



# Addressing Agrarian Challenges inherent to the Hills of Manipur.

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## Abstract

Discussion on the agrarian economy of Manipur revolves around diagnosing its problems and arriving at the communal land ownership system as the one major factor for low land productivity, which then serves as a proxy in making the hill districts of Manipur poorer than the valley districts. Also, absence of technological penetration, lack of irrigation and market system, poor infrastructure and less use of high yielding variety seeds are diagnosed. Land reforms coupled with introducing high-yielding varieties, better irrigation and market systems are recommended. Moving beyond the diagnosed problem, the paper supplements the existing recommendations, considering that the shortage of arable land with a good water source becomes a fundamental topographical problem for the small farming communities in the hills of Manipur. Addressing the twin problems and exploring alternatives to mitigating them becomes the focus of this paper. It examines possible interventions for resolving the agrarian crisis. Three alternatives are identified: a) approach roads, b) farmer producers' companies, and c) farm ponds at individual farm levels. Establishing farm ponds at individual farm levels plays a dual role: 1) mitigates water crisis and 2) intensifies the use of the scarce resource that is land. Intensifying the use of the resource requires approaching roads where machines and technology replace manual labour. Intensifying the use of resources exerts a positive externality on the environment. FPOs can decrease farm input through collective purchase, access institutional credit, and hone their skills through training and agricultural extensions. Farmer Producer Organizations have also served as successful entrepreneurs. This paper is based on field interviews conducted at Senapati, Kangpokpi, Churachandpur and Tamenglong districts in 2019 and revisiting certain villages in 2023.

**Keywords:** agrarian crisis in the hills of Manipur, low productivity, poverty, water scarcity, shortage of arable land, farm ponds, approach roads, Farmer Producer Organisations

## I. Introduction

Any individual entering Shajouba village<sup>i</sup> during the three months of Feb-April will experience the woeful representative of the farmers in the hills of Manipur. These three months are vital to realize and comprehend the farmer's misery as they form the lean months for water requirements. The discussions at the grocery store and market for aggregating agricultural produce ranges from question on "why the rain god has not showered down the rain", "awaiting of rain to transplant vegetable saplings", "planted crops drying up in the farm", and the "sheer lack of motivate to invest time and energy". "Pale white vegetable leaves flattened to the ground slowly turning crispy brown" forms the common sight for farmers. The above discussion depicts the farmers' typical plight due to shortage of water. This is not characteristic of farmers of Shajouba alone but across the state.

A joke frequented amongst agricultural scholars, rural practitioners and farmers of the North East India is that "Farmers have missed boarding the bus to India's Green Revolution of 1958". Many farmers have not seen the Green Revolution's face in these regions. Over sixty years have gone by, and the studies on North East, especially the hill economy, are stuck with issues about the traditional mode and pattern of agriculture. The topography of the hill districts of Manipur manifest two major impediments that impedes the use of technology in supplementing physical labour and multi-purpose projects for irrigation. Machines are not goats that can climb slopes and hillocks, nor does the water flow upstream. Under such circumstances, technology (machinery) cannot penetrate, and water is scarce. These two problems do not serve well for a country-wide policy like the Green Revolution to be adopted and implemented. They are impediments inherent and specific to the farmers cultivating in the hills. Land is brought under cultivation wherever spring discharges are found and farm ponds structured. They are where the saplings are grown for transplantation, and green vegetables are grown for sustenance and the market. Farmers require alternative means of irrigation to diversify and intensify the use of the scarce resource: land. If country-wide policies such as the Green Revolution have impacted little to nothing amongst the farmers in the hill, we ought to look for alternatives that come down to a single farmer. "Personalised or customised policies", "area specific policies", "development in pockets", and "one district one crop" are catchphrases used by government practitioners and policymakers that are more plausible than countrywide policies about addressing the agrarian challenges in the hills of North East.

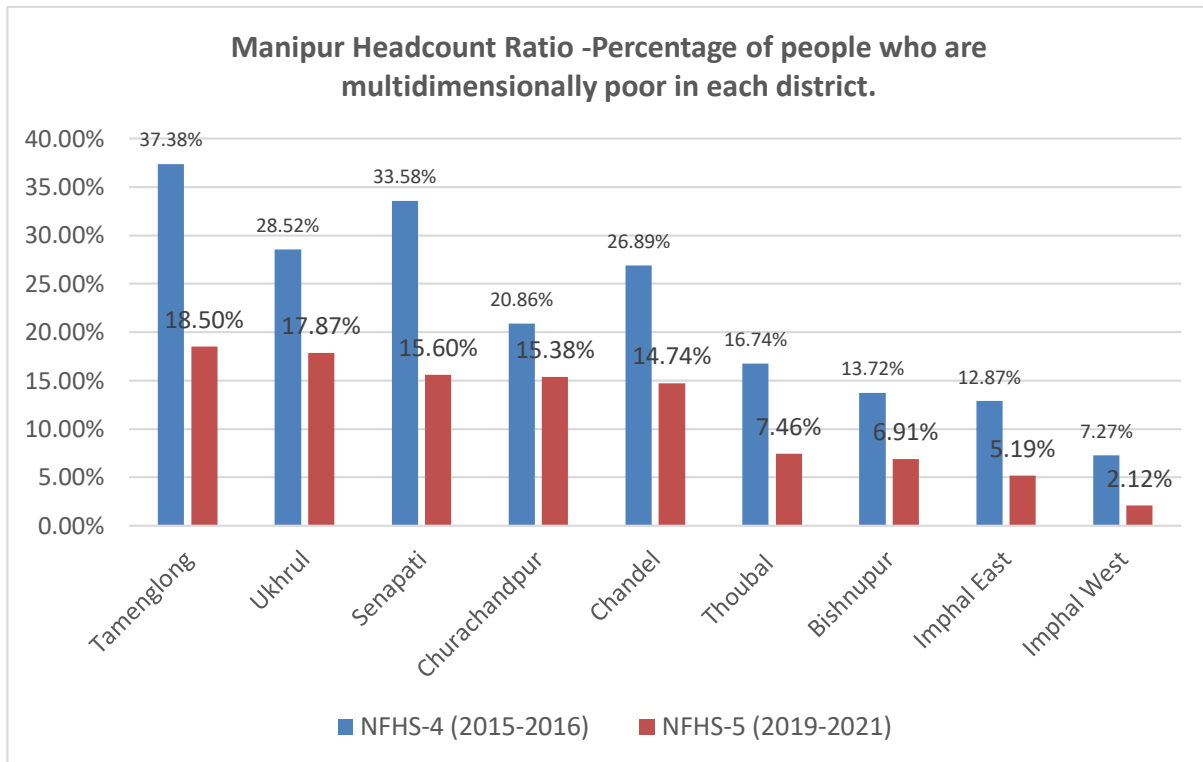
Shortage of arable land and scarcity of water becomes the fundamental problem inherent to the agrarian economy in the hills of Manipur. This paper explores small possibilities to mitigate the twin problem at the individual farm level by channelising scarce resources (capital) into priority areas that can address the challenges.

### A note on the Socio-Economic profile of Manipur

Manipur is vastly segregated into hill districts and valley districts. inhabited by three major ethnic groups, Nagas<sup>ii</sup>, Kukis<sup>iii</sup>, and Meiteis. Non-tribals mainly inhabit the six valley districts: Meiteis (Brahmins, OBC, Schedule Caste) and Meitei pangan (Muslims).<sup>iv</sup> The nine hill districts<sup>v</sup> are predominantly resided by the 33 scheduled tribes belonging to the two ethnic groups: the Nagas and Kukis. The hill forms 90 per cent of the total area, which is 20,089. Square Kms and the valley accounts for the remaining ten per cent (2,238 sq. km). The geographical differentiation between hills and valleys not only segregates the communities that live but also differentiates and determines the pattern and

mode of agricultural practices adopted by farmers. Permanent and settled farming is practised in the valley. The hill adopts a mix of two modes of farming system—settled and farming through terrace farming on low slopes and along the river banks. Jhum, also called shifting cultivation, is the mode of agriculture in the hill slopes and higher altitudes. The difference in their mode and pattern of agriculture results in differential farm productivity. The farm's productivity determines the income generation with different socio-economic outcomes of farmers settled in the valley and hills. This is evident from the percentage population of people below poverty between the hill and valley.

Fig 1: Multidimensional Headcount Ratio-Percentage for Manipur.



Source: Niti Ayog Government of India

According to the multidimensional poverty index Manipur's population who are multidimensionally poor poverty stood at 8.10% 16.96% from 2015-2016 to 8.10% in 2019-2021 [1]. The state ranks 16<sup>th</sup> in all India ranking of states and union territories. It is measured considering the three indicators: education, health, and living standard<sup>vi</sup>. In terms of performance amongst the districts in Manipur, the hill districts have fared poorly compared to the valley districts of Thoubal, Bishnupur, Imphal East and Imphal West. The hill districts of Tameglong, Ukhrul, Senapati, Churachangpur, and Chandel exceed the state's poverty average of 8.10%. The MPI show a decreasing trend amongst the districts of Manipur, but it still requires much effort to make it poverty-free. Augmenting agricultural productivity by addressing the agrarian challenges forms an important task given the background that Manipur and the hill districts in particular are agrarian by nature. About 52.81 per cent of Manipur's total workforce are engaged in agriculture as cultivators and agricultural labourers in 2020. In 2021-2022, the Gross State Domestic Product (GSDP) at the constant price was 1938457 lakhs. Of which agriculture contributes 21%, 9% by industry, and 66% by the service sector of the state's GDP [2].

## Contextualising the Hill Agrarian Crisis

The existing literature concerning agriculture and the hill economy concentrates on diagnosing the problems and suggests solutions to improving the rural economy. The high poverty level in Manipur's hills is attributed to the underperformance of the agricultural sector. The communal land tenure system, primitive mode of agriculture, low penetration of technology, absence of use of high-yielding variety seeds, shortage of water and dependence on the rain/monsoon are some factors attributing to the agrarian crisis in the hills. The communal land ownership system is considered and accepted to be the most important factor in deterring the hill economy. It is arrived at by measuring the economic efficiency of the land and the sustainability aspect of the institution. Communal land ownership is not sustainable as it encourages the practice of jhum cultivation amongst the farmers on the hill. The shifting cultivation involves clearing large forests yearly, causing environmental degradation through deforestation, ecosystem disturbance, soil erosion, and siltation in the plain. The environmental impact also reduces the people's natural capital, affecting their livelihood. [3] asserts that “the persistent predominance of shifting cultivation, low proportion of use of HYV or improved varieties of seeds, low degree of mechanisation and low proportion of gross irrigated area in the hills are closely linked with the issue of land ownership related incentive system” further the “uncertain tribal land ownership system, and low agricultural productivity has been one of the factors behind persistent poverty in tribal or hill areas of Manipur”. The failure of the communal institution of property rights in devising incentives for members to engage in long-term investment retards farmers' ability to increase productivity and profit. The practice of jhum is not only unsustainable but economically inefficient. Jhum cultivation is based on a primitive type of cultivation; hence, the hill signifies a “primitive economy” [4]. A primitive economy involves less to no use of technology, high-yielding varieties and fertiliser. Productivity in the hills on rice production is much lower with 1942 kgs against the all-Manipur yield of 2432 kgs per hectare [5]. Low productivity in agrarian output is pinned down as the driving force for underdevelopment and poverty persistence in Manipur's hills. The area under high yielding variety seeds amounts to 8.24 percent of the state's total area and the hills consume only 6.43 percent of the state's total consumption of fertilizer in 2000-01 [6]. Production would be relatively low without all the enriching factor input for farm productivity. “Agricultural land as CPRs would be subjected to significant management problems, including temptations to free ride on investment costs. The lack of incentives to invest and innovate would lead to stagnation, even decay” [7]. Access to institutional credit also gets limited as farmers do not have formal documentation of their land records (both private and communal) that can be used as collateral for loans [8], [9]. This curtails farmers from purchasing inputs and service requirements to improve agricultural practices. The institution does not provide incentives to shifting cultivators or forest dwellers to be true stewards of the land and its resources and provides disincentives instead [10].

In addition, and supplementing the above problems discussed, agriculture in the hill of Manipur suffers from two twin challenges inherent to its geographical location: water scarcity and arable land shortage. The hills districts of Manipur account for 90 % of the state's total geographical area, and the valley districts sum to the rest 10% of the state. Only 7.41% of the state's total geographical area is used for cultivation. Of which, 52% of the cultivated land

is within the valley districts, and the remaining 48% rests within hill districts [11]. The shortage of arable land is depicted through distribution of operational holdings into different type of operations.

**Table 1: Operational Holding<sup>vii</sup> across different categories in Manipur and the Schedule Tribes.**

Type of operational Holdings	Operational holding by Size Manipur Operational Holdings '000 Area of Operational Holding '000			Operational holding by Size Schedule tribe Operational Holdings '000 Area of Operational Holding '000		
	No. of operational Holdings & %	The area operated & % distribution	The average size of the holding	No. of operational Holdings & %	The area operated & % distribution	The average size of the holding
Marginal	76705 (77) 50.97 %	40295.68 (40) 23.40%	.53	29 (.29) 44.71 %	16 (.31) 20.14 %	.55
Small	48737 (49) 32.39%	62773.84 (63) 36.46%	1.29	22 (.67) 33.92 %	27 (.55) 33.91 %	1.23
Semi-Medium	22269 (22) 14.80%	55322.02 (55) 32.13 %	2.48	12 (.45) 19.36 %	31 (.55) 38.57 %	2.45
Medium	2734 (3) 1.82%	13357.23 (13) 7.76 %	4.89	1 (0.09) 2.01 %	6 (-0.55) 7.38 %	4.5
Large	39 (.03%)	432.42 (.25%)	11.09	-	-	-
Total	150484	172181.19		65	Total Area - 79 Hect	
Average Holding	1.14 Hectares			1.23 Hectares		

Source: Based on 2011 Census

\* All Manipur data are Extracts from [12] and The Data about Schedule Tribe Operational Holding is extracted from [13]

About 83.29 % of the operational holdings in Manipur are within small and marginal farmers and about 97 percent amongst the Schedule tribes in the hills. The size of the farm impacts its productivity. That 50.97% of the farmers in the state farm on land with 0.5 hectares and the schedule tribe is 0.55 hectares. The average state land holding across different operational holding is 1.14 hectares and 1.23 hectares amongst the scheduled tribes. The scarcity of arable land is intrinsic to the geographical location with hilly terrain and low to steep slopes from 790 metres to 2,994m above sea level [14].

Water shortage becomes the other twin problem inherent to farmers cultivating on hill slopes and terraces. A year with irregular and insufficient rain reduces the productivity of the land. Local newspaper dailies and national newspapers run their headlines. Recording farmer's plight for water: "Manipur farmers suffer less yield due to poor rainfall, irregular irrigation" [15], "Manipur Stares at food shortage after scanty rain" [16], "Scant rainfall trigger rice price hike in Manipur" [17], "Deficient rain hits Ukhrul farmers [18], "Manipur farmers blame institutional failures for low yield and demand compensation" [19], "Manipur: Farmers growing restless over scarcity of water, stage protest" [20].

**Table 2: Net Irrigated Area on Agricultural land****Area: '00 hectares****Holdings:  
'00**

Total Operational Holdings	Total Area Under Cultivation	Number of Households receiving irrigation under different sources	Total Net Irrigated Area
1506	1721	425 (28.2%)	322 (18.7%)

Source: Department of Agriculture and Framers Welfare, Ministry of Agriculture and Framers Welfare

The total percentage of area irrigated under Principal crops (rice, pulses, cereals, foodgrains) was 16.3% as of 2022 [12]. A similar report shows that only 18.7% of the horticultural operational holdings come under irrigated areas [21]. This 18.7% benefits 28.2% of operational holders from 150600. The data on the irrigated area under foodgrains and horticultural crops shows that much of the cultivated land depends on the rain and the monsoon. This twin problem results in low land productivity in the mountains. The low productivity on land is a proxy for low-income generation, and the ultimate causation is poverty in the hills of Manipur.

A cursory literature on the agricultural sector in the hills of Manipur gives a handful of impediments to agriculture in the hill districts of Manipur. In supplementing the diagnosed problems and their suggestions, this study addresses the twin problems of water scarcity and shortage of arable land. Finding alternative approaches to address the challenges requires much understanding of the field where the farmers operate and experience these challenges. Also, the field experience should be able to guide policymakers and government and non-government agencies in framing policies that could reach and impact beneficiaries. The beneficiaries here refer to the farmers. In the quest for clarity, fieldwork was conducted to arrive at definitive approaches.

## II. Methodology

The study is based on primary data collected in the field of study<sup>viii</sup>. Semi-structured schedules were used during the interviews with individual farmers and for focus group discussions with the Farmer Producers Company. The schedule includes both open and closed-ended questions. The study is based on the qualitative data gathered from the field where inferences on identifying problems and alternative approaches are derived. One hundred farmers were interviewed using random sampling, comprising 25 respondents from the three hill districts of Tamenglong, Churachandpur, Kangpokpi, and Senapati. Of the total interviewed farmers, 50% are women farmers and 50% men. The villages of study included are Shajouba village, Phuba village, Makhel and Songsong village from Senapati District, Namtiram, Khunjao and Farmlane from Tamenglong District, Daili, N. Ningthoupan and phybu from Kangpokpi district, and S. Longphai and, koirentak Khuman in Churachndpur District. The study also conducted 3 Focus Group Discussions with shareholders and representatives of the Farmer Producer Organization from Senapati, Kangpokpi, and Churachandpur. The focus group discussion includes 4-5 individuals. Focused group discussions shed light on the challenges of establishing such an institution and the advantages of forming such an organisation.

They are selected due to the location suitability of the researchers. The interview and group discussion were conducted to identify key areas that beneficiaries require and need to mitigate problems experienced in the field.

### **III. Identifying Issues in the Field**

#### **a) Human Capital Constraints:**

The study finds that society sees producers as poor with low-income generating capacity in the society. Since there is less production and less sales, the rate of returns is negligible. Therefore, the producer does not have enough financial resources to invest in improving their human capital through education and better health care. Due to its low returns, agriculture failed to attract educated youngsters who can augment production through acquired skills and knowledge by incorporating new modes of production, flexibility to change, access to institutional support (subsidies, schemes), and financial credit.

#### **b) Structural and institutional constraints in forming social capital:**

One of the prominent themes in the focused group Discussion with farmer producer organisations was structural discrimination while trying to register a Producer Company. They opined that they faced institutional problems in registering their farmer-producer companies. The extensive requirement for documents to be produced in forming the producer company takes a toll on the farmers<sup>ix</sup>. Registration requires documents like a PAN card, Adhaar Card, Voter ID and address proof. Often, it happens that there is a mismatch in these documents. They further stated that the Government agencies entered their names, which do not match all the documents. Rectifying names took longer than expected for various reasons: officials, postal delays, etc. In social mobilisation, forming a farmer institution is not a traditional institution; it is an introduced institution that requires stakeholders' efforts to instil ownership and make it operational sustainably. Garnering enthusiasm and support of the community seems quite essential. After a long and delayed registration exercise, farmers lost trust and interest in being a shareholder of the Farmer Producer Organization.

#### **c) Challenges in the formation of financial capital:**

One major problem farmers have is the lack of credit facilities. Both primary and secondary data<sup>x</sup> reveal that farmers do not have loan credibility. The reasons could be traced to bad loans in the past or even structural constraints where farmers are excluded from accessing the financial benefits. The requirements established by banking sectors often exclude deserving farmers from obtaining credit. It was found in the field survey that the existing land ownership system practised in the hills does not allow farmers to use their land as collaterals. Individually owned land is not surveyed and has formal documents that can be used as collateral for credit access. Lack of credit also hinders accessibility to subsidies provided by the Government, as most subsidies are credit-linked.

#### **d) Physical Capital Formation.**

During the interview, farmers opined that villages that have approach roads under MGNREGA or other government schemes are motivated to bring more land under cultivation and practice double-cropping because the drudgery of carrying goods physically is reduced and is replaced by vehicles. In places with poor road connectivity to the nearest market, producers opined that their input and transportation costs are higher than their agricultural output sales. A transport system that connects producers and consumers approaches roads from farm to market and aggregators. The profitability would have decreased with extra transport expenditure and service payments. Thus, there is a visible lack of motivation to grow more crops in areas with weak physical infrastructure like roads. The agony of farmers is aptly represented in the words of Akha-a:[19] “Hard work is futile in the absence of water as your effort bears no fruit” and stresses the need to conserve and harvest water during the rainy season for the lean months. Water scarcity due to a shortage of irrigation facilities is cited as the prime reason hindering rabi crop cultivation and multiple cropping in the hills. Canals and irrigation are impractical as cultivations are done on hill slopes. The lack of perennial water sources in the hills is the greatest disadvantage to farming during the winter season. There is no culture of rainwater harvesting practised amongst the farmers interviewed. The financially poor are also limited by their lack of knowledge to access relevant information, and as a result, they are not aware of developmental schemes [20]. Most farmers are unaware of the various facilities provided by the Government. Lack of information and absence of credit availability hinders the accessibility of production equipment and infrastructure.

#### **IV. Discussion**

For a good policy, preliminary ground knowledge and customised policies are required. To address the shortage of arable land, hill farming, such as a shortage of arable land, requires intensification in the use of the resource (land) through multiple cropping and farming all year. Intensification of cropping and diversifying horticultural crops from growing traditional crops to high-value crops (kiwi, broccoli, onions, chia) that do not require extensive plots but yield higher income and the same plot to be utilised throughout the year. The primary requirement for such a transition is water. Harvesting water during the rainy season and use it as a buffer during the lean season. Small initiatives like personalised water storage seem more viable and practical for farming in small parcels with one or a few acres. These farms are not accessible to perennial sources of water. Conserving meticulously per one’s own needs can ease the chronic water shortage problem, increasing production and farmers’ income. Also, construction of approach roads from farm to market will intensify production in those areas where roads are constructed. Thus, intensify and diversify land use and increase production, two key approaches are identified as conducive for small farm cultivation and where government and non-government institutions can take up: a) Approach roads and) Farm Ponds.

##### **a) Farm Ponds**

Resolving the water crisis becomes the initial step through which other forms of crisis affecting the agrarian economy can be mitigated. Exploring means to meet the water requirement at the individual farm level sounds plausible rather than a large-scale dam or water conservation project to mitigate drought and water scarcity. Collecting and storing

rainwater through artificial structures such as farm ponds and water harvesting ponds. The cropping pattern developed will be dependent on the quantum of water available. Currently, there are two types of farm ponds farmers at Shajouba village use: spring-based ponds and rainwater conservation farm ponds. Spring-based farm ponds are most common, where farmers dig out ponds to collect and conserve from the natural springs. This pond type is small and dries up by April and May. The spring farm ponds are not dependable during the lean months when farmers need water the most. The only way to obtain a dependable irrigation source is through harvesting and conserving rainwater during the rainy season. Constructing of farm ponds to harvest and conserve rainwater forms the second type of farm pond.

For the state of Manipur and Shajouba village, in particular, farm ponds for rainwater harvesting are constructed through the distribution of pond liners to kiwi farmers by Nabard, which proves beneficial to farmers. They are distributed to members of self-help groups (SHGs). The ponds are dugged at the site where kiwis are grown, