table 3.3) which reveals inequality in terms of ownership. Nearly 20% families in Puichi and 17% in Haochong village do not own any *loukhun.* On the other hand, there are 33 families (37%) owning more than 10 *loukhun* in Puichi while the corresponding figure for Haochong is 47 families (48%).

The long history and fluid social processes poses a challenge in putting forward straightforward answers to explain present inequalities in ownership. The formation of new villages from Haochong leading to change in boundaries and fluctuating population numbers means that a simple answer is elusive. It is also observed that families without *loukhun* (or owning less number) tend to 'blame' the older generations for being

irresponsible. Stories of giving away *loukhun* over wine and similar indulgences are common. The converse is also true: families with *loukhun* often praise their 'far-sighted' forefathers. There are instances of families who have settled relatively lately in the village (a few hundred years) owning more loukhun than those who have been living in the village much longer. While a clear explanation may be hard to find, perhaps the entrepreneurial spirit played an important role in this process.

Table 3.3 Distribution of *Loukhun* by Number of Plots Owned per Family

	Puichi		**Haochong**	
No. of *loukhun* owned	No. of Families	% to total	No. of families	% to total
<5	17	19.1	19	19.4
5 to 10	22	24.7	15	15.3
10 to 15	17	19.1	26	26.5
15 to 20	4	4.5	3	3.1
20 to 30	12	13.5	18	18.4
Owning at least 1	72	80.9	81	82.7
Owning none	17	19.1	17	17.3
Owning 10 or more	33	37.1	47	48
Total	89	100	98	100

The theory of evolution of land tenures in the villages under study highlights the primary role of agriculture and inequality associated with it. The implication of this argument is not limited to explaining present inequality. Rather, and more importantly, it implies that bases of inequality are embedded in the traditional tenurial system. These were relatively insignificant in a shifting agricultural context. However, the capitalist system that builds on this tenurial system has the potential to exacerbate inequality and perpetuate it over time. A detailed explanation is offered in the chapter on agriculture (Chapter 4).

3.3 Labor Arrangements

Labor arrangement in a jhuming system is of interest for the dual reasons of collective efforts undertaken to meet individual needs and manage common resources. It has found

little space in the academic discussion perhaps because labor sharing in jhum and common property resource management are rarely seen in a similar light. The collective nature of labor is a unique character of the jhuming system. In the absence of labor ready for hire, mutual give and take becomes an important basis for organizing work. It is a highly complex arrangement that involves various forms of social capital and goes much beyond work. Mishra (2006, p. 315) rightly points out that jhuming involve "elaborate networks of informal contracts, co-operation, resource-pooling, risk sharing and mutual insurance mechanisms".

Collective efforts are organized at two different levels. The first one is organized by the family and is commonly known as exchange labor or reciprocal labor. It is still a collective effort; it is not only an exchange between one person and another as the term 'exchange/reciprocal' labor indicates. It can be strictly agricultural or for other purposes like house construction. The second is organized by some competent authority in the village for different purposes. It may range from investing labor in managing resources, labor pooling to carry out some work of common significance or collectively supervising the functioning of an institution.

3.3.1 Collective Management at the Village Level

Collective efforts at the village level are often closely linked to management of resources. However, these may take different forms. For example, collective efforts like preparation of fire-line, though closely linked to jhum agriculture are better understood as proactive management of resources. Preventive measures such as imposing fines for causing forest fire are also means of managing forests. This is noteworthy because in the case of forest fire, the *loukhun* that is/are harmed by fire belong to individual households. However the penalty is imposed by the Village Authority instead of the families, which make such decisions more binding and strong.

The villages also collectively decide on the areas where cattle will be allowed to graze. This is more pertinent to Puichi than to Haochong. It is found that *loukhun* owners do not desire cattle to be allowed to graze in their field-plots. This is because grazing cattle in an

area for an extended period of time ‘compacts’ the soil and affects jhuming in the next cycle. Cattle also bring new kinds of weed to the field plot because of their food habits. In such cases, collective decisions are found to be most effective.

In both villages, certain tracts of forest land there are protected. For Haochong village, the watershed area of the stream from where drinking water is brought to the village is protected. Similar arrangements are also in place for Puichi. Felling of trees in these areas invite a heavy fine. Firewood collection is also restricted to dead/dried trees and branches.

Other management practices include rules regarding extraction of timber. The Village Authority ‘opens up’ certain forest areas wherein individual persons from the village may pay a certain amount and extract timber for a specified period. In such a case, the extracted timber may be sold. This has not been followed in Haochong village for some time. Instead, the Church has been given the right to extract timber and raise funds for a new building Construction. However, the general rule with regards to timber extraction allows timber harvesting and usage only for household needs and not for business purposes.

Some collective activities like making and repairing of bridges and roads are not directly linked to resource management. However, these also form important components of collective efforts at the village level. On similar terms, activities of common significance also involve labor-pooling and collective work. For example, collective efforts are observed every year in preparing ‘camps’ for Christmas and New Year Celebrations. Private activities like marriage, if they have been ‘entrusted’ to the Church, also involve significant collective labor. ‘Stone-pulling’ to erect huge memorial stones to celebrate certain momentous occasions is also undertaken collectively with much fanfare. Harris-White et al. (2009) has categorized these types of collective activities as ‘generalized labor sharing’.

3.3.1.1 Collective Management of a Government School

A collective effort that speaks volumes about deep social trust, concern and foresight is observed in Haochong village. It involves the functioning of a government high school whose management has been taken over by the village, for the better. A brief background would aid to appreciate such an arrangement more. The quality of education in government schools in Manipur is a matter great lament. One of the main problems, typically in the hills, is the absence of teachers in the school due to lack of any institution that holds them accountable. Thus, the concerned teachers often 'employ' 'local teachers'- mostly from within the same village, to teach the students in school. These 'local teachers' are paid by the 'government appointed teachers'. Any complaints against teachers who 'employ' another set of teachers apparently backfire as the 'government teachers' get themselves transferred. Getting another teacher transferred to the village school is a greater challenge as no government teacher desires to go to some remote hill village to teach. The question of approaching the courts does not arise as these poor farmers are not well versed with the law. On the other habd, the rich 'government teachers' are well versed with the system.

Haochong village has developed an interesting mechanism to rise to this occasion[42]. The village 'runs' the school through a 'Board' whose members are selected from within the village. Faced with a near impossibility situation of making the 'real' teachers to teach, the board appointed its own set of teachers from within the village. The board also negotiated with the 'real' teachers who are made to give part of their salary (more than they would have paid, had they 'employed' their own replacements). Students were also charged minimal admission and tuition fees. The money collected from the 'real teachers' along with the fees paid by the students funded the salary of the board- appointed teachers. The board has also opened up hostels for both boys and girls. At the time of field-visit, the Haochong Government High School was running well. Perhaps, much better than it would have been had the 'real' teachers had employed their own replacements.

[42] Interview with Bp. Aleng in October 2014. He is one of the teachers appointed by the Haochong School Board.

Certain benefits have gathered as a result of this arrangement. Teachers appointed by the Board are accountable for performance of the students, especially in Matric exams. The students have the privilege of being taught in a language they can understand, which is unlikely if the 'real' teachers were teaching. Parents are able to pay only minimal fees-much lesser than in a private school while their children enjoys the same quality of education as in a private school. More importantly poor parents are able to provide basic education in the village itself as well as get feedback from the teachers on their child's performance. Providing residential facilities have also meant that students from other communities and even different districts have come to attend this school.

While the present system of arrangement may perhaps be a 'second best option', it reflects much about the society and the level of trust within it. While concern for the future of students is indeed central, integrating the school into the village functioning such that the School Board reports to the *Kraanmi* is unique. In fact, there is an Education Secretary in the Village Authority who is also a member of the School Board. Thus collective efforts need not be necessarily confined management of resources as the preceding discussion reveals.

3.3.2. Collective Efforts at the Household Level

Collective efforts at the household level are chiefly meant for agriculture. Special events like house construction, celebrations or death also entail collective effort. However, the nature of 'exchange' in agriculture and special events is vastly different. In the later, kinship plays a far more important role. Collective labor arrangements in agriculture help to meet peak agricultural demands. There are various ways in which agricultural labor is organized to meet individual household needs.

In the traditional setting, whole dormitories were involved in exchange labor. In one type of arrangement known as '*Kalom deinu'* or 'big exchange', all members of the dormitory would go and work in each of the member's fields. Thus a family with three youth in three different dormitories would host each of the dormitories on different days. '*Kalom*

deinu' was a festival in itself: work was accompanied by songs sung at specific times during the working hours. For example, there is a song sung before lunch, after lunch, while working etc. This was, however, limited to seed sowing. 'Limited-liability arrangement' where two or more households exchange a mutually agreed number of working days (Harris-White et al., 2009) would take over after the seed sowing in the traditional way. This has become the norm for all purposes in the present day setting.

The idea of working as a group has been extended to move beyond labor exchange to 'earning money *via* group work' in Puichi village where jhum is extensively practiced. It is found that some few individuals come together to form a group which offers to work in others' fields for money (not their own field). Thus, it is an organized form of wage labor with its foundations in exchange labor. There are two different objectives for such an effort. First, such groups earn money which is then invested in food and drinks during a festival known as *Bangeipui* or 'big festival' which occurs at the middle of the jhum calendar. The other objective, which is more common among the older women folk, is to earn money by working in others' fields, which is then given out as loan at a lower rate of interest within the group. In yet another variation, such groups work in their own fields one by one, but they pay the group according to the number of 'other' workers. The logic is to earn money as well as to get work done in their fields.

Exchange labor is also employed in case of wet-rice cultivation. The preparation of terrace and leveling of field requires much labor. Exchange in such cases may be repaid months or even years later when the other person prepares a wet-rice field too. Employing labor for wages has also become pretty common. However, for such activities as rice transplanting and harvest, where labor is scarce, exchange is still preferred.

The following tables (3.5a and 3.5b) show distribution of labor arrangements against total labor employed across different activities for Puichi and Haochong village respectively. It shows the preferred labor arrangement for different agricultural activities. In Puichi village, family labor surpasses exchange labor for cutting forest, clearing burnt field and harvesting. Making field house and spraying common salt is exclusively done by family

labor. Exchange labor predominates for sowing crops and the various phases of weeding. Wage labor does not account for any major contribution in existing labor arrangements for jhuming in Puichi village. Individual cases of labor are almost non-existent as even the little percentage employed is generally in groups.

Table 3.5 (a) Type of Labor Arrangement by Activity for Puichi Village

Activity	% Family labor to total	% Exchange labor to total	% Wage labor total
Cutting Forest	65.0	21.8	13.2
Clearing Burnt Field	89.2	9.8	0.9
Making Field House	100.0	0.0	0.0
Sowing Crops	40.5	53.7	5.9
Weeding Phase 1	24.9	67.3	7.8
Weeding Phase 2	21.8	71.1	7.1
Weeding Phase 3	35.1	57.5	7.4
Spraying Salt	100.0	0.0	0.0
Harvesting/Threshing	61.2	35.3	3.5

Table 3.5 (b) Type of Labor Arrangement by Activity for Haochong Village

Activity	% Family labor	% Exchange labor	% Wage labor
Cutting Forest	80	9.4	10.6
Clearing Burnt Field	96.9	0	3.1
Making Field House	95.0	5.0	0
Sowing Crops	91.8	1.2	7.0
Weeding Phase 1	94.9	3.9	1.2
Weeding Phase 2	86.5	5.8	7.7
Weeding Phase 3	100	0.0	0.0
Spraying Manure	100	0.0	0.0
Harvesting/Threshing	94.1	1.2	4.7

Haochong presents a contrasting picture. The family labor predominates across all types of activities. Perhaps it gives a glimpse into the agricultural scenario in the village which is definitely different from Puichi. The preponderance of family labor suggests that it is practiced by a smaller number of families, only within which exchange labor can be

employed. Indeed, jhuming is not practiced at a large scale anymore in Haochong village. However, it is interesting to note that decrease in share of exchange labor has not resulted in increase in the share of wage labor. Instead, family labor seems to have supplemented almost completely for both types.

Labor arrangements for horticulture and plantations are different. It is marked by the absence of exchange labor in both villages. Interviews reveal that in Haochong village employing wage labor to clear the weeds or bushes in the field is very common. Perhaps, this can be understood in the context of a rising class of families who are gradually moving away from traditional jhuming. In Puichi, the family labor still does the job.

3.4 Summary

This chapter attempts to address the institutional specificities encountered in the shifting agricultural villages of Haochong and Puichi. It details the underlying bases on which agriculture is carried out, though not without influencing the base. This is done in the of backdrop of the shifting agricultural production system which strives to appreciate the linkages amongst various components. Institutions are also studied in the context of their evolution and adaptations to internal and external changes.

The chapter studied three important institutional setups found in the study area: organizations, land tenures and labor arrangements. A common feature in each of these is the coexistence of ‘traditional’ and ‘non-traditional’ elements. However, it is interesting to note that these dissimilar institutions are intricately linked to one another, especially at the organizational level. Adaptations, however, do not necessarily erode the earlier bases or practices, but rather builds on it. It has its own positive and negative points for the village concerned. This can be seen in the emergence of more private land rights from the *loukhun* for wet-rice and horticulture. This very well has the ‘seeds’ for perpetuating inequality in the long run. Adaptation is also be seen in how laborers organize themselves to work in groups to ‘collectively earn money’ which is then utilized for the benefit of the members.

Mishra's (1983) argument that the character of traditional institutions are 'colored by shades of the new economic bases' seems to hold true in the present context too. Far from fading away to insignificance or being replaced by market institutions (Harris-White et al., 2009), adaptations of local institutions have profound implications both on the local society as well as the direction and pace of the penetrating market.

CHAPTER 4

JHUMING AGRICULTURE IN TRANSITION: THE CASE OF MANIPUR

The agricultural component of shifting agriculture is the most prominent one. Undoubtedly, it is also the most important. It has received widespread attention and been subjected to critical scrutiny. It would not be an exaggeration to equate research in jhuming with research of the agricultural component. Criticism of the system is based on the agricultural practice, not the associated tenurial arrangements or institutions. The technique of 'slash-and-burn' to clear land and plant crops was, until recently, widely criticized all over the world. However, the un-sustainability of the system as a whole in the face of increasing land scarcity is the main point of contention. Yet it continues to be practiced with little modification on a large scale. Inability to find a technology that adapts better than jhuming to the specific ecological challenges is the primary reason for such continuity. The thrust of current literature is to make jhum sustainable by managing fallows (Task Force, 2006) as well as introducing practices like horticulture, agro-forestry. At the same time, a considerable amount of literature has documented the traditional agricultural technologies of different communities.

While agriculture is indeed technology, it is important to recognize the factors that subject technology to change. While explorations continue to find innovations undertaken over time within jhum, one must be mindful of the context in which jhuming is placed. The pressure of ecological restrictions on the one hand, and economic opportunities brought by the penetrating market on the other has made it imperative for the farmer to innovate. In other words, this 'transition period' of jhum is also a period of adaptations to rapidly diminishing land for agriculture and increasing ways in which land may be put to use. It is an important stage where jhuming agricultural system has begun to take on a character different from the traditional one. It is characterized by an emerging category of privately owned land (Mishra, 2006), and a market that is increasingly being seen not as

alien, but rather as integral to the survival of jhuming. Answers, or in the least, broad hints to the challenges facing jhuming may be found in these ‘current’ local adaptations. The notion of jhuming as a rigid system that does not adapt to challenges may be effectively dispensed with. Indeed, it is important to recognize the implications of these changes both on the ecology and the society at large.

