

Livelihood Diversification and Challenges: A Case Study of Mao Tribe of Senapati District of Manipur

Dr. B Komow¹ & Dr. Bimla Rai²

Abstract: The Mao tribe in Manipur is dependent on agriculture for their livelihood. Traditionally, they practiced dry and wet terrace cultivation which is mainly for self-consumption. The Mao inhabited area has a high potential for high-value crops due to moderate climate and fertile soil. The National Highway -2 (NH-2) which passes through Mao area has been a significant factor for livelihood diversification and commercialization of agriculture crops. They have shifted from subsistence paddy cultivation to horticulture for commercial purposes as an alternative to income generating source and livelihood opportunity. Thus, the paper examines the changing pattern of livelihood of the Mao tribe, with focus on the factors influencing diversification and the related challenges.

Key words: Mao Tribe, Livelihood, Horticulture, Floriculture, Livelihood Strategies

1. Introduction

Livelihood Diversification or shifting livelihood patterns serves as a resilience measure against economic instability, poverty, food insecurity, environmental shock, climate change, market fluctuations and others. Livelihood Diversification is process in which rural families change towards diverse activities as well as social support capabilities to survive and to increase the standards of living (Ellis, 1998). In other words, Livelihood Diversification as a continuous adaptive process through added new activities to the households, sustain the existing activity or abandon it, thereby creating varied and dynamic livelihood options (Saha and Bahal 2014). Various factors can be connected with Livelihood Diversification such as asset, capital, land, and environment (Biswas and Mallick, 2021). However, there is a broad distinction between necessity and choice as motivations for Livelihood Diversification, the shift from farming dependency is influenced by six main determinants i.e. risk, seasonal, credit markets, asset strategies, labour market and coping behaviour. These are mediated with social relations and institutions (Ellis, 2000). Livelihood Diversification is greatly emphasized in developing countries, as it becomes essential to reduce poverty or

¹ Department of Political Science, Arunachal University of Studies, Namsai, Arunachal Pradesh

² Department of Geography, Arunachal University of Studies, Namsai, Arunachal Pradesh

other forms of vulnerability and improve resilience to risks. The limited scope of agriculture contributes to instability and poverty, often leads to migration of potential human resource, particularly youth.

2. Study Area

The present paper focus on Senapati District of Manipur, India, where Mao Tribe mainly inhabited. The district is located in the northern part of Manipur. It is bounded on the East by Ukhrul District, on the West by Tamenglong District, on the South by Imphal East District and Imphal West District and on the North by Phek District of Nagaland. The total geographical area is 3271 sq.km with an altitude varying from 1061 m to 1788 m above sea level. The total population was 4, 79,148, of which male and female were 247,323 and 231,825 respectively with density of population of 147/km² and the sex-ratio was 937 as per census 2011. The main areas of the Maos falls in the Sub-Division of Mao-Maram of the district.

3. Objectives and Research Methodology

For the study, the objective is to examine the changing pattern of livelihood, particularly emphasizing on agriculture diversification among the Mao Tribe of Senapati District, Manipur. The study also explores the related challenges to livelihood diversification.

The research paper was based on descriptive qualitative study which incorporates both primary as well as secondary data. For primary data, participation, observation and discussions with individuals of Mao tribe engage in agriculture were considered to overview their livelihood practices and challenges. For secondary data, published journals and census reports that further support contextual depth and the analysis.

4. Discussion

The economy of Mao tribe is predominantly agrarian in nature and shifting and terrace cultivation has been the dominant land-use system in their traditional economic activities (Neli, 2021). However, shifting cultivation practices were almost abandoned by the Mao and terrace cultivation remain the major farming system. Terrace cultivation is mainly done for paddy since rice is the main staple food, which is subsistence in nature. The tradition to provide manual help by the acquaintance is the key features of their farming system. This is generally based on reciprocity which involves exchange of labour to complete various agricultural tasks on time, and to overcome the labour constraints. This traditional practice known as *Ava Kocho* in Mao (Kamei et al., 2024). Depending on the gender role, the farming activities are classified between men and women. It was noticed that there is a shift in agriculture pattern from subsistence to cash crop. Apparently, with the improvement of road connectivity i.e. NH-2 which is also a part Asian Highway-

1 (Hanghal, 2017) has enlarged the scope of agricultural diversification, leading to the growth of horticulture. Furthermore, its strategic location on the NH-2 has opened other avenues to the Mao community, fostering entrepreneurship and small-time business. The road connectivity further strengthens the market-supply chain within and outside the state, thereby establishing Mao Market at Imphal, Manipur and at Kohima, Nagaland which is mostly run by women. Another reason related to this shift could be due to rice easily found in the market and the rice provision through Public Distribution System (PDS), has reduced the cultivation of paddy. Women, in particular are engaged in cash crop cultivation and they grow variety of crops like potato, cabbage, ginger, beans, mustard, cucumber, chilly, pumpkin, squash, tree tomatoes, beans, pumpkins, cucumbers, oriental onions, spring onions, yam, plum, pear, peach, passion fruit, kiwi, grapes, persimmon and so on. The government also intervened to boost the local economy through establishment of Regional Potato Farm at Pfkukhro (Song Song village) which is the first sponsored scheme of North Eastern Council in Mao area, and is entirely owned by the State Government with an aim to supply potato for the whole north east regions. Besides vegetables and fruit cultivation, floriculture is another venture has become one of the sources of livelihood. To extend its reach to people and foster tourism, they started 'Flower Festival' in 2015 (Kapesa, 2017) and Flower Festival cum Manipur Cherry Blossom Festival in 2017 (ANI, 2017) which later become part of Manipur Sangai Festival in 2018 (NE Now News, 2018).

5. Challenges related to Livelihood Diversification

5.1 Geographical Constraint

The hill districts of Manipur is dealing with geographical limitations due to its topography which marked two major barriers i.e. the use of technology to supplement physical labour and the implementation of multi-purpose irrigation projects. This hinders the adoption and implementation of a country-wide policy. Besides this, the shortage of arable land and scarcity of water become the fundamental problem inherent to the agrarian economy in the hills of Manipur (Lolia, 2023). Similarly, the 80 percent of the area is covered by forest and remaining 20 percent is arable land of Senapati district (MSME - Development Institute, n.d.) limiting agriculture development.

5.2 Climate Change

The evident on the impact of climate change could be gradually seen in the region in recent years. The region is experiencing variability in temperature and rainfall patterns, which has resulted into crop failures and low agriculture productivity. The Mao inhabited areas, having a moderate climate is suitable for

horticulture crops cultivations. However, gradual rise of temperature in the region as well as pests and diseases attacked on plants has lower down in the productions of fruits crops like potato, cabbage, plum and passion fruit. It was due to lack of raw material particularly passion fruit, the Exotic Juice Ltd. which was established in Mao in early 2000, became defunct after 3-4 years (Jajuo and Sukai 2013). The NH-2 also affected by landslide hazard during heavy monsoon season, limiting the accessibility of market.

5.3 Land System and Pressure on Land

The ownership of Land in the hills districts of Manipur is patterned after kinship relation within the community. Thus, the land ownership can be classified as owned by individuals privately or by clan or by whole community of the respective villages (Zimik, 2021) and the management and regulation of land usage is democratically decided and regulated by the community (Dangmei, n.d.). Similarly, the Mao land system also divided into the community land (*moso oji*), clan land (*opfomie oji*) and individual land (*lipe oji*). Clan and communal land can be used for farming activities under the customary law. Community land ownership is, however, regarded as unproductive since it limits the motivation to invest and innovate, subject to significant management problems and also deprives farmers of access to formal credit, inputs, and other institutional services required to improve agricultural practices (Gongmei, 2013). It is considered the most important factor in deterring the hill economy as it encourages shifting agriculture, causing environmental degradation through deforestation, ecosystem disturbance, soil erosion, and siltation in the plain (Lolia, 2023). Fragmentation and small landholding is another issue with communal land as well as with the increase of population, the issue of land scarcity and pressure on land has become evident.

5.4 Land Degradation

The shift from subsistence to cash crops also increased the use of high yielding variety seeds and chemical fertilizers, weedicides and pesticides in Mao areas. However, lack of knowledge on its utilization is affecting soil fertility and crop production. The study found that crops production has reduced due to indiscriminate use of fertilizers. The encroachment of forest areas for farming is yet other challenges leading to deforestation and land degradation. Besides this, limited access to market, lack of storage facilities, lack of government intervention also limits the agriculture returns.

As discussed above, livelihood diversification, particularly through horticulture is ensuring economic stability of the Mao community. However, climate change and scarcity of arable land limits the agriculture production. Furthermore, cultivation on slopes also leads to soil erosion and declining fertility, further undermining the sustainability of farming practices in the long run. Maos, through their indigenous

knowledge system and practice manage their agricultural land. The maintenance of soil fertility is done using organic fertilizers (vermicomposting, organic manures, green manures, natural manures, organic amendments, animal wastes). They have indigenous system of irrigation i.e. water is collected from streams through canal is utilized; they follow crop rotation was practice for maintaining the fertility of the soil as well as to improve crop yield; the process of management of weed are done either by hand weeding or iron implements (Kamei, et al., 2024). With the shift from subsistence crop cultivation to cash crops, the traditional agricultural land management system, has gradually declining due to the adaption of modern agricultural practices, leading to land degradation. Therefore, it is essential to integrate both traditional and modern method of farming practices, to protect environment and also to ensure economic stability with sustainable agriculture. In Northeast India, traditional agricultural practices are highly effective and viable from the economic, social, cultural and environmental perspectives (Jeengaph, 2023). Indigenous knowledge and practices cannot be ignored as it adapted as per the local environment applicability (Basera, Chunera and Bhardwaj, 2022). Land management through surveying and testing of land suitability and capability (Husian, 2017) is a modern agriculture strategy that can be adopted. It is because with better agricultural management and land use, improvement in the yield per unit area of cultivation can be ensured (Majumdar, 2017). Furthermore, an awareness on using the Information and Communication Technology (ICT) is crucial to disseminate information to the farmers on various aspects such as new invention, methods on agriculture, weather prediction, market information and also scope for online services and so on (Food and Agriculture Organisation, United Nations, 2017). It is essential to explore scientific farming patterns like piggery, fishery and poultry to strengthen the alternative livelihood options for the people.

6. Conclusion

Livelihood diversification, particularly through crop diversification has led to a positive change among the Mao tribe of Manipur by enlarging their economic opportunities. Nevertheless, challenges such as limited arable land, increasing population pressure, scarcity of water, infrastructure gaps, poor market access and vulnerability to the climate change are barriers to agriculture growth. The shortage of arable land has also reshaped the livelihood patterns of Maos toward other diversified livelihood strategies. However, the key concern is whether these local communities can successfully transition to alternative livelihood beyond agriculture. Therefore, adopting effective agricultural policies that align with the region's geography and the specific needs of its people is essential so that livelihood diversification through agriculture remains sustainable in the long run for the people.

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