In this backdrop, the researcher is faced with a different set of questions. As the framework followed in this paper suggests, changes in agriculture in turn act as drivers of change in other components. Boserup (1965) predicted a different regime of land rights to emerge with new land use practices in the face of increased resource scarcity. Institutions are expected to undergo a transformation too, with individuals having a greater say than before in resource control and management. Inequality in terms of land ownership and access arise as important deviants from past practices. Sustainability then becomes as much a social question as it is ecological.

The present chapter places agriculture in a larger context- as an agent of change while it is also being changed. Broadly, it aims to do two things. First, it shall characterize jhum, wet-rice and horticulture. This is sought to be realized by outlining the physical constraints and their management; crop diversity and changes in cropping pattern, and the role of market in ushering in such changes. Second, the non-traditional agricultural practices are linked to new arrangements in land tenures and institutions.

The two villages under study are compared and contrasted in this chapter. The geographical and historical (advent of education and Christianity) differences have been laid out in the first chapter. Similarities and dissimilarities in institutions and land tenures were presented in Chapter 3. This chapter draws attention to the role of agriculture, especially jhum, in the economies of Puichi and Haochong village. Comparing the two villages in terms of dependence on jhum, wet rice or horticulture helps to establish the direction in which transition in jhum appears to be heading.

4.1. Characterizing Agriculture- Jhum, Wet Rice and Horticulture

This section of the chapter discusses and contrasts the popular agricultural practices in the two villages. Along with traditional jhum, wet rice and horticulture have become important sources of income to the farmers. These are strongly rooted in the traditional social setup. In other words, wet-rice and horticulture cannot be discussed outside the jhuming system though they differ greatly from traditional jhum. In fact, placing these new land use practices in the context of jhum is helpful to explain how new land tenures are being formed. This is the subject of discussion in the second section.

4.1.1. Specificities of Geography, Management and Agricultural Calendar.

The three widely followed agricultural practices[43] have their own specificities with respect to geographical constraints, technology and management involved and seasons of work. Along with livelihood needs and market opportunities, these factors shape agricultural characteristics of the villages.

4.1.1.1 Geographical Conditions

With regards to geographical conditions, jhuming agriculture is the most adaptable. Jhuming is done even on steep slopes of 30-40º angle (Ramakrishnan, 1992). It is commonly noticed that jhum continues to be practiced in areas unsuitable for wet rice or for horticulture crops. Jhum is less affected by rainfall deficiencies compared to wet rice[44]. Jhum is also carried out over a wide range of soils. In fact, the villages have different varieties of rice that grows well in specific soil conditions (further elaborated in subsequent sub-section). These qualities make jhum more resilient and a reasonable prospect under various natural constraints. It may be recalled that the two villages follow a similar jhum cycle of 9 years with 1 year of cultivation, followed by 8 years of fallowing.

[43] Agro-forestry is also practiced but at a much smaller scale.

[44] 2014 was a year of abnormal rainfall as many wet rice fields had to be abandoned mid-way. Jhum however was little affected. Many farmers expressed the opinion to cultivate larger jhum fields anticipating another year of abnormal (deficient) rainfall.

Wet rice cultivation is a recent land use system that was introduced in the 1960s in connection with jhum control[45]. Following Nagaland Environmental Protection and Economic Development (NEPED, 1999), it may be further divided as wet terrace rice (WTR) and wet rice (WR). Wet terrace rice is carried out by terracing gentler slopes with potential of water supply from a river or stream, at least in the rainy season. Wet rice, on the other hand are carried out in the river valleys or small plains formed by rivers. Quite often, fields are situated at the foot of a hill that merges into an adjacent plain or river valley (Picture 2c). Thus they are a combination of both wet terrace and wet rice, drawing water from more than one source. As such fields are common in the two villages, no distinction is made in the paper between WTR and WT. Abundant supply of water in the season of transplanting rice is an important criterion for investments in preparing wet rice fields.

Horticulture also requires certain favorable geographical conditions depending on the type of crops being grown. Reasonable soil quality and gentle slope receiving abundant sunshine throughout the year are important factors that favor this practice. In addition, nearness to the village and motorable road are other decisive factors. It may be observed that in Haochong village, the regions closer to the village and to the Noney-Haochong-Puichi road have abundant banana, orange, chilly, bamboo plantations amongst others.

4.1.1.2. Management Practices

Of the three agricultural practices, horticulture involves minimum management and technology. In other words, banana plantations or orange orchards involve very little use of modern technologies generally associated with these practices. In the villages under study, the plant/tree in question is planted in land either freshly cleared from vegetation, or in the second year of jhum after cultivating paddy. Apart from clearing competing weeds, no other activity or investment is made. Pesticides or weedicides are generally not used in the jhum fields nor in the plantations though it is being experimented in wet rice fields. Weed is manually cleared two to three times in a year depending on the plant or

[45] Interview with Majathui Bariamtak, 56 years, New Kabuikhullen village, 10th July 2014; Ms. Kh. Meichanguanglu, 78 years, Haochong Village, 3rd November 2014.

tree on the farm. Banana is less sensitive to weeds than orange farms. While horticulture farmers in Haochong use hired labor to clear the weed, Puichi farmers generally employ their own family labor.

Wet-rice fields involve substantial initial investment to prepare and level land, build terraces, water channels but they are annually cropped. It involves tilling the ground every year either by machine or plough. Tilling is normally done in at least two rounds: first, in March without water and then in April with water. Wet rice fields operation start comparatively early in the two villages. The high altitude requires it to have a lengthier growing season. The tilled land is leveled with the help of bulls or buffalo before transplanting of rice saplings are carried out. The rice saplings are prepared much in advance in a nursery usually near the wet rice fields. Hired hands or exchange labor or a mixture of both are required if the field is large as the process of transplanting is sought to be finished in a day or two, a week at the most. It is important for water distribution amongst the farmers because in most cases adjacent fields have the same source of water supply. In fact the whole process of tilling the field (with machine and water in the second round) right up to transplanting involves informal agreement and understanding amongst farmers. Labor for exchange or hire is not abundant as it is distributed between the jhum fields and wet rice fields. Thus, it is observed that the unique setting of a jhuming society characterized by strong kinship bonds and informal social contracts are essential to carry out wet rice farming. In fact, it is the social settings- including market that provides favorable circumstances for technology to work.

In this light, it may be argued that the historic failure of the government initiatives was not the introduction of new technologies like wet rice, horticulture *per se*. Rather it was the inability to integrate these practices with the larger jhuming societal practices, labor arrangements and its belief system. It does not fail to impress any traveler in the hills of Manipur that the jhuming landscape is dotted with wet rice fields, terraces, banana plantations etc. Perhaps the ‘successful’ adoption of these practices by the jhum farmers may reveal the reasons of past government failure

4.1.1.2.1 Management in Jhum

The traditional management practices in a jhum field are well known (Ramakrishnan, 1992; NEPED, 1999). Many common features are found across different communities; this is also true for the two Inpui villages under study. The agricultural calendar of jhum starts with plot selection which is usually done soon after completion of paddy harvest. This is immediately followed by preparing land which includes clearing forest, burning vegetation, clearing land and re-burning un-burnt vegetation and dividing the plot into different parts for various crops. Forest clearing is done both by male and female though there is greater contribution of the male members. While most of the secondary vegetation is cleared, larger trees are pollarded to allow quicker regeneration. Smaller trees which can be used as support for climber-crops are also left standing. Tree stumps are most often left standing 1-3 feet on the ground. They act as support for laying poles across slopes and to check soil erosion. Plots of land with heavy undergrowth require more labor.

Clearing forest starts by November-December of the previous year and is normally finished by January or latest by February. These are then left to dry in the sun (Pic 4.1). Prior to burning, a fire-line or '*meilam*' is prepared under the supervision of the *Thampei*. Vegetation is burnt around late March or early April. The farmers take a week to clear the land of un-burnt vegetation; these un-burnt logs are the major source of fire-wood (Pic. 4.2). Some logs are also gathered at specific sites within the plot- generally where chilly is to be grown, preferably bamboo grooves- and burnt again. Logs are laid across slopes at regular intervals, using the tree stumps for support to prevent soil erosion. They also serve to demarcate the field into parts as well as distinguish between varieties of crops. In fact, the farmers have a clear idea of which crops to be planted in which part of the plot. At this time, the field-house (Pic. 4. 5) is constructed, mostly by a male member or relative. Often, when the fields are far away, this temporary shelter houses the farmers for days together, sometimes running into a week or more.

The jhum fields are prepared in time for the pre-monsoon showers or *Nor'westers*. Seed sowing starts soon after the first rains are received. Paddy is the most important crop and

(1) A freshly-cut jhum field left to dry. Tamsamon Village, Tamenglong Dist.: February, 2015.

(2) Clearing the jhum field after it has been burnt. “It’s back-breaking work” they say. Haochong Village: April, 2015.

also the first crop to be planted. They are either literally ‘planted’ with the hoe, or scattered and loosely covered with soil. Farmers differ in their method of sowing paddy, but scattering is more widely preferred- it also involves less labor and time. The main reason for planting is protection from birds and pests. Seed sowing may be carried out over a period of two whole months from April to May. Sometimes the farmers mix two or more varieties of seed while broadcasting. The farmers look for a period locally known as ‘*tachi bungnu*’, which means a period when seeds sprout rapidly. This period lasts around one week and is repeated three times, returning after a gap of a little over a week. When rice seeds are sown in a *tachi bungnu* period, they begin to sprout by the third day itself. Otherwise, farmers report that paddy may take more than ten days to sprout. Paddy planted in this period is able to outgrow the weeds; thus farmers look to do the bulk of seed sowing in this period. While a *tachi bungnu* period can be detected only after checking the planted seeds, the fact that the whole village is involved means that such an important period does not go unnoticed.

Other crops are planted as soon as paddy has been sown. Crops like sesame, chilly, varieties of brinjal, ginger, turmeric, yam, soyabean, tapioca etc are often grown in small groups. Maize is an important crop and is often grown in a separate section in the plot. In addition they are always grown to mark boundaries between different crops or their varieties, to mark the footpaths and parallel to the logs across the slopes to help prevent soil erosion (Pic. 4.6). Roselle or Gongura are also grown to mark boundaries. Crops like pumpkins are usually grown on the field’s edges. Gourds are often grown near the field-house with the field house functioning as a support. Other crops like millets (*dun*), climbing plants including variety of beans, cucumber etc are distributed across the field (Pic. 4. 9). While the jhum field doesn’t look as organized as a modern farm, it has its own way of assigning various plants depending on soil types, plant types and also the needs of the farmer. The NEPED (1999) classifies the crops grown in the jhum field into main crops, special crops, margin crops and crops near the hut (pg. 133).

It is noteworthy that farmers sow paddy seeds intended to be used as seed for the next season in a different patch of land. While rice is a self-pollinating plant[46], farmers try to keep 'pure breeds' of each variety of paddy by growing them separately from the rest of the crops. These are harvested after ensuring full ripening and stored separately from the rest. Preserving seeds of other crops are not done as meticulously.

Weeding begins almost as soon as all the crops are planted (Pic. 4.3). Both Haochong and Puichi farmers normally weed their jhum fields three times though two times is a necessity. The first round of weeding is done around the first week of June. It is locally known as '*loupui lwaknu*' which means that the bigger, larger weeds are removed. The second round of weeding is done in the first week of July, known as '*Nram mainu*' in Haochong village. According to the farmers, the second round is where the 'real weeding' is done. As the crops are relatively stronger than the weeds, thorough weeding can be done without fear of uprooting the crops. The third round of weeding, known as '*baru-nu*', is carried out around August-September. The local term denotes weeding that is done to supplement the thorough weeding of the second round.

While there is negligible use of weedicides in the jhum fields, the local farmers use common salt (sodium chloride) to suppress weed in the field. This is also reported in other Naga villages in Nagaland (NEPED, 1999). A solution of common salt mixed in water is sprayed in the field around June-July when weed is not yet strong. Often, this makes up for one round of weeding. The farmers report faster growth of crops, especially paddy, in addition to suppressing weeds when salt is sprayed in the field.

Weeding takes up a significant portion of the labor employed in a jhum field. As Table 4.1 shows, total labor spent in weeding alone account for 22.6% and 30.3% in Haochong and Puichi village respectively. It can be noted that while the average labor spent by a family is slightly higher in Puichi across all work types, it is significantly higher in weeding (70.6 in Puichi and 33 in Haochong). Perhaps this reflects the intensity of work in the jhum field in Puichi. It is done mostly by exchange labor in Puichi (more than

[46] Rice is almost completely self pollinated (Morishima and Oka, 1967).

(3) Mixed group of exchange laborers weeding a jhum field- first round. Notice that weeded plants are left to be decomposed *in-situ*. Puichi: July 8, 2014.

(5) View of jhum fields cultivated in a contiguous area. Puichi: July, 2014.

(4) A typical 'Field-house'. Roselle plants are at the back, some bean-vines and maize are visible. On the far right is a wet-rice terrace field. Puichi: July, 2014.

(6) Maize plants demarcate the jhum field into different parts. Notice also the wet-rice field on the upper right corner. Puichi: July, 2014

(7) Bamboo-made water channel brings water to field house. Notice that tree stumps are left behind; also banana is planted with paddy. Puichi: July, 2014.

(8) Ready for harvest, a jhum field of Puichi village: Mid-October, 2014.

(9) A typical jhum field at harvest: roof of field-house overgrown by bitter-gourd, Roselle plants, varieties of beans growing on poles. Puichi: Oct. 2014.

(10) A man harvesting his field. Harvest is mostly done with family labor. But exchange labor help accomplish the rest of the process. Puichi: Oct. 2014.

(11) The younger workers, both boys and girls, collect and supply harvested paddy sheaves to the threshing floor. Puichi: Oct. 2014.

(13) Paddy is winnowed immediately after threshing, dried and then carried home. The cycle is repeated many times. It may take days to complete the process. The 'army dress' is much preferred for its longevity. Puichi: Oct. 2014.

(12) Threshing the paddy: exchange labor takes over. The field-owner is left to extend hospitality to the workers and supervise when needed. The mood is of joy-songs, stories and a sing-song '*Kahoinu'* abound. Puichi: Oct. 2014

(14) Every member contributes at harvest: A little boy plucks beans seated on the branch of a pole. Roselle plants in flower can also be seen. Puichi, Oct. 2014.

60%, Table 3.5 of Chapter 3); while labor in Haochong village is mostly family-based. Women are generally the main actors when it comes to weeding. While men are also involved- more than the women folk in some families, yet these are exceptions. The role of women in weeding is further intensified if it is mostly family-based labor.

Table 4.1 Distribution of Labor by Type of Work in a Jhum Field

Work type	Haochong			Puichi		
	Total labor	Avg. labor/HH	% to total	Total labor	Avg. labor/HH	% to total
Clearing Forest	414	21	14.3	1088	22.7	9.7
Clearing field	162	8	5.6	530	11.0	4.7
Field House	60	3	2.1	132	2.8	1.2
Sowing crops	428	21	14.7	1245	25.9	11.1
Weeding 1	254	13	8.7	1479	30.8	13.2
Weeding 2	260	13	9.0	1247	26.0	11.1
Weeding 3	93	5	3.2	405	8.4	3.6
Spraying Manure	50	3	1.7	257	5.4	2.3
Total weeding	657	33	22.6	3388	70.6	30.3
Harvesting	527	26	18.1	1425	29.7	12.7
Total	2905	145	100.0	11,196	233.3	100.0

The harvest season is one of the most hectic in a jhum calendar. Harvest season denotes the harvest season of paddy. Various factors make it imperative for the farmer to complete the harvest as soon as possible. Birds and wild animals, especially rodents and untimely rains can damage the crop extensively. Bird watching is an important and integral part of the harvest season. The normal paddy harvest season starts from September till late October (Pic. 4.8). It may start as early as August for some early varieties of rice, which is grown when there is shortage of food. It needs to be explained that farmers do not separately harvest, thresh, winnow and then carry the paddy home. The whole process is done together and repeated many times over. A typical day would involve harvesting followed by threshing, winnowing and carrying the paddy home- all in one day (Pic. 4.11 to 4.13). This is true for work involving only family labor and involving exchange labor. The threat posed by rodents and untimely rains in the absence of store houses in the field requires that harvested paddy is not left in the field for long

without completing the process. Unlike sowing and weeding, harvesting involves more of family labor (Pic. 4.10). Exchange labor is strategically organized only for threshing and winnowing the paddy, with a bulk of the harvesting already done before hand.

Harvesting crops in the jhum field start much before paddy and ends much later too. In fact, certain crops like king chilly continue to bear fruit well into the next year; or as along as one keeps it free of weeds. As is well known, the diversity of crops in a jhum field provides not only variety of food, but also at different times of the year. It is not only a security against failure of certain crops, but also a source of food before paddy can be harvested again. Early varieties of maize can be had as early as July, supplementing the depleting stock of paddy. Millet is another crop that supplements rice. Later varieties of maize can be had during the normal harvest season when paddy has almost or is already exhausted. Tuber crops like ginger, tapioca, yam, turmeric etc are harvested in the months of November and December.

This characteristic of jhuming makes it hard to quantify the utility of a jhum field to the farmer. Calculating the productivity of the field (land or crop) or labor is an arduous task. But this aspect also explains why farmers with large wet rice fields continue to practice jhum- not for paddy but for all the other crops which cannot be grown otherwise. Perhaps it is also one of the reasons why jhum could not be 'replaced'. The jhum fields provide a constant supply of vegetables and other food throughout the year. Replacing jhum with any other type of farming in the absence of an alternative to provide these daily needs, say market, would have a high opportunity cost.

4.1.1.3. Agricultural Calendar

Agricultural seasons are important from the farmers' point of view. In the absence of a labor market, labor is the most important input. Many of them operate more than one plot of field. It has become necessary to manage labor across jhum, wet-rice and horticulture. Table 4.2 gives a comparative picture of the seasonal labor requirements for the three popular ways of farming. It is apparent that a farmer who is engaged in two or more practices is engaged for the whole year.

Jhum requires labor to be distributed throughout the year. The peak season is from April-May to September-October where major activities of sowing, weeding and harvesting are concentrated. Cutting forest is distributed across two to three months and requires lower intensity of labor. Wet-rice cultivation requires a comparatively early start due to colder climate experienced by the villages due to their altitude (1100 to 1400 m asl)[47]. Thus peak season of jhum and wet-rice overlap. Families carrying out both wet-rice and jhum benefit from mutual exchange of labor the most. It enables them to get bulk of the work done in a short period of time. In addition, the small to medium scale of work enables farmers to cope with the demands of labor. However as Table 4.2 points out, giving equal efforts to both wet-rice and jhum may be easier said than done. While Puichi farmers give more efforts (and more harvests from) in jhum, Haochong farmers give more efforts to wet-rice.

Perhaps paucity of labor partly explains why horticulture is gaining more acceptability. Compared to jhuming and wet-rice, horticulture requires much lesser investment in terms of labor while giving cash returns. Banana begins to give returns one year after they are planted. In addition, there is no specific season for harvest and is therefore extremely popular[48]. Orange plantations on the other hand have a gestation period of around 6 years before they start bearing fruit. In both cases, they are much easier to maintain. After planting tree saplings which requires some labor, controlling weed is the only concern. This is done by slashing them three times a year with either hired or family labor. Plantations for timber do not require any efforts from the farmer. Some tree species like bean tree are grown as part of kitchen garden or in the wet-rice field and do not demand any attention while giving good returns in the market. Farmers are thus able to concentrate in the jhum or wet-rice field and yet maintain a plantation. In other words, plantations alone, if done on a fairly large scale can give steady income to the family. The ready market available for horticulture products is another important incentive.

[47] It is observed that while surrounding villages transplant their fields in June after the arrival of monsoon, these two villages carry out transplanting with the help of the pre-monsoon showers around May. However they harvest at the same time or sometimes, later than the nearby villages.

[48] A horticulture farmer, who also works as a private teacher, explains that banana plantation pays as much as a Grade IV government job.

Table 4.2 Agricultural Calendar Showing Different Seasons and Related Activities for Jhum, Wet-rice and Horticulture.

Sl. No.	Months	Jhum	Wet Rice Fields	Horticulture
1.	January	Clearing Forest	Preparing nursery for rice saplings.	Orange picking continues.
2.	February	Clearing Forest, letting it dry	Potato and other crops harvested.	Late orange picking.
3.	March	Burning Forest, clearing burnt field, making field house.	First round of tilling land. Preparing water channels collectively and privately.	Clearing weeds in orange farms.
4.	April	Early sowing of paddy starts.	Second round of tilling, with water. Repairing bunds, preparing field.	
5.	May	Peak activity for sowing paddy; other crops follow.	Transplanting rice saplings completed.	
6.	June	Late sowing of paddy; brief lull before weeding starts. First round weeding starts by last week.	Checking availability and supply of water	Bamboo shoot begins to appear.
7.	July	Peak of first round of weeding in the first week. Second round of weeding starts by last week. Early variety of maize is available.	Weeding.	Peak season to harvest bamboo shoot and ferment it.
8.	August	Third round of weeding in the last week of the month. Harvest of early varieties of rice.	Weeding.	
9.	September	Watching the field for birds. Harvest of most varieties of rice starts. Late variety of maize begins to mature.	Watching field for birds	
10.	October	Peak harvest season for paddy. No other activity carried out. Harvest ends with the month.	Peak Harvest season for paddy.	Early picking season for orange starts.
11.	November	Bringing remaining harvest home. Harvesting other crops like ginger, tapioca. Harvest Festival. '*Ram-rai nu'*, choosing land for next cycle is done.		Clearing orange farm-weed growth is stunted if cleared at this time.
12.	December	Clearing forest starts again. Different varieties of chilly are picked and dried.	Winter crops like peas, mustard, potato etc. are sometimes grown. (Practice yet to pick up.)	Peak season for orange and bean tree. Market activity is at the highest-in time for Christmas.

4.1.2. Crop Diversity and Changes in Cropping Pattern

An integral component of discouraging jhuming by state agencies was the introduction of new varieties of crops, mainly cash crops. Along with a new system of 'settled' land use, these two measures sought to control jhum. This is not isolated to India but is an experience of other South-east Asian countries too where governments have seen shifting agriculture in a negative light (Fox et al, 2009). This can serve as an entry point to analyze the current trend of changes in cropping patterns. While all changes are not necessarily imposed from outside, and such external interventions have not seen much success in India, one cannot underestimate their direct and indirect effects on the jhuming system. Indeed experiences from the present study seem to suggest that farmers took advantage of available market opportunities resulting in a shift towards horticulture. However, a survey of available literature on jhuming shows an inclination towards promoting horticulture, agro-forestry, managing fallow systems etc. Encouraging planting of high yielding varieties of rice in jhum fields is conspicuous by its absence. In other words, analyzing changes in jhuming requires an examination of the shift away from the traditional crops to horticulture, plantation or agro-forestry. The following section presents crop and rice diversity in the jhum fields. This is followed by a discussion on the shift away from jhuming towards wet-rice and horticulture and their extent in Puichi and Haochong village.

4.1.2.1.Crop Diversity in Jhum

Crop diversity is one of the distinctive features of shifting agriculture. It indicates a rich heritage of knowledge that supports the livelihood of the agricultural community (Thrupp, 2000). The two villages displayed a high degree of diversity in their jhum fields. Table 4.3 shows the rich diversity of crops and their different varieties[49] (excluding rice). While it is unlikely that *all* these crops will be found in a single field, some varieties from each group are found. The most common crops include varieties of rice, maize, Job's tears, millet, chilly, eggplant, gourd, pumpkin, beans, yam, taro, ginger, turmeric, garlic, cassava, sweet potato, roselle, mustard, soya bean, sesame (Pictures 4.15 to 4.31).

[49] The Table shows crops that are commonly grown in the jhum fields. It should not be interpreted as crops indigenous to the place.

Table 4.3 Crop Diversity in the Jhum Fields of Haochong and Puichi Village

Sl. No	Group	Common Name/ *Local Name*	Botanical name	Varieties	Parts used
1.	**Vegetables**	Roselle (Gongura)/*Ankhiang*	*Hibiscus safdarifa L.*	2- Green Stem& Red Stem	Fiber, leaves, flowers, seeds.
2.		Mustard/ *Ancham*	*Brassica nigra* and *Sinapis alba*	6- Dark green; green; small; large; hairy (for fermentation); For oil	Leaves
3.		Eggplant/ *Anchok kalang*	*Solanum melongena* L	11- Orient express (green, dark green, black, purple); Globe eggplant; Italian eggplant; Thai eggplant (green, dark green, purple, black)	Leaves and brinjal
4.		Chilly/ *Baroksi*	*Capsicum spp. (annuum)*	5- King Chilly (Dark green, green, white); Long chilly; short chilly	Leaves and chilly
5.		Tree tomato/Tamarillo	*Solanum betaceum*	1- Tree tomato	Tomato
6.		Ladies' finger/ *Bellundri*	*Abelmoschus esculentus L*	1- Lady's finger	Ladies finger
7.		*Liangto*		3- Red; white; Baang rwan liangto	
8.	**Tubers**	Yam/ *Baanra*	Dioscorea spp.	4- Air/potato yam (white, black); Greater yam (black, red)	Tuber
9.		Sweet potato/ *Sathum*	*Lopmoea batatas* L.	2- White; red	Tuber; leaves for animals (pigs)
10.		Cassava/ *Thing sathum*	*Manihot esculenta* Crantz	1- White	Tuber; leaves for animals (pigs)
11.		Taro/ *Baan*	*Colocasia esculenta* L.	10- Alu baan; Aantui baan; bazingbae; senmik baan; baan popnu; khongchai baan; bero baan; khun baan; tatou baan; andwan sansa.	Tubers; stem of *andwansansa* used as vegetable. Stem used as feed for pigs.
12.		Garlic type/ *Anam*	*Allium sativum*	7- Tapwang anam; anam chap (small-white, dark; big- white, dark); chiru anam; tuilian anam.	Roots of tapwang anam; bulbs of anam chap; leaves of all.
13.		Ginger/ *Kathing*	*Zingiber officinale* L	1- Ginger	Tuber; stem as spice for fresh meat.
14.		Turmeric/ *Airim*	*Curcuma longa*	1- Turmeric	Tuber; flower of the turmeric plant.
15.		Potato/ *Aloo*	*Solanum tuberosum*	2- Red; white	Leaves, tubers

Sl. No	Group	Common Name/ *Local Name*	Botanical name	Varieties	Parts used
16.	**Cereals**	Job's tears/ *Nim*	*Coix lacryma-jobi* L.	2- Nim; basulu	Seeds
17.		Millets/ *Dun*	Genus *Echinochloa*	5- Duntak; dun Maituang; dun tanaang; uike dun; saang dun.	Seeds
18.		Maize/ *Kichaak*	*Zea mays*	3- Early, Late, three- months	Seed- for humans; as feed for animals.
19.	**Legumes**	Beans/ *Bae*	*Phaseulus vulgaris; Phaseolus and Vigna spp.*	15- Large flat bean of South east Aisa; yardlong bean (White, red, black); hyacinth bean (green, green-purple, Hyacinth Indian bean); winged bean; snap bean; tongue of fire; baephan; bandungra; pisak bae; bae taswei; fapwang bae.	Leaves of some varieties; beans when they are not mature; seed (peas) when they are mature.
20.	**Oilseed**	Soyabean/ Bae Swei	*Glycine max*	1- Soyabean	Seed crushed for oil; seed for fermentation.
21.		Sesame/ *Kalim*	*Sesamum indicum*	2- Black sesame; Nimbung	Seed crushed for oil
22.	**Cucurbits**	Bitter gourd/ *Ankhak kra*	*Momordica charantia*	3- Bitter gourd (light green, dark green, small)	Bitter gourd.
23.		Bitter less/Spiny gourd/ *Minrounu kra*	*Momordica dioica*	1- Bitterless gourd	Only fruit.
24.		Cucumber/ *Sangmaikra*	*Cucumis sativus*	2- Small, big	Only fruit.
25.		Pumpkin/ *Amai*	*Cucurbita spp.*	3- Pumpkin- round, long; Ash gourd	Leaves, pumpkin for humans & animals.
26.		Gourd/ *Siphok*	*Trichosanthes cucumerina* and *Luffa aegyptiaca*	2- Snake gourd; luffa (sponge) gourd	Snake gourd as food; luffa gourd as sponge.
27.		Gourd/ *Bon*	*Lagenaria siceraria*	4- Bottle gourd (long, short); birdhouse gourd (small, large)	Bottle gourd as food; birdhouse gourd for storing seed and water in the past.
28.	**Fiber**	Cotton/ *Laa*	*Gossypium spp.*	2- Yellow flower type, white flower type.	Flower used to spin cotton fiber.
29.	**Tree**	Banana/ *Nachang*	*Musa paradisiaca*	3- Nachang tak; champra kola; Zehazi.	Banana
30.	**Others**	(Sugarcane type)/ *Bazu tamtou*	*Saccharum officinarum*	2- where stem is eaten; where fruit is eaten, similar to popcorn	Stem and fruit.

(15) Colorful varieties of maize to be kept as seed.

(16) King chilly plant in a jhum field.

(17) Parkia or stinky bean, an important cash crop.

(18) Ash-gourd in a jhum field.

(19) Winged bean amidst banana and maize

(20) Sesame plant with Roselle plant & paddy.

(21) Job's tears, a crop losing its importance.

(22) Thai eggplant. Pink (left) & green variety (right)

(23) Soyabean in a jhum field.

(24) *Changat* variety of rice.

(25) *Changmeison Tapnaang* (Sticky rice)

(28) Birdhouse Gourd

(26) *Changat (Karang)* variety of rice.

(27) *Tin 100 saang* variety of rice.

(29) *Takhangba Tapnaang* (sticky rice)

(30) Paddy & Job's tears (upper left) being dried before crushing. Haochong: Oct. 2014.

(31) King chilly, for sale. Notice the varieties: Dark red, green, dark green, whitish green.

The jhum field served as the major source of food supply to the farmers, apart from hunting and gathering other forest products. Indeed it is hard to imagine such dependence on a single plot of land in the present day context. However, in the near-absence of market- which was a few days journey away, the jhum fields served as the center of economic, social and political organization. Dependence on the jhum field gave the village the independence it enjoyed. In other words, the diversity of crops that one witnesses in the jhum fields is deeply linked to the *need* of the farmers/village to sustain itself when faced with no other alternatives for survival. The variety of crops ensured constant supply of food both in terms of quantity and nutrition all the year long.

However, the food at the table of a farmer in Haochong has many ingredients that are not found in the jhum field. Rice, in many households is bought from the market; popular vegetables like cauliflower, cabbage, tomato, dried fish etc are not from the jhum field either. The relative nearness of the market has meant that while farmers can sell their goods, they are also consumers. It is not an unfounded fear to state that the diversity of crops found in the fields is disappearing gradually. The decision of the farmer to grow certain crops is influenced not only by his need but also by its price and demand in the market. Thus, crops like cotton and the large variety of birdhouse gourd (earlier used for storing seeds and as water-carriers) are scarcely found. Cereal crops like millets and Job's tears have also lost much of their significance. In contrast, crops like chilly, roselle, beans, edible gourds, maize etc have good demand from the market and are grown in large quantities.

Women have been known for playing an important role in preserving genetic diversity (FAO, 1997). The present research also found it to be true though a handful of male members were equally informed or interested. In general, men tended to know more about the 'village affairs' while women gave more details about the field. While both men and women (or husband and wife) participate in preserving and maintaining genetic diversity, the women play a much larger role. She also has much freedom to decide the type and quantity of crops to grow (NEPED, 1999), as ultimately 'she has to prepare the food'. In fact, she plays an important role in 'organizing' the field. For example, maize

and taro are grown on footpath boundaries; pumpkins and ash gourd are grown on the field edges; sesame, ginger, soybean are grown in groups; brinjals, beans, bitter (less) gourd are grown near the field-house etc. Larger decisions like quantity of paddy to be sown are taken collectively and are likely to be male-dominated. Works like weeding are also done collectively, as a family or by exchange labor. However the upkeep of the jhum field is in the hands of the woman of the household. In fact, the geography of crops and condition of a jhum field bears the signature of *the* woman.[50] While this reinforces the fact that women do more work than men in jhum (Karlekar, 1999), it also highlights her role as a manager rather than being only a worker.

Familiarity and experience are essential to work in a jhum field due to the variety of crops and their specific seasons. Two examples from rice, one from each village, give a glimpse on how the diversity of crops, especially rice, involves an active participation of the farmer. It may be noted that rice (*Orya sativa*) is an almost completely self-pollinating plant (Oka and Morishima, 1967). In other words, rice variety is largely due to mutation and is the subject of extensive research. A combination of various factors like soil properties, availability of water, rainfall lead to the expression of certain physical qualities, like fragrance, grain size, color or adaptability to certain conditions in some varieties[51].

In Puichi village, there is a new variety of rice, yet unnamed, that is becoming popular. 2014 was only the fourth year since this variety began to be cultivated. It was discovered and nurtured by Ms. Namdinreilu and her husband in their jhum field[52]. The keen farmers noticed two stalks of paddy different from the rest. These two stalks were harvested differently and sown separately in the following season. They harvested 2 kilos of paddy which was again sown separately in the next season. They harvested a *khawlwang* (approx. 20 kilos) of paddy. The new variety is now beginning to be cultivated by other farmers too. Its appearance is like the '*Tin* 100 *saang*' but ripens earlier by the first week

[50] The farmers understand the condition of a jhum field to be a reflection of the skill and hard work of the woman or wife of the family, rather than the husband.
[51] For research on rice qualities and genomics associated with it, please refer Fitzgerald et al, 2009; Pucciariello and Perata, 2013; Huang et al, 2013; Fukao and Xiong, 2013.
[52] Interview with Ms. Namdinreilu on 8th November 2014.

of October. It also has a fragrant aroma which is much appreciated. The process of 'harvesting' new varieties of rice is known as *barom-nu* in the Inpui language and is well known amongst the farmers.

There is a variety of sticky rice known as '*Changmeison tapnaang*' (pic 4.25). The term is a combination of names of the couple who discovered and nurtured this variety of rice - Mr. Kh. Changmeizinang and Ms. Kh. Asonpi from Haochong village. At the time of fieldwork, the old couple was still alive. It is widely used in both the villages and the story of its origin is well known. This technique of *barom-nu* to nurture new varieties of rice enabled the farmers to keep varieties of rice which were suitable for certain conditions or which met their needs. Older farmers narrate that new varieties of rice are discovered while older, less popular ones become unused and extinct. Table 4.4 presents the varieties of rice that are presently found in the two villages.

The variety of rice and the conditions to which they were specifically suited awed the researcher. The table has been arranged on the basis of suitability of the rice varieties to colder or warmer climatic conditions. The boundaries of Puichi village are shared with Bakuwa village which is 400 m asl. Haochong also shares boundaries with Nungtek village which is at a much lower elevation. The highest point of the two villages each goes to 1300 m asl. A long history of jhuming has enabled the farmers to nurture different varieties of rice to suit the local climatic conditions. At the time of research *Tin* 100 *saang*[53] was the most popular variety in Puichi as the fields were nearer to the village, at a high altitude. Haochong village had its fields far away, in the warmer region, hence the popular varieties were *Banglai, Ditiang saang, Changat* etc.

Certain varieties of rice suitable for rocky soil (*Banglai, Ditiang saang, Takhi Ketngan*) and bamboo soil (all varieties of sticky rice-*tapnaang, Banglai, Ditiang saang, Chingkao kompi*) are also found. There are other varieties that are harvested early by mid-August,

[53] *Tin 100 saang* means the variety of paddy which gives 100 tins when 1 tin is sown, or a hundredfold. However, there was no family which actually harvested 100 tins by sowing 1 tin. Perhaps it was achieved in the past, and therefore got its name; or it is an indicator of the high yielding quality of this variety.

Table 4.4 Varieties of Rice Found in the Jhum Fields of Haochong and Puichi

Sl. No.	Name of Paddy	Sub-types	Climate type (Cold/warm)	Rice Color	Specificities
1.	Tariang Tapnaang (sticky rice)		Warm	White	Good in bamboo soil.
2.	Tapnaang (sticky rice)	2- Red; White (Paddy Color)	Warm	Red/White	
3.	Changmeison tapnaang (sticky rice)				
4.	Takhangba (sticky rice)		Warm		Good in bamboo groove soil, black compact soil.
5.	Katang rangaak tapnaang (sticky rice)		Warm		Can grow either in bamboo or wooded forest soil.
6.	Banglaai		Warm	Red	Good in warmer, bamboo forest. Suitable for rocky, strong soil.
7.	Ditiang saang		Warm		Suitable for bamboo; rocky, strong soil.
8.	Saang Karang Kadumnu		Warm		Earliest variety- can be harvested by 15th August. Favors good sunshine.
9.	Mogulwang Saang (Pokchulu saang)		Warm		
10.	Saang Kasennu	4- Short/Long paddy stem; Big/small paddy size	Warm		All have red paddy. The short stem variety is good for plots which have had a long fallow (25-30 years).
11.	Changat	2- Early; Late	Warm		Early variety is harvested in August.
12.	Kwangring saang		Warm		The stem is very green.
13.	Saang Katoilu		Warm	Red	Shortest plant height; suitable for plots which have had a fallow period of 25-30 years.
14.	Chang san		Warm	White	Fragrant; Flat red paddy, white rice.
15.	Napdai (Poland rwan saang)		Warm	White	Long plant, large paddy size.
16.	Napdum		Warm		Small seed; fragrant; early variety.
17.	Bazinlu lwak		Warm		
18.	Kalorei		Warm		Early harvest variety

Sl. No.	Name of Paddy	Sub-types	Climate type (Cold/warm)	Rice Color	Specificities
19.	Kongchaang		Warm		Very Fragrant
20.	Kachaknu		Warm	Red	Round, sparkling paddy, red rice.
21.	Takhi Ketngan		Warm		Soft stem, grows well even in rocky soil.
22.	Tompok saang		Warm		Used to prepare rice-beer (white).
23.	Chingkao Kompi		Warm		A newer variety, strong stem; good in bamboo forest.
24.	Marwangpa rwan saang		Warm/Cold		Can grow in both cold and warm conditions
25.	Mang Saang		Cold	White	
26.	Mupo		Cold		
27.	Loupui	2- Early; Late	Cold		Very fragrant; early variety is harvested in August.
28.	Napchwang		Cold		Most fragrant variety.
29.	Tarikphik	2- Big; small (paddy size)	Cold		The paddy has a slightly glittering look. Does well in plots having had long fallow (25-30 yrs) or fresh plot.
30.	Tin 100 saang		Cold	White	Good in red, porous soil, less sunny areas. It has deep roots, long stalk. Last to be harvested- October last week.
31.	Tangkhul rwan saang		Cold		
32.	Takham saang		Cold		
33.	Palem Saang		Cold		Suitable for plots having had long fallow (25-30 years)
34.	Yet Unnamed		Cold	White	The rice is fragrant, resembles '*Tin 100 saang'*, but ripens much earlier, October 1st week.

The table is prepared with information gathered from household schedules, as well as interviews with the following people:

1. Ms. Bt. Bajalwanlu, 50 years; Haochong Village on 17th October, 2014.

2. Mr. Kh. Meinganlakba, 78 years; Puichi village on 28th October, 2014.

3. Ms. Bt. Thiunilu, 82 years and Ms. Bt. Nambuanlu, 36 years; Puichi Village on 31st October 2014.

keeping the farmers from running out of stock (*Saang karang kadumnu, Changat, Napdum, Kalorei*- all in warm climate; and *Loupui karang* in colder climate). There are some varieties that do well when the plot of field is being cultivated after a long period of fallow- 25 to 30 years or more. In such conditions where the soil is very fertile, the farmers report that normal varieties cannot be grown. The normal varieties grow so well that the plant is not able to support itself on its weight when wind or rain falls. At other times, it is not able to bear grain. Varieties like *Saang Kasennu, Saang katoilu* (for warm) and *Tarikphik, Palem saang* (for cold) are grown when primary forest or long-fallow secondary forest are being cut for jhum.

Some varieties of rice give good fragrance- all varieties of sticky rice, *Changsan, Kongsaang, Loupui, Napchwang* and the new unnamed variety from Puichi. A variety of rice, *Tompok saang*, is used specially to prepare rice beer. Other varieties of paddy include those whose plants are short or long in stature, where grain size is large or small, round or elongated, where paddy is red, glittery or normal, where the rice is red or white etc.

The local names of rice also prove to be an unlikely source of information on the historical relationship with other villages. Some varieties are known by the place or tribe from which it was brought. For example: *Ditiang saang* (from Ditiang), *Mogulwang saang* (from Mogulwang), *marwangpa rwan saang* (from Marwangpa), *Tangkhul rwan saang* (from some Tangkhul village). Other varieties with a non-Inpui name but which continues to be used also reveal the tribe from where they might have originated- *Napdai*, *Napdum, Napchwang* are Rongmei[54] names. It is an evidence of the historical connection amongst jhuming villages of different tribes. It is likely that crops, techniques and knowledge were shared.

However, just like any other crops, the rich varieties of rice have also evolved in the context of jhum being the only economic and livelihood source. Now fewer households practice jhum on a large scale and some have given up altogether also. It would be increasingly difficult to maintain this diversity of crops, especially rice.

[54] The Rongmei tribe is from Manipur and is concentrated in Tamenglong district.

4.1.2.2 Changing 'Cropping Pattern' – from Jhum to Horticulture

As mentioned earlier, there is a definite shift away from the traditional practice of jhum towards market-conducive horticulture, agro-forestry and wet-rice (Pic. 4.32 & 4.33). While the first two are carried out mainly for the market, wet-rice is mostly for domestic consumption. It must be understood that this is not a shift *within* jhuming; rather this is a shift *away* from jhuming agriculture. In fact, Choudhury (2004) reported a shift in jhum- the ratio of cash crops in terms of area occupied is increasing in comparison to food crops. This paper draws attention to the changes outside the jhum field.

In some ways, the transition from traditional jhum to growing cash crops like banana and orange is a change in 'cropping pattern'. Land tenures remain unchanged and land is prepared in the same way as in jhum. After the banana or orange trees have perished after a few years, the land is left fallow. However, the similarities end here. It is obvious that this is a totally different form of land use from the one Choudhury (2004) reported. Lim and Douglas (1998) inform that transition from traditional crops to non-traditional, market induced crops translates into changes in fallow management, jhum cycle and soil fertility.

The common horticulture crops in Puichi and Haochong are banana, orange, potato, chilly and *heirangphok*. The Parkia tree (or stinky bean) is not cultivated like any of these but is grown as isolated trees around the house or wet-rice fields. Potato and chilly are annual crops and are carried out at a much smaller scale. Sometimes a jhum field may have chilly as the major crop, but this is not common. It is much more common to let it grow with other crops in a jhum field, or plant it in a separate part of the jhum field. Potato is most often grown in a separate field in both the villages, mostly for domestic consumption. Potato is commonly not grown in a jhum field along with paddy and other crops. Haochong village has earmarked a separate land for growing potato from the village land where no *loukhun/taram* norms apply.

Banana and orange plantations are most popular and have become an important source of supplementing income from jhum and wet-rice. While growing fruit trees for home consumption was a common practice, market-oriented farming has picked up pace only in

(32) A wet rice field belonging to a Haochong farmer after it has been transplanted, around 10 kms away from the village. It has now become an integral part of the village landscape. Haochong: July, 2014.

(33) Jhum fields- a first year jhum, where banana is planted with paddy. These fields will be transformed into banana plantations in the coming year. Pungmon village, Tamenglong Dist.: October 2014.

the last decade. It is no surprise that this has coincided with development of all-weather roads linking the villages to the local market center, Noney. Jhum control programs seem to have not contributed to rise of horticulture though it played a part in introduction of wet-rice. It is now not uncommon to find a household operating a banana plantation along with jhum field or wet rice.

Table 4.5 shows the number of families engaged in Jhum, wet-rice and horticulture (JWH) irrespective of the size of fields. It is revealing that only 60 families out of 98 do jhuming in Haochong, while 88 out of 89 households continue with jhum in Puichi. Wet-rice agriculture is carried out by nearly half of the households in both villages. Almost every third household in Haochong and every second household in Puichi village owned a banana or orange plantation, some parkia trees or a potato field in 2014[55]. The significance of jhum as the sole source of livelihood has disappeared. Even in Puichi where almost every family engages in jhum, wet-rice and horticulture are also found to be practiced in abundance.

Table 4.5 Distribution of Jhum, Wet-rice and Horticulture by Households

Sl. No.	Main Sources of Income	No. of Families	
		Haochong	Puichi
1	Agriculture (Jhum)	62	88
2	Agriculture (Wet Rice)	46	53
3	Horticulture	37	48
	Total HHs interviewed	98	89

The above table however, tells only a part of the story. Subsequent tables compare varying levels of dependency on JWH for the two villages. Table 4.6 shows the importance of JWH in relation to their contribution to income of the household. In Haochong village, jhum is the main source of income only for 29 households. An equal number of households (29) derive their income as government employees. 16 families depend on wet-rice while 5 families return horticulture as the most important source of income. Horticulture is the second most important source of income (29 HHs) followed

[55] Chilly is taken as a jhum crop as it is mainly grown with other crops in the jhum field.

by wet-rice (24 HHs) and jhum (16 HHs). The significance of horticulture as additional source of income is clearly seen. These numbers for Haochong ought to generate considerable interest as the village would have been totally dependent on jhum only a few decades back. However, less than one-third households derive their main income from jhum. An even lesser number of households (16) return jhum as their secondary source of income. It would not be an exaggeration to project that wet-rice and horticulture will gradually replace jhum as the main source of income. In fact, the appeal of wet-rice and horticulture is much stronger than jhum, as jhum is seen as a physically demanding source of income with low returns. Wet-rice with horticulture is seen as an ideal combination by many farmers. Jhum in Haochong village has become secondary though not completely dispensable[56].

Table 4.6 Dependence on Jhum, Wet-rice and Horticulture

Source of Income	Haochong Village				Puichi Village					
	1st in importance		2nd in importance		1st in Importance		2nd in Importance		3rd in importance	
	Nos.	% to Total	Nos.	% to Total	Nos.	% to Total	Nos.	% to Total	Nos.	% to Total
Jhum	29	29.6	16	16.3	84	94.4	3	3.4	1	1.1
Wet-rice	16	16.3	24	24.5	2	2.2	41	46.1	10	11.2
Govt. Service	29	29.6	2	2.0	3	3.4	-	-	-	-
Horticulture	5	5.1	29	29.6	-	-	18	20.2	29	32.6
Others*	19	19.4	17	17.3	-	-	6	6.7	1	1.1
Unstated	-	-	10	10.2			21	23.6	48	53.9
Total HHs interviewed	98	100	98	100	89	100	89	100	89	100

* Others include NGO worker, business, vehicle owner, driver, construction worker, wage labor, rice mill, private school teacher, and Christian worker.

The situation is quite different in Puichi village. Jhuming is done by all households except one and is the main source of income for 84 households out of 89. Wet-rice serves as the main source of secondary income (41 HHs) followed by horticulture (18 HHs). It is

[56] The farmers themselves state that more families practice jhum, and at a larger scale when the fields are near. When the fields are far, both the number of families and scale of operation reduce significantly.

interesting that 29 households return horticulture as the third most important source of income. The picture is quite clear: jhum is undoubtedly the most important source of income. It contrasts sharply with Haochong; not only in dependence on jhum but also on the lack of government employees (31 in Haochong, 3 in Puichi).

Having gained a general picture of the diversification of economy, Table 4.7 (a) and (b) reveal the scales on which these are carried out. It reinforces the picture of two villages at different stages of transition. Table 4.7 (a) gives a small but important insight into the differential roles of jhuming and wet-rice in Puichi and Haochong. The average production of paddy from a jhum field in Puichi is almost thrice as much compared to Haochong. The maximum quantity of paddy harvested is also much more in Puichi (335 tins) than in Haochong (150 tins). The extent of wet-rice agriculture seems to be more comparable, both in terms of average and maximum produce. Haochong village however has higher average production despite lesser number of families.

Table 4.7 (a) Extent of Jhuming and Wet-rice

Villages	**Qty. of paddy from jhum (tins)**			**Qty. of paddy from wet-rice (tins)**		
	Average	Minimum	Maximum	Average	Minimum	Maximum
Haochong	55.1	10	150	138	20	300
Puichi	152.7	30	335	99.5	15	300

Table 4.7 (b) Extent of Horticulture (for Banana and Orange)

Villages	**Banana Plantation**				**Orange orchard**			
	Avg. no. of trees per HH	HHs with more than 100 trees	Min no. of trees in a HH	Max no. of trees in a HH	Avg. no. of trees per HH	HHs with more than 100 trees	Min. no. of trees in a HH	Max. no. of trees in a HH
Haochong	236.8	22	20	1150	198.9	21	30	1050
Puichi	93.8	14	10	250	108.5	18	10	300

Table 4.7 (b) shows the degree of dependence on horticulture for the most commonly cultivated trees: banana and orange. Haochong has much more trees per household on average than Puichi: more than twice for banana (236 & 93), and nearly twice for orange

(198 & 108). The maximum number of banana trees owned by a single household in Haochong is 1150 compared to 250 in Puichi. The corresponding number for orange trees is 1050 and 300 for Haochong and Puichi respectively. In brief, while Puichi has more families involved in horticulture (48 & 37, Table 4.6), it is carried out at a much larger scale in Haochong. Thus, 5 households derive their primary income and 26 families their secondary income from horticulture in Haochong. In comparison in Puichi, none of the families return horticulture as their main source of income, 18 families as their secondary source and 29 as their third most important source (Table 4.6).

A few important points can be drawn from the above discussion. First, wet-rice and horticulture have become an inseparable part of the jhuming economy in the area under study. A few families have found horticulture as an *alternative* to jhum. However, most families see it as an additional source of income. This is likely to be true in areas which are close enough to exploit opportunities in the market. One can expect horticulture to be carried out at much larger scales by increasing number of families in the near future.

Second, the two villages are situated at different stages in the jhuming transition. Haochong village is much more integrated to the market and conversely, much less dependent on jhum. The opposite is true of Puichi village where jhum is the predominant source of income. It is interesting though that both the villages seem to be headed towards the same direction- a greater integration to market. This is in line with the current ideas in literature which sees market as coming to the rescue of jhum.

4.1.2.3 Explaining the Shift

There are some important causes that have led to the changes documented in the preceding discussion. However, the issues fiercely debated in literature, namely shortening jhum cycle and environmental destruction seem to have not contributed in any significant way. The 8-9 year fallow period is healthy by the standard of the farmers as well as literature. Jhum specific government policies have not played any major role either in discouraging jhum or encouraging other forms of agriculture. The two villages have been more or less undisturbed by these internal and ‘external’ interventions.

However, the jhuming society has not been immune to the 'way of life' defined by 'modern' society. The market has gradually but surely extended its reach and made its presence felt. These subtle processes have been the most forceful and consistent drivers of change.

4.1.2.4 Limitations of Jhuming Agriculture

In this context, a significant entry point is the limitations of jhum. Apart from the prejudices faced by this system of agriculture, there are other limitations faced by the farmers. It is helpful to keep in mind that jhuming societies live and interact with the society at large. In fact, they are situated in both, strongly affected by the more dominant economic, political and societal experiences. Therefore the shortcomings of the jhuming system are better understood in relation to the 'modern' society's view of a 'good life'.

While jhuming families are relatively self-sufficient, the system is not able to produce enough surplus to meet needs as perceived by the larger society. For example, while the jhum field can supply food for the whole family, it is not able to generate returns to fund education for the children[57]. The farmers are hard pressed to convert their products into monetary terms for which they have to invest more time and energy. Often they were at the receiving end as they had very less bargaining power being unaware of the market conditions. While children may join schooling in the early stages, many of them eventually drop out as resources to support their education are exhausted. In addition, labor is required in the jhum field. Thus the jhuming farmer finds himself vulnerable and insufficient outside of his home and village. On the one hand, he is wise enough to appreciate the need for education of his children. On the other, the jhum field does not produce enough to meet all these perceived needs.

Another shortcoming of jhuming is the year-long distribution of labor. Farmers are unable to spare much time for other economic activities. In contrast, wet-rice farmers are able to engage in other gainful activity within the village or outside in the off-season

[57] While education is indeed a major concern for the farmer, there are many other concerns like health and housing.

which is a few months. Horticulture crops require much lesser investment in terms of labor as compared to jhum.

4.1.2.5 Opportunities in the Market

While jhum has considerable shortcomings to generate hard cash, horticulture crops return good prices from the market. With better access to the market through all-weather roads, horticulture has picked up pace. The following table captures major crops and the prices they generate in the village, Noney and in Imphal.

Table 4.8 Major Crops Sold and Their Prices in the Village and Market

Sl. No	Name of crop/tree	Average price in the village (Rs.) *	Average price in Noney (Rs.)#	Average price in Imphal (Rs.)#	Maximum price at peak demand
1.	King Chilly	Rs. 500/tin	Rs. 500/tin	_	Rs. 750/tin
2.	King Chilly dried	Rs. 1/piece	Rs. 1/piece	Rs.1/piece	Rs. 1/piece
3.	Long Chilly	Rs. 150/tin	Rs. 150/tin	Rs. 150/tin	Rs. 200/tin
4.	Banana- Zehazi	Rs. 25/hand	Rs. 30/hand		Rs. 70/kg
5.	Banana- Local variety	Rs. 25/hand	Rs. 30/hand	Rs. 35/hand	Rs. 40/hand
6.	Parkia	_	_	_	Rs. 5/piece
7.	Orange	Rs. 4.5/piece	Rs. 5/piece		Rs. 7.5/piece
8.	*Heirangphok*		Rs. 15/piece	Rs. 15/piece	Rs. 15/piece
9.	Potato (local variety)	Rs. 300/tin	Rs. 300/tin	_	_

* Denotes prices at which the farmers sell to middle-men.
# Denotes prices at which the middle-men sells to the market.

Crops like orange, parkia, banana and chilly (King chilly, King chilly dried, long) are in demand even in Imphal. These form the bulk of the crops meant for market. They guarantee a certain minimum price. The rest of the crops have a more localized demand based mainly in Noney. Others like Roselle, pumpkin, gourd, varieties of eggplant

(brinjal) do not generate as much demand or returns and are excluded from the table. While almost all varieties of crops from a jhum field can be sold in the market, they do not guarantee good returns.

It is found that the two villages are closely linked to the market by middle-men. The middle-men- from the villages itself, buy the goods from different farmers, transport and sell it in bulk, either in Noney (14 km away) or Imphal (60 km away). It is now uncommon for a farmer to carry his products on foot all the way to Noney and sell it at minimal prices. In fact, the farmers now have the luxury of selling his goods from his/her home as the middle-men come asking. He even has the privilege to bargain for a price in his favor as farmers are quite aware of the market prices. A few women have begun to work primarily as middle-'men' in the horticulture business. This is a very recent development of 4-5 years. In addition, driving and owning vehicle- mostly jeep, has also become a consistent and reliable source of income. These are hired by the middle-men who take the goods from the villages either to Noney or Imphal. Horticulture has not only opened up a new avenue of earning additional income, but also provided opportunities for new livelihood options which were hitherto unavailable.

It is interesting to find that peak prices for certain crops are related not only to the seasonal nature of the crops but also to the *Meitei* festivals in Imphal[58]. Orange generates its best prices around October, where an important *Meitei* festival known as *Chakouba*[59] takes place. While orange is generally sold at Rs. 500 per 100 pieces, prices may go up to Rs. 700 per 100 pieces at this time. Parkia also gets its best price of Rs. 1000 per 200 pieces during this time. The same is true for the local variety of banana. While orange and parkia are not fully ripe by October, proactive farmers who manage their farms well are able to get good returns.

Thus farmers are persuaded to take up horticulture which requires little capital investment, provided he owns suitable *loukhun* and is able to manage the demands of

[58] The *Meiteis* are the non-tribal population living in the valley of Imphal.
[59] The Chakouba festival is one where married sisters are invited to their paternal homes by their brothers.

labor. The fact that the farmer gets cash returns is also a major incentive as urgent needs can be met in this way. In fact, farmers seek to repay loans by selling their crops during *Chakouba*. A single parkia tree, if it is a particularly fruitful one, is enough to supply the needs of an average-size family for the Christmas season. On the other side, the richer farmers in the village see horticulture as an easy way to generate additional income. The importance and popularity of horticulture can be gauged from the role it plays in the daily life of the farmer.

4.1.2.6 Government's Policy of Encouraging Horticulture

In addition to the limitations of jhum *vis-à-vis* market opportunities, government policies have also played an important role in the shift away from jhum. While these may not be jhum specific, farmers reported having benefited from such initiatives as distribution of orange saplings by the Horticulture Department. The government has also actively sponsored the 'Orange Festival' in Tamenglong District since 2001 which has now become an annual event and held as a State Level Festival.[60] It has become an important tourist attraction where traditional cultures are showcased with 'Orange Queen' contest as the showpiece item. The aim of the festival is to 'facilitate the socio-economic upliftment… by taking advantage of the natural favourable conditions for the growth of horticulture crops'.[61] Seminars or related activities are organized as part of the festival for orange growers. Apart from incentives such as cash prizes for farmers with the 'Best Orange', they also attract buyers and even fruit processing industries who directly buy from them. The farmers of Puichi and Haochong also participated in the 11th State Level Orange Festival, 2014.

In brief, the transition in jhum involves a significant shift away from jhum. Settled wet-rice agriculture and market-friendly horticulture are the popular alternatives in the study area. Indeed, the jhuming system appears to be headed towards greater integration with the market. It is noteworthy that cropping pattern in the jhum fields have remained more or less unchanged. However, as maybe seen from Haochong village, the scale of jhum

[60] The first Orange Festival was organized in 2001 by Manipur Small Farmers Agri-Business Consortium. http://mansfac.nic.in/ORANGE%20%20New_Fetival.htm Accessed on 9th June, 2015.
[61] http://manipur.nic.in/orange/orangefest.html Accessed on 9th June 2015.

operations tend to get smaller as wet-rice and horticulture becomes more prominent. While various factors are responsible for such a change, the market seems to play the most significant role.

4.2 Agricultural Changes: Effect on Institutions, Land Tenures and Inequality

The focus of the chapter so far has been to characterize the different agricultural practices found in the villages under study. It has also captured the remarkable shift to horticulture as part of the changes in the jhuming system. This section attempts to present the effects of these changes on traditional institution and tenurial regimes. It also brings in inequality as a criterion to comment on these shifts. The approach adopted in this chapter is founded on the understanding of an intricately linked jhuming agricultural system. An analysis of corresponding changes is thus seen as essential.

4.2.1 Old Institutions and New Practices

The traditional institution of *Thampei* found its significance in its ability to identify and integrate individual household needs with the larger needs of the village. The effectiveness of this institution is borne by the fact that the villages move their fields together and maintain a sustainable 9 year fallow cycle even now. The *Thampei* however faces a unique challenge with the introduction of new methods of agriculture. The individual needs are no longer always congruent to the larger interest of the village. Some adjustments have been made and these are documented here. The differences between the two villages are also highlighted.

In Haochong village, the fire-line is no longer prepared by the *kraanmi*. As nearly half of the households do not carry out jhuming anymore, the farmers who cultivate adjacent fields have to prepare it on their own. The *Thampei* however still decides the day to set fire to the fields and some people oversee to make sure that forest fires are averted. In Puichi, the fire-line is actively prepared by the *kraanmi*. Certain new practices have also begun to be followed. Farmers owning *loukhun* can ‘open’ the forest for horticulture purposes. Earlier, such practice was uncommon. The farmer has to ensure that there is no forest fire, and pay a fine in case it happens. But the farmer is now allowed to cut a part

of the forest for plantation in his own *loukhun*- beyond the area demarcated for jhum for a particular year. This is true for both the villages. The *Thampei's* role in jhuming has been considerably limited in Haochong village. Puichi village has more semblances to the traditional pattern. This is further discussed in the section of tenurial rights.

4.2.2 Changes in Land Tenures: Emerging Property Rights

Boserup (1965) pointed out that land tenures are closely linked to land-use practices. A new form of property rights with distinctly private characteristics are emerging in the study area. It may be recalled that the land holding is a two-fold pseudo-private system, consisting of field-plots or *loukhun* and ownership of large tracts of land or *taram* with many *loukhun*. Haochong has only *loukhun* system having abolished the *taram* system. Jhuming could be done even by households without their own *loukhun* by borrowing from other households.

However, the norms for wet-rice, agro-forestry and horticultural farms are different. All horticultural practices are strictly carried out only in their own *loukhun*. In other words, a household without *loukhun* cannot borrow one for plantation purposes. If at all *loukhun* is borrowed, it is only for a very close relative. The *loukhun* gets excluded from the jhuming cycle so long as the farm exists and the *Thampei* has no control over its management. In fact, *loukhun* owners do not need permission, neither from *Thampei* or Village Authority to start wet-rice, tree or horticultural plantation. The plot of land reverts back into the jhum cycle and under the *Thampei's* control after the farm has run its course and is left to fallow. Jhum related operations like borrowing and lending of plots may then continue for the same plot. The same norms apply to *loukhun* which have been converted to agro-forestry and growing trees with timber as the main purpose.

Wet-rice fields, after the initial investment to get the land ready for cultivation, become the farmer's private property. Perhaps the wet-rice field is the first piece of private land in

the real sense[62]. However, in Puichi village where *taram* system exists, the wet-rice farmer also gives *rampon* or rent each year the jhum cycle includes his field[63]. Wet-rice fields are seen as an asset as a single plot may be cultivated repetitively in contrast to jhuming where different plots are required every year. A few cases of share-cropping tenancy were also found in wet-rice fields in Haochong. The question of borrowing wet-rice field does not arise. Rather, selling and buying of wet-rice fields between households run into several thousand rupees depending on size, soil conditions and source of water supply. The management of the field is solely dependent on the household with no outside interference. It is common for a family in Haochong to plant orange trees near the wet-rice field, provided there is enough land. Orange trees are preferred for their longer life which can be up to 50 years. The popularity of wet-rice fields have led to the introduction of ploughing machines, which has now become a necessity. Households owning these machine-ploughs are able to earn a significant amount in the ploughing season alone.

Table 4.9 Traditional and Emerging Land Rights in Haochong and Puichi Village

Nature of Rights	**Private land**				**Common land**
	*Loukhun**	*Taram**	Wet-rice**	Horticulture/ Forestry**	Village land
Decision to use land	*Thampei*	*Thampei*	Family	Family	Village Authority
Access & Withdrawal	Y	N	Y	Y	Y
Management	Y	N	Y	Y	Y
Exclusion	Y	N	Y	Y	N
Alienation (within village)	Y	N	Y	Y	N
Right to collect rent	N	Y	N	N	N

Adapted from Schlager and Ostrom (1992)

[62] The only right the farmer does not have is to build a house near his field and live there. The Village Authority and *Thampei* decide on which part of the village land can be inhabited. However it is unlikely that a farmer would want to go and live in his isolated field.

[63] Or, would have included his field had the land not been converted to wet-rice field.

*The *loukhun* owner gets endowed with all these rights only in the year the *loukhun* is cultivated. The *taram* owner collects rent only in the year when *loukhun* within the taram are cultivated.

**Wet-rice and horticulture/forestry are the two types of land where the private family has the maximum say. The private rights in horticulture/forestry are however restricted to the length/life of the farm. After the farm has run its course, the plot of land reverts back to be a normal *loukhun.*

Thus a new regime of land rights is emerging. While these may not have been concretized as yet, they are understood, followed and respected. The difference private and public has become much more visible. Between these extremes are the traditional ownership patterns where land is privately owned but managed by the village. Table 4.9 summarizes the prevailing rights in the two villages.

4.2.3 Emerging Inequality

The question of inequality is seldom raised in the context of jhuming agriculture. While the level of inequality may be much lower comparatively, these are not insignificant. Exploring inequity in distribution of land, which is the most important capital in the jhuming system is revealing. Since these are primarily agrarian societies making a transition to market-based economy, the building blocks of inequality are distinctly visible. The purpose of such an exercise is not to suggest a status quo or discourage changes. On the other hand, it is to bring to light the inbuilt mechanisms of inequality even in a seemingly egalitarian society, so that policies may be directed to this aspect too. It is observed that policies tend to address agricultural problems only without affecting the underlying structure. In fact, ensuring equal distribution of capital, or land in the present context, would go a long way in confronting present and future problems.

The above discussion on emerging land rights reveals two significant things. The earlier system was less discriminatory in that families without land could also participate in the livelihood process. The new system is however exclusionary- households without *loukhun* are not able to participate in wet-rice, horticulture or forestry. These practices which are seen as more lucrative are now beyond the reach of some households.

The inequality in distribution of *loukhun* was 'insignificant' as long as the value of land was realized only once in 9 years. However, when new technologies brought new methods of using land continuously, raising its value manifold, existing 'insignificant' inequalities suddenly came alive. New technologies and opportunities build on existing land use system to introduce new land use practices. This inevitably leads to a new system of rights which facilitates a smooth functioning of the new practices. The new set of rights however does not eliminate the in-built basis for inequality. Rather it builds on it and intensifies it.

The emergence of new rights is also not necessarily gender-neutral. On the contrary, with the tendency towards privatization, the man is being conferred the title of the owner. Once again, the traditional practice of transferring property from father to son has gained much more significance than it used to. With increasing shift towards wet-rice, the manager's role of the women folk in jhum has also been left redundant.

Table 4.10 compares the combination of livelihood options pursued by households of Haochong owning *loukhun* and those who don't. Haochong village practices horticulture and other non-jhum options much more intensely and therefore has been analyzed. In contrast, the dependence on jhum is much more uniform in Puichi. In Table 4.10a, households are arranged in several classes in terms of the number of *loukhun* owned. These classes are then compared for the most important livelihood options. A combination of these options is also worked out.

Table 4.10a Livelihood Options of *Loukhun*-owning Households in Haochong

No. of *loukhun*	**No. of Families**	**Jhum (1)**	**Govt. job (2)**	**Wet Rice (3)**	**Hort. (4)**	**Owning Vehicle (5)**	**2 + 3**	**3 + 4**	**2+3+4**	**None of 2, 3, 4**
<5	19	13	2	8	12	1	1	3	1	2
5 to 10	15	5	5	12	5	0	3	4	1	0
10 to 15	26	16	9	16	9	2	6	3	1	1
15 to 20	3	2	1	2	2	0	1	1	0	0
20 to 30	18	9	5	13	10	4	4	8	2	2
Total	81	45	22	51	38	7	15	19	5	5

Of the 81 families who own *loukhun* in Haochong, only 45 families practice jhuming while a larger number of families (51 hhs) own at least one wet-rice field. 22 households have government employees and 38 households own at least one horticultural farm. Only 5 households are totally dependent on jhum with none of the other options pursued. All the rest, that is, 76 households have a combination of at least two options. The combination of wet-rice and horticulture seems to be most intensely pursued (19 hhs), followed by government job and wet-rice (15 hhs). 5 families have a government employee, a wet-rice field and a horticulture farm at the same time. The table suggests that very few households are likely to continue only in jhum if they have an option to diversify. In fact, almost half of the families (39 hhs out of 81) have left jhum altogether.

A group wise analysis also brings out some peculiarities though these are much less distinct. Households owning 15 to 20 *loukhun* form the largest group with 26 families, followed by those who own the least (<5 *loukhun*- 19 hhs). The next largest group is those which own 20 to 30 *loukhun* (18 hhs) followed by those which own 5 to 10 *loukhun* (15hhs). The unequal distribution is clearly seen. Wet-rice is the most popular source of income across all groups. Households with the least number of households seem to be most inclined to horticulture (12 hhs). The group owning the largest amount of *loukhun* also has more vehicles (4) than any other group. But there are also two households who have not diversified at all. The households with 10 to 15 *loukhun* have maximum families with government job as well as carrying out jhum and wet rice.

Table 4.10b Livelihood Options of Households without L*oukhun* in Haochong

No. of HHs	Jhum	Govt. job	Construction Workers	Wage labor	Driver	Business	Only Jhum
17	13	3	5	3	1	2	5

The families without *loukhun* have a different story altogether. Table 4.10b explores their side of the narrative. Out of the 17 households without *loukhun*, 13 households practiced jhum. It is obvious that these families had to borrow *loukhun*. However, it is interesting that even this group of families have diversified. Of the 13 carrying out jhum, only 5 families depend solely on it. Diversification might been a choice but it is also possible

that it is forced on them. However, the range of options suggests that the livelihoods of these households are closely linked to the group of families who own *loukhun*- wage labor, driver and business are directly or indirectly linked to the agricultural production process. Construction workers generally work outside the village when agricultural season has not reached its peak.

This section compared available livelihood options for families with and without *loukhun.* The small group of families without *loukhun* has much lesser opportunities. What these differences in opportunities translate into the social, economic and political life of the village over a period of time can be imagined. While the current trend in literature has encouraged the shift away from jhum, the experiences in the two villages suggest that these may result in an increasingly unequal society. There is an inevitability of inequity if the market forces are allowed to build on the traditional land tenurial systems without any intervention. The ambiguity that is most often found in traditional rights may be exploited to create an unequal society. The focus of government policies need to be directed towards ensuring equity amongst households and between genders at the local level.

4.3 Summary

The chapter on agriculture within the jhuming system is one of the most important chapters. The present work is a departure from other works dealing with similar subject in the way it approaches agriculture as being shaped by outside forces and itself being an agent of internal change. Thus, it studies not only jhum, but also the two other agricultural practices- wet-rice and horticulture. The chapter gives a brief description of geographies and management associated with the different practices. It then proceeds to give a detailed analysis of crop diversity in jhum, including a significant part on variety of rice. This leads to a study of changing cropping pattern- which is rather a shift from jhum to horticulture. This shift, and the degree of differences between the villages are captured with the help of tables. It is found that Haochong is much more integrated to the market than Puichi. Some reasons for the shift is provided.

The second part of the chapter links the changes in agriculture with the internal changes in the jhuming system. In particular it captures the emerging property (land) rights which are private in nature. It also tries to show how inequality is an issue that needs attention in the same measure that agriculture has got. The link between changes in agriculture, emerging land rights and increasing inequality are established.

CHAPTER 5

THE MODERN JHUMING SOCIETY

A jhuming society may be defined as one such society which pursues jhuming as a source of livelihood, irrespective of its dependence on the system. It is perhaps the most vibrant and dynamic component of the jhuming agricultural system. It is the sum total of the values, beliefs, social practices, festivals, aspirations and imagination- in short, their way of life. Society also represents 'needs', a part of which the economic system, here agriculture, seeks to fulfill. The mode of production and the underlying institutions, system of rights and techniques of agriculture in turn find approval in the societal expectations. These processes, however, are not confined to satisfying needs; they also determine the course and direction of the society's progress. Seen in this light, the 'modern' jhuming system, at least in the study area, is one of paradoxes. The jhuming society is in 'transition', though in a completely different sense- the aspirations of the people are no longer confined to the boundaries defined by the jhum field.

In fact, the jhuming society appears to be situated in two places at the same time. While the production processes continue to be rooted and shaped by the age-old jhuming experiences, the imagination of the people are shaped by the 'modern' values which places education, prosperity and comfort on a pedestal. It is in these circumstances that the jhuming society is said to be going through a transitional phase.

This important component of the jhuming system has, however, escaped the attention of most scholars on the subject. Sociological and anthropological studies on the other hand do not address issues that are of interest to the scholar of jhuming. The available description of society by the jhuming scholar is limited to the time in which the study was done. Thus a temporal picture of the jhuming society has rarely been presented. In fact, the oft-quoted jhuming as a 'way of life' has not contributed much to this aspect either. Perhaps this silence has given rise to the popular perception of jhuming as a static system and jhuming farmers as a persistent lot.

The present chapter is a modest attempt to fill this huge gap by outlining the social experiences of the two villages under study. An important factor, namely the introduction of Christianity, serves as the watershed that divides the society into two unequal but decisive divisions. The collective memory of the older generation- the first generation Christian (who lived in before Christianity came) serve as the main basis for a comparison of the past and present[64]. This chapter, therefore, attempts to capture and present jhuming society in transition. This is sought to be done in two major sections. The first is an effort at reconstructing the jhuming society prior to the advent of Christianity. The second is a picture of the present society. Comparison is made between the two periods on the following points: social organization and structures, economy, linkage with the market and most importantly the imagination and aspirations of the people.

Before embarking on this challenging task, a word of caution seems necessary. The sections that follow require a historical re-construction of the past. It also involves a sociological exercise of depicting jhuming society. Instead, efforts have been made to trace out prominent changes in the society.

5.1 The 'Traditional' Jhuming Society Before Christianity

Depicting even a sketch of the past requires considerable use of imagination, given that little research has been done on the Inpui tribe and the two villages in particular. The similarities shared by the two villages, which is significant, serve as the subject in this effort though differences are pointed out when necessary. Staying true to the objective of the chapter, a good starting point would be the site and setting of the villages. Unlike the present village setting, the old villages were enclosed by a boundary wall, often made of rocks piled together. In addition a deep trench surrounded the wall from inside. All houses were located inside this boundary. There were two entrance gates, locally known

[64] The different people interviewed from Haochong are: Ik. Keirijin; Kh. Kadijeiba; Kh. Pouriang, 70 yrs; Keijibwanang Inka, 52 yrs; Nk. Ningthoungam, 45 yrs. From Puichi village, the people interviewed are: Bt. Kadimuanang, 90 yrs; Bt. Namdijanang, 78 yrs; Kh. Meinganlakba, 77 yrs; Bt. Mathiuphui, 72 yrs; Bt. Thoiphui, 71 yrs; Mrs. Kh. Kadinganlu, 88 yrs; Mrs. K. Riangzilu Bt, 59 yrs.

as *Kapan*, which were the only places of entry and exit to and from the village. Water for household uses was manually fetched by women and children from a source usually some distance away from the village. Often, male volunteers assigned for guarding the village known as *Rangkaan*, would accompany and guard the women in fetching water. All these activities were required to be finished before dark. Every member of the village was expected to stay in the village in the night. The threat posed by enemies and wild animals were real and security was a priority that had to be kept at all costs. It was an important factor that shaped their way of life. It was earlier pointed out that the need for security, along with other factors, might have been an important reason for farmers cultivating adjacent plots of land.

5.1.1 Social Organization

The society was intricately organized such that clear demarcations were not made in religion, institutions, societal structures and even agricultural practices. In fact, religion being mostly rituals rather than a clearly defined set of beliefs, it was largely identified with the social practices. The people were animists and lived in fear of various 'gods' who needed to be appeased. They did not 'worship' these gods though, nor did they make idols. However, rites and rituals preceded each and every major activity that the individual or village had to undertake, to different gods for different purposes. The *Thampei,* as discussed in the chapter on institutions performed the role of a religious body as well as the highest court of the village. The administrative work was carried out by a body known as *Ingaanchang,* consisting of a group of men who had withdrawn from the dormitories but were yet to be a part of the *Thampei.*

A closely followed norm, but without any institutional basis deserves mention here. Locally known as *takhwang*, this can be a gesture, an action or the lack of it, words or the lack of it to show something much more than courtesy best described as 'respect'. This norm underlined all human relationships, especially between individuals of the opposite gender and between elder and younger individuals. It was also the basis for interaction amongst institutions as well as individual compliance to institutional arrangements.

Another important component of social organization was the dormitory system which is also found in other Naga tribes. There were dormitories for unmarried boys and girls in both the villages. Both Puichi and Haochong village had 4 dormitories each for boys and 2 dormitories each for girls[65]. The dormitories were the centers of learning social etiquettes, songs, crafts and the way of life in general. They were hosted for a period of 6 years each by different individual families. Each dormitory had 15-20 youth or more on an average. The youth dormitories took center-stage in the cultural life of the village, especially during festivals. They also functioned as groups for exchange labor during seed sowing. In addition, the boys' dormitories played important part in the security of the village.

Memberships to dormitories were decided with elaborate rituals at the birth of the child. Young boys and girls were received into their dormitories when they reached puberty. They then spent a greater part of their youth life in the dormitories. While they would go to work with their family members in the day, they did not spend the night in their parents' house until they got married. The girl remained a part of the dormitory only before her marriage. However, there were different rules and stages for the men. Married men were expected to be an active member of the dormitory for a certain period after their marriage, even until they had two children. They were then given a break from the dormitory, known as '*Khangriak kainu*' literally translated as 'separation from group' lasting for three years. He would then become a member of '*Khangbwan*', also lasting for around three years. After this stage, he would become a member of '*Inlak* or *Tangsing*' for another three years. He would then become a member of the *Ingaanchang,* which performed administrative functions along with the *Thampei.* The members of Ingaanchang become members of *Thampei* after reaching certain age and depending on the vacancy.

[65] The names of dormitories in Puichi were, for boys: *Katangpui rwan, Thoukaicham rwan, Ba-ak kai rwan* and *Katang inran rwan*; for girls: *Tangakpui rwan* and *Tangak rwan-rwan*. The dormitories in Haochong were named, for boys: *Katang Kasak rwan, Katang Kathwei rwan, Katang Inpuirwan and Katang Inran rwan*; for girls: *Tangaak Inpui rwan and Tangaak Inran rwan.* (Souvenir, Haochong Golden Jubilee celebration, 2009)

5.1.2 Festivals Related to Agriculture

Numerous festivals were celebrated in the villages, many of which coincided with agricultural seasons. Other festivals included those for the dead who passed away in the past year (*Nam aannu* and *Tataknu*), festival to mark the new year (*Karingei*), warriors' festival (*Kaliamnu*), festival for new births (*Naabitnu*) etc. These involved numerous types of songs and dances, many of which included singing the whole night long. Some of the important festivals related to jhuming agriculture are briefly summarized below[66].

Kalomdei Zu-innu, is an important festival related to seed (paddy) sowing celebrated in both the villages in the month of April-May. Two each of the boys' dormitories combined to form two groups, while the girls' dormitories formed another two groups to work as exchange labor in the members' fields. This was a major time of work-cum-celebration. Seed sowing, done in groups of 25-30 people, was accompanied by different types of songs at different periods of the day.

Kutchat Bangei or *Nitsi*, is a post-seed sowing festival celebrated in May. *Kutchat* is literally translated as 'hand cease', or a brief lull in all kinds of work. In other words, this festival is celebrated when the seed sowing is done but the weeding season has not yet started. Games and sports are associated with this festival. Firewood is collected by a special male relative known as *Ba-a* for his *Sanu*[67] and stored near the village boundary wall from which the women would bring it to their homes.

Bangeipui is perhaps the only festival without much ritual. However, it usually involved a lot of feasting. In Puichi village, the celebration was held after the end of the weeding season. Another festival, known as *Tarok tonu*, is celebrated when the harvest is near. This involved a ritual where prayers were offered for rich harvests. This was celebrated at the family level though the *Thampei* was also involved.

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[66] Only the important festivals are mentioned. It must be remembered that rites and rituals accompanied almost every single stage of agricultural activity.

[67] The relationship between *Ba-a* and *Sanu* may be described as closest to but more than siblings. These are social relations of great respect and care between members of the opposite gender, either across clans or within the same clan. These relations remained even after marriage (to different people; the *Ba-a* and *Sanu* being a non-romantic relationship)

One of the largest festivals was the harvest festival, known as *Muliangnu*. The two families which brought the maximum harvest home in the calendar year (excluding old paddy from the earlier years which might not be used-up yet) would give a feast to the whole village. The *Thampei* decided the winner by using a method that involved a rod of standard length and rope, similar to determining the area of a right triangle[68]. This was a festival of great prestige where friends and relatives from different villages were invited. In many ways, *Muliangnu* was the greatest dream and achievement by a farmer. The other achievement was *Into-Somdumnu*, which represented the highest pride and honor, achievable once in a lifetime by a person.

Perhaps the significance of *Muliangnu* to the jhuming community might be gauged from the fact that this is the only festival of the past that continues to be celebrated, and with much fanfare, albeit with overarching Christian tones. In Puichi village in 2014, the *Muliangnu* families are Bt. Thoiphui's with 480 tins (approx. 3360 kgs @ 1 tin = 7 kgs) and Bl.Kadiliang's with 450 tins (approx. 3150 kgs). The only other festival celebrated in Puichi, though only with localized groups, is the *Bangeipui*. In Haochong, *Muliangnu* was until recently celebrated. It has now been replaced by a 'Thanksgiving Day' celebration and families with maximum harvests are only acknowledged.

These festivals constituted a major part of social life in the traditional villages of Puichi and Haochong. Many of these festivals involved competition across activities like weaving, craft-making, songs and sports. Thus, considerably large villages like Puichi and Haochong functioned as self-sufficient societies. Not only did they have an agricultural system that met their needs, they had a robust social life unique to the village.

[68] The rod of standard length represented the length of a triangle while the rope represented that of the hypotenuse. This method could be used because paddy was stored in store-houses that were rectangular or square in built. After gathering the entire paddy against one side of the wall so that the tip of the rod represented the highest point, the rope tied to the tip of the rod would measure the slope. The length of the slope, which becomes gentler and longer as quantity of paddy is greater and vice-versa, would determine the winner. The farmers comment that those with little harvest would not have enough grain to stack up till the tip of the rod.
In essence, this is calculating the area of a right triangle where the height is given and the hypotenuse is measured. The method stops short of measuring the base and determining the area though. The length of the hypotenuse is taken as the decisive factor to determine the largest area and winner.

5.1.3 Economy and linkage with the market

Jhuming agriculture was undoubtedly the center of life in the traditional jhuming society. It was the main source of livelihood, supplemented by hunting and collection from the forest. The nature of the jhum field was such that it produced all kinds of vegetables in different seasons, enough to provide the household needs throughout the year. Thus, it could survive with little linkage to the market which was further confined to specific seasons where agricultural work was least.

The jhuming economy appears to have done reasonably well in terms of food production. While elders recount stories of individual scarcity, they also remember stories of individual abundance. While many villages broke up or ceased to be, due to war or pestilence, there are no stories of villages breaking up due to shortage of food. In contrast, some families were extremely rich and the harvest so much that a single, normal-size storehouse was not enough. These households had 2-3 storehouses and also served as providers of grain for needy families in return for labor in the coming calendar year. There are older persons who have experienced these times of scarcity and abundance. For example, there is a person who borrowed three year old paddy[69]; there are also stories of borrowing seven year old paddy, which had lost much of its weight and could scarcely be eaten[70].

The two villages of Puichi and Haochong seem to have had contact with the market, especially with the valley of Imphal. Stories and songs speak of interaction with various *Meitei* kings. Goods were carried to and sold at Imphal city via Kangchup-Chingkhong road. The major goods were cotton, dried chilly, cane, orange, sesame, Job's tears, dried stem of a variety of taro. Mustard and sesame seeds were often carried for crushing for oil. The farmers would buy agricultural equipments like knife, dao, spade; edibles like salt; and clothes and sweets for children. At latter times, they began to buy more clothes, shoes and kerosene oil when the lantern made its entry (perhaps, after India's independence).

[69] Interview with Mrs. Bt. Thiunilu, 82 yrs, 31st Oct., 2014. She once borrowed a three-year old paddy, *Banglai*, from Mr. Meijikamang from Haochong. This woman has also celebrated *Muliangnu* a few times.
[70] Interview with Yaima Khumba, 50 yrs.

Batei banu[71], which is the local term for visiting market, was an annual affair of much fan fare. The journey, which took at least 3 full days of marching to go and return, was undertaken in large groups. Crops had to be prepared much in advance. Provisions of food- cooked as well as uncooked, were carried along with the crops for sale. Both men and women undertook these journeys but never alone. The high anticipation and warm welcome given by the children to their parents (on the third day's evening) who had gone to the market are stories that speak volumes of how distant the market was, both in the physical and psychological sense. In addition, journeys to Imphal also served as major avenues for interaction with other distant villages and establishing friendship and relations across such distances.

5.1.4 The Significance of the Jhum Field

One of the main reasons for outlining the social and economic life of the traditional village is to sketch the 'world' of the traditional jhuming farmer. This would come closest to 'jhuming as a 'way of life'' as has been often argued. Indeed, as may be pictured from the preceding discussion, jhuming was the one activity around which institutions, tenures, social life and belief systems revolved. Jhuming held all these together- some more closely (like land tenures and institutions) while others were not so closely held (beliefs, festivals). This understanding is crucial to appreciate what the jhum field meant to the farmer.

Exploring the 'world' or 'imagination' of the jhuming society would perhaps be a fruitful exercise. However such an attempt can be seldom free from imposing value judgments. In addition, it is beyond the scope of this paper. Therefore, leaving the outline of the jhuming society as is, the remainder of this section seeks to uncover the significance of the jhum field to the farmer. This also enables a comparison of the jhum field between the traditional society and the present one.

[71] In fact, *Batei banu* is translated as 'going to Imphal'. In other words, a visit to the market was synonymous with going to Imphal. Market was Imphal.

The jhuming villages of Puichi and Haochong were quite self-sufficient both economically and socially. Apart from interactions with other jhuming villages and the *Meitei* kings from time to time, they were relatively isolated. Needs and demands, as well as luxuries were equated with abundance of food. The quality of life in the village was determined to a large extent by the condition of the jhum field. The highest achievable honor of a lifetime in the villages was the *Into Somdumnu*. Organizing such a celebration involved constructing a big house and feeding thousands by a single family, which was no mean feat to achieve. It was largely dependent on consistently good harvests over a period of time. The highest ambition of the jhuming farmer was also invariably linked to the field.

The 'world' of the jhuming farmer largely revolved around the place of his home, his field and his village. The jhum field not only represented the source of livelihood but was also the center of social and political life. It was also the basis for the evolution of land tenures like *loukhun* and *taram* (Chapter 2). Jhuming undoubtedly played a significant role in shaping the imagination of the society. Thus, with no other 'complimentary' or 'competing' economic system to influence the society, jhuming took center-stage over all aspects of life. The significance of the jhum field extended well beyond the economic which is a departure from the general understanding today. For such a period, which is loosely referred to as the traditional jhuming society, jhuming was indeed a 'way of life'.

5.2 Jhuming Society after Christianity

It is significant that the first major challenge that the villages of Puichi and Haochong encountered in their 'way of life' was religious[72]. Indeed, Christianity met with bitter opposition from the villages when it was first introduced. The first Christian converts from Haochong in 1927 were exiled from the village. The first converts from Puichi in 1948 also met the same opposition. However, over a long period of time both villages have become fully 'Christian'. Puichi and Haochong celebrated Passover in 1994 and 1995 respectively to mark the full conversion to Christianity (Passover Souvenirs).

[72] In contrast, the farmers of Tripura faced restriction in using forest from the Maharaja since the late 19th century (Dasgupta, 1986; Sengupta, 2013).

The advent of Christianity was a defining period which changed the belief systems of the jhuming society modifying its character unalterably. While jhuming continued to be the mainstay of the economy, its practice was completely different from the way it was done in past. In other words, Christianity captured the beliefs of the people thereby doing away with almost all of the rites, rituals and festivals as well as institutions like dormitory system. It is noteworthy that while the Christian worldview, in the understanding of the people, necessitated the earlier 'way of life' to be discontinued, it did not alter the basis of the economy- jhuming, labor arrangements, land tenures and *Thampei*. On the contrary, the *Thampei* was purged of its religious roles and assigned a much more secular role as discussed in the chapter on institutions. The *Kraanmi* also retained its character as the highest collective decision making body in the village- above the Church, the Village Authority and *Thampei.*

The period after the introduction of Christianity saw a clearer distinction between religion and economic system in the two villages. The Church, *Thampei* and later Village Authority had different roles to play. However, much of the norms that governed life in the traditional village, like *takhwang*, were reinforced by Christian ethics. Some festivals were also 'carried over' and merged with Christian values such that these festivals could be accepted and celebrated in a Church setting. *Muliangnu*, the festival of the harvest is now a permanent fixture in Puichi village. *Naabitnu*, a festival celebrating new birth has been accommodated and is celebrated during Christmas.

There are some ways in which the Church performs additional roles apart from the religious. The decision of the Church (via Baptist Youth Fellowship) to consider a person as 'youth' is accepted for all practical purposes in the village. The practice of giving 'tithe' (a tenth of every income) has been modified in an interesting way for 'paddy tithe'. The Church has a separate store-house where paddy given as tithe is stored. This storehouse is then opened on specific days throughout the year, and paddy is sold to the needy. However these processes took time- over 4 decades, to evolve into the present system. It may also be recalled that there were no direct interferences from any agent outside the village.

The jhuming society after the advent of Christianity is very much unlike the traditional system. Apart from the changes in society brought about mainly by Christianity, there have been widespread changes in the economy too as highlighted in the preceding chapter on agriculture. The occupational structure of the villages has undergone a radical change. Government jobs are now the most sought after profession, and is followed by wet-rice cultivation and horticulture. While jhum continues to be the mainstay of Puichi village's economy, it is the least sought after in Haochong. These changes in land use pattern have also led to the gradual emergence of a new regime of land rights which are private in nature. Greater access to the market has played a major role in these developments. In addition, education continues to make an indelible mark in the villages. Thus the present day jhuming society is very much different from the traditional in every way- socio-religious, economic and political. Perhaps jhuming as a 'way of life' does not capture well the realities of the modern jhuming society.

5.2.1 The Diminishing Significance of the Jhum Field

Perhaps the changed scenario of the jhuming society may be conveyed effectively by considering the value of the jhum field to the farmer today. As briefly stated in the introduction to this chapter, the present jhuming society is one of paradoxes and ironies. It is one where farmers go to their fields on motorbikes[73]. It is one where mobile phones, whose utility have been confined to media-playing as there is no network, have replaced the radio to play contemporary Inpui, English and Hindi songs as they work. It is a situation where only the older members of the family toil in the jhum field while the younger ones *labor* in the schools. The ambition of the present day jhuming farmer is not for *Into Somdumnu*. It is not in the jhum field anymore, but elsewhere- largely imaginative, though inherently promising. In fact, the dream of the farmer is to get the children educated so that they may 'become an officer'. The value of the jhum field has thus been confined to its economic function of sustaining livelihoods. Jhuming is, therefore, no longer a 'way of life'. It is just one of the ways to live.

[73] Of course, the number of farmers going to field on motorbikes are very few and constrained by the presence of a motorable road.

The decline in significance of the jhum field is not only because of Christianity depriving it of the various social arrangements earlier associated with it. More importantly, it is the 'competing' agricultural practice of wet-rice and horticulture that replaced it from its dominant role. In fact, while Christianity introduced a new belief system, the market brought large scale changes in the way agriculture is done, affecting even the land regime. The present day farmer lives in a milieu where the jhum field can provide only some basic livelihood needs. Thus, one cannot find many farmers who are happy in their jhum fields, especially in Haochong. In contrast, wet-rice and horticulture appear much more appealing. These are huge departures from the traditional way of jhuming and the social and religious values that used to be associated with it.

The shift away from jhuming, under no compulsion from outside forces, is remarkable. It is likely that similar circumstances are being experienced by other villages in different parts of the country. It is a quiet transformation that has taken place. The system seems to be headed towards greater integration with the market as one can only suppose that the market will extend its reach. Jhuming as an agricultural practice seems headed for a sure decline in the years and decades ahead.

However, it would be erroneous to assume that issues related to jhuming are over with such a shift away from jhum. The tenurial regimes which served as a basis for this system take a longer time to change; in addition, it has been left largely untouched. Indeed, while wet-rice fields and horticulture farms have attained a private character, these account for only a small fraction of the total land at any point of time. Thus, the present situation is one where institutional control and regulation have been significantly reduced in favor of the individual farmer, who is free to pursue agriculture (or horticulture) for profit. This is likely to lead to greater exploitation and destruction of the environment than when jhuming was carried out under active supervision by the *Thampei* with regards to usage of *loukhun*. In addition, as highlighted in the preceding chapter, it is likely that issues of inequality become prominent in an otherwise comparatively egalitarian society.

5.3 Summary

This brief chapter attempted to show that the transition in jhuming also involves a quiet change in the society that has almost gone unnoticed. Major differences between the traditional and present society are highlighted. The advent of Christianity marked the start of a change that picked up pace with greater linkage with the market. As a consequence, the society has undergone a transformation as far as its religious beliefs are concerned. However, and more importantly, the economy of the villages has become much less dependent on jhum. The imagination and aspirations of the present society are not confined to the jhum field anymore. Thus jhuming is no longer a 'way of life', but rather a way to live and pursue a livelihood. However these shifts away from jhum may also lead to greater environmental destruction if the local institutions are hindered from playing an effective role.

CHAPTER 6

SUMMARY AND CONCLUSION

The many variants and aspects of shifting agriculture have been studied by administrators, geographers, sociologists, economists, anthropologists, agronomists, foresters, plant ecologists and soil scientists (Nye and Greenland, 1960). Drawing on the rich theoretical and empirical literature on the subject as well as field experience, this study attempts to add a critical component specific to the North-east Indian context. This is at once a subtle and radical 're-imagination' of shifting agriculture, provoking one to think beyond the contours of traditional well-worn lines of argument. This concluding chapter presents a summary of the research, its relevance and implications for future research and policy and spells out areas and challenges for further research.

6.1 Brief Summary of Chapters

An important objective of the paper was to explore an alternative framework from which shifting agriculture could be appreciated. This was proposed as approaches and debates centered on environment and/or livelihood proved inadequate to capture the full spectrum of the massive transitions the system is undergoing. Significantly, they also do not pay enough attention to the different mechanisms and motives behind state interventions. Therefore, the second chapter that outlined the theoretical framework for the paper was also devoted to derive an alternative paradigm that could help arrive at a better understanding of the complex system.

It proposed that shifting agriculture be understood as a unique production system with close linkages between production process (jhuming), the underlying system of rights and governing institutions and societal expectations. The major contribution of this framework is the holistic way in which it approaches shifting agriculture. Thus, it differs from approaches that tend to separate agriculture from other components of the system. The production system offers a picture of the 'traditional' practice in its complexity from which contemporary divergences can be contrasted with. It places in context shifting

agriculture on the one hand, and the external and internal drivers of change (both obvious and less discernible) on the other. It is therefore, able to provide a nuanced explanation of the current phase of transition marked by co-existence of seemingly opposing institutional arrangements at various levels within the system (Harris-White et al., 2009).

The institutional specificities of shifting agriculture in the two villages in terms of organizations, land tenures and labor arrangements are explored in Chapter 3. While this flows out of the framework of the study, it is without much precedent in Indian literature where institutions are generally mentioned only in passing. The chapter outlines the bases on which shifting agriculture as well as new practices are being superimposed. In addition, it also illustrates how non-market institutions are adapting and changing rather than disappearing altogether. For instance, the *Thampei* or traditional village council continues to wield considerable influence though there is a legal 'village authority' instituted by the state. Traditional exchange labor arrangements are being used as a means to earn money 'in group' and provide credit to members. An important section of this chapter is in tracing the 'seeds' of inequity in the 'traditional' egalitarian system, breaking the aura of traditional tenurial systems and highlighting the need for necessary changes. At the same time, the importance of traditional institutional bodies in maintaining ecological sustainability is acknowledged.

The most visible component, which is, agriculture, is discussed in detail in Chapter 4. The resilience of jhuming agriculture vis-à-vis wet-rice and horticulture are explained with reference to topography, climate and crop variety. The large diversity of crops grown in the jhum field, especially rice is highlighted. The shift away from jhuming to more specialized farming for commercial purposes is also found in the two villages surveyed. The differences in extent of market integration are observed from the degree of dependence on jhuming or wet-rice, horticulture and plantation. Consequent changes in land tenurial system and implications for equity can be observed in its nascent stages. For example, a new set of private property rights are evolving along with the practice of wet-rice cultivation and plantation/horticultural practices. Thus, families that do not own

loukhun or field-plots are excluded from these prospective activities as field-plots are no longer borrowed, unlike for jhuming purposes.

The jhuming society, its dilemmas, confusions and changing aspirations that are increasingly becoming distant from jhuming agriculture is the subject of Chapter 5. This chapter forms a crucial part of the discourse on shifting agriculture and the 'way of life' it represents. Changes in religion, education, development, and the increasing tendency towards market-oriented farming have meant that jhuming has begun to take the character of *only* an economic activity, The societal aspirations linked to jhum that once contributed to a 'way of life' has become more and more diluted. Thus, it is increasingly becoming 'rural', where 'rural-ness' may be understood as being situated on the margins of a capitalist system, not outside of it.

This study drew attention to the intricate linkages and causative relationships shared by different components of shifting agriculture. It is a departure from studies that have treated jhuming agriculture independent of other components, say tenurial rights. It underscores the fact that changes in agriculture, regardless of the mechanism by which they are introduced, necessarily affect land holding systems as well as the society. This study attempts to draw together the sum of changes that can be expected when a single component is changed, deliberately or otherwise. For instance, introduction of non-traditional agriculture like wet-rice and horticulture has resulted in new forms of private tenurial rights. This has affected the efficacy with which traditional bodies worked to ensure compliance from the villagers, especially in forest management. In turn, collective action in agriculture, in the large scale that used to be in the past has more or less disappeared. However, far from encouraging status quo or unchanged continuity of the traditional system, the study seeks to promote a multi-pronged approach towards shifting agriculture in both research and policy making.

6.2 Relevance of the Study

The diversity of shifting agricultural practices not only in India but also in different parts of the world where it is practiced means that the relevance of the paper beyond the study-area comes into question. Indeed, the conclusions drawn from the study are specific to the

two villages where field work was carried out. However, experiences from the field find much commonality with the range of issues addressed in other studies. While the state specific policies (as in Tripura, Manipur etc.) may differ, they are largely driven by the same motives. Moreover, these policies project the market as an important agent in resolving the issues in jhuming. The experiences of privatization of communal land and land alienation often resulting from 'settled' agriculture are shared across the North-eastern states[74]. The continued relevance of traditional institutions albeit with "shades of the new, emergent economies" (Mishra, 1983: 1837) has been mentioned earlier.

The study also reinforces the view that identifies market as the main driver of change in shifting agricultural economies. Of course, the state plays its role of facilitating market penetration and encouraging farmers to adopt market-friendly products. This is done partly through government agencies (horticulture departments) and partly by creating 'needs' outside the jhuming system that requires the farmer to adopt practices that can bring cash returns. Indeed, future research in shifting agriculture would need to investigate the role of the market in transforming this system.

It may be noticed from the preceding discussion that the ecological question has not been directly answered. Indeed, the sustainability of shifting agriculture being dependent on a certain minimum cycle for forest regeneration is acknowledged. Literature has also pointed to the shortening of cycle across various communities carrying out jhuming in North-east India. While recognizing the urgency of the question of environmental degradation, this study does not treat it as a focal point.

There are two aspects involved in this. First, this research clearly did not set out to address how land degraded due to shifting agriculture may be restored. This begs a different approach and methodology. The nature and extent of degradation is however, subject to debate which is partly due to lack of comprehensive data. Second, and more

[74] The experiences of privatization and land alienation are noted by different authors for different states. For example, Mishra (2006) and Harris-White et al. (2009) for Arunachal Pradesh; Sengupta (2013) and Dasgupta (1986) for Tripura; Nongkynrih (2008) for Meghalya.

importantly, this paper underscores the multiplicity of factors that directly and indirectly contribute to environmental concerns. Thus it contends that jhuming agricultural activity which has borne the brunt of criticism with respect to environmental degradation is not entirely justified. In the same breath, it maintains that focusing only on the agricultural component to address environmental concerns is bound to fail. While the study stops short of providing concrete steps, it provides ample suggestions on the various issues that need to be addressed together with ecological concerns. For instance, the state can look to provide tenurial security to the marginal farmers within the community itself. This may perhaps be done by strengthening local traditional bodies.

The central theme of this piece of research is to present shifting agriculture as a system that is much more than merely an agricultural activity. It urges that research on shifting agriculture transcend the simplistic and linear explanations that it so often offers. The implications of seeing the whole system in its entirety are by no means insignificant. It questions the cultural adaptation argument that espouses status-quo as well as the popular theory of encouraging market-based production without paying due attention to the institutional specificities. Thus it looks for new entry points to address issues of environmental degradation and livelihood enhancement keeping in mind the importance of social and economic justice, notably equitable access to and ownership of resources. It is hoped that this framework can be a useful tool in further research and policy making specifically to North-east India.

6.3 Identifying Areas and Challenges for Future Research

This paper drew attention to the various ways in which shifting agriculture is coping, adapting and changing in response to internal and external pressures. It has focused primarily on the changes taking place within the system and its varied components. Limited space has been given to exploring how these changes within the system have external bearings, especially on the local environment. For example, intensification of settled agriculture or profit-based horticulture activity could lead to greater and more permanent land degradation which has been reported in other studies (Lim and Douglas, 1998). However, the present study does provide a sound basis on which such projects

may be taken up. In fact, there is an urgent need to critically explore the much misunderstood and possibly over-emphasized role of shifting agriculture in environmental degradation, especially deforestation in the Indian context.

The extent and nature of dependence of shifting agriculture in North-east India is another pressing theme that needs research. Lack of data, however, has significantly hampered such an endeavor. While this is a common lament of researchers in this field, too little efforts seem to have gone into filling this important gap at the governmental level. It may be mentioned that the latest data available on household-level dependence on shifting agriculture for the country as a whole is as old as 1983 (Task Force, 1983). The National Wasteland Atlas (2000, 2005, 2010 & 2011) provides information on area under 'current jhum' and 'abandoned jhum' at the district level. However, much more information at different levels is required to establish more comprehensive understanding of transitions in jhuming. While case studies of different areas have tried to fill in this gap, the absence of comparable national-level data has been sorely missed.

The emergence of market as the most dynamic driver of change in shifting agriculture has been well documented in this paper. It is also well corroborated in an increasing number of literature. In the Indian context, it is expected that future research would focus on the dynamic relationship between market and shifting agriculture. Interactions between jhuming and market have enormous implications on the jhuming system at all levels. It transforms agriculture introducing changes in cropping pattern, redefines property rights relations, questions traditional bodies and changes the character of the jhuming society, even replacing its expectations and aspirations. Questions of social and economic justice become pertinent as privatization and land alienation become more visible. It has also been argued that a large number of jhum farmers become more vulnerable to market risks. It is also contended that private profit motives coupled with ineffective local institutions may lead to greater environmental destruction.

In conclusion, shifting agriculture continues to be a subject that attracts much attention for a number of reasons. It is interesting that shifting agriculture has fuelled debates

ranging from climate change, ways of life and state-free spaces (Scot, 2009). It has been subjected to criticism for a considerable period of time because of its difference from the more dominant settled agriculture. However, greater appreciation of the intricate and complex relationships within and the environment outside- both physical and political has opened up new areas for research. While ecological concerns remain, it has transcended the traditional linkage with agriculture to include institutions and market. The current transition of shifting agriculture in North-east India provides rich ground for research for practical reasons, say, farmers' livelihood and adaptations or policy initiatives. It also provides a canvas where the advance of state-led capitalism to the final frontiers of resistance may be painted.

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Annexure - 1

Household Schedule

Demographic Characteristics

1. Household ID: _____ 2. Head of the Household: _____

3. Year of settling in Village/ No of years residing in the village: _____

4. Household Details:

Sl. No	Name of HH member (1)	Relation to Head (2)	Sex (M-1, F-2) (3)	Age (As on 1st June '14) (4)	Marital Status (M-1, U-2) (5)	Educational Level (Code) (6)	Principal Activity (Code) (7)	Whether out-Migrant (8)
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								

Relation to Head: 1- Head, 2- Father, 3-Mother, 4- Grandpa , 5- Grandma, 6- Daughter, 7- Son, 8- Daughter-in-law, 9-Grandson, 10-Granddaughter, 11- Brother, 12- Sister, 13-Great grandmother, 14- Great grandfather.

Land Holdings

5. If you *own* **Taram** or **Loukhun** or have **Leased-in land** for farm/plantation/orchard:

Type of Land (1)	**No. of plots** (2)	**Area (1+1+1…tins)** (3)	**How you came to own this land? (Codes)** (4)
Taram			
Loukhun			
Wet-Rice field			
Cultivation in others Loukhun			

(Process of ownership- 1- Inherited, 2- bought, 3- as bride-price, 4- as gift to grandson from maternal granddad, 5- Others, specify)

6. Jhum Agriculture **(Current Year)**

No of Plots (1)	**Year of Jhum** (2)	**Ownership Status** (3)	**Area (Rice Seeds equivalent, tins)** (4)
Plot 1			
Plot 2			
Plot 3			

(Year of Jhum: 1- Current Jhum/First year Jhum, 2- 2nd year Jhum, 3- 3rd Year Jhum, 4- Others, specify

Ownership Status: 1- Own, 2- Borrowed, 3- Others, specify)

7. If you have **borrowed land** or **given land** to others in the **last 3 years,** please give details:

Year (1)	**Borrowed/Lend** (2)	**Relation to you (include clan)** (3)	**Area (rice seed, tins)** (4)	**Output** (5)	**No. of years used** (6)	**Terms of lending/ borrowing** (7)
Current Year						
Last year						
2 years ago						
3 years ago						

(Relation to you: 1- Blood relations, 2- Relative, 3- Friends, 4- Clan, 5- Others)

Agricultural Characteristics

8. For a first year Jhum:

Sl. no	Crops (1)	Area (seeds sown) (2)	Source of seeds (3)	Who decides (4)	Growing Season (5)	Output (last year) (6)	Main Usage (Self/Market) (7)
1.							
2.							
3.							
4.							
5.							
6.							
7.							
8.							
9.							
10.							
11.							
12.							
13.							
14.							

9. If there is a 2nd year Jhum (*Louchun*):

Sl. No	Crops (1)	Crop specificity (CS) (2)	Who Decides (3)	Area (Rice seeds, tins) (4)	Growing season (5)	Output (6)	If CS is 1, productivity difference (7)	Main Usage (Self/Market) (8)
1.								
2.								
3.								
4.								
5.								

(**Source of seeds:** 1- Self, 2- Borrowed (to be repaid), 3- Exchange, 4- Bought from market, 5- others (Specify);

Who decides: 1- Female has greater say, 2- Male has greater say, 3- No difference;

Crop Specificity (CS): 1- Same as in 1st year Jhum, 2- Specific to 2nd Year Jhum, 3- Does better in 2nd year Jhum)

10. If you have orchard/farm/plantation:

Sl. No	**Type of plantation (1)**	**No. of plots (2)**	**Ownership status (Codes) (3)**	**Area (in rice seed equivalent) (4)**	**Output (5)**	**Main Usage (Self/Market) (6)**
1.	Banana					
2.	Orange					
3.	Lemon					
4.	Pineapple					
5.	Tree					
6.	Thatch					
7.	Vegetables					
8.	Chilly					
9.						
10.						

11. For crops sold in the market:

Sl. No	**Crops (1)**	**Source (2)**	**Market place (3)**	**Quantity (4)**	**Mode of Transport (5)**	**Remarks (6)**
1.						
2.						
3.						
4.						
5.						
6.						
7.						
8.						
9.						
10.						

(**Source**: 1- 1st year Jhum, 2- 2nd year jhum, 3- Wet rice field, 4- orchard; **Market**: 1- Within Village, 2- Noney, 3- Imphal;

Mode of transport: 1- Self (on foot), 2- Hired Jeep (self), 3- Hired Jeep (Collective action)

Labor Arrangements

12. Individual agricultural activities (confined to **rice** for one plot of jhum field):

Sl. No	**Type of Work (1)**	**Season (2)**	**Labor preferences (3)**	**No. of family labor (Man-days) (4)**	**No. of exchanged labor (Man-days) (5)**	**No. of wage labor (Man-days) (6)**
1.	Selecting Plot					
2.	Clearing forest					
3.	Burning Forest					
4.	Clearing Field					
5.	Making Field-House					
6.	Sowing crops					
7.	Weeding					
8.	Using manures etc					
9.	Harvesting					
10.	Winnowing					
11.	Carrying harvest home					
12.	Making granary					
13.						
14.						
15.						

(Labor Preferences: 1- **Male** over female, 2- **Female** over male, 3- **Children** over other, 4- **No difference**)

13. Community work where the household has participated:

Sl. No	**Type of Work (1)**	**Labor preference (Kraanmi/Lakmi) (2)**	**Participated (Yes/No) (3)**	**Male from HH (Man-days) (4)**	**Female from HH (Man-days) (5)**	**Male arranged outside HH (Man-days) (6)**	**Female arranged outside HH (Man-days) (7)**
1.	Fire-line						
2.	Village road						
3.	Bridge						
4.	Making water channel						
5.							
6.							
7.							

14. Does the Jhum field produce enough food for your family?

15. If it doesn't, what are the sources from which you procure the needed grain?

16. How has the size of your jhum fields changed in the last 5 years:
a) decreased b) increased c) stayed the same.
What are the reasons?

17. Can you draw a sketch of the Jhum land with the cycles, pointing out your taram, Loukhun and the village settlement.

18. With the help of a sketch, please explain how various crops are grown in which parts of the field.

****Note: All calculation of area of land is in 'rice seed equivalent'.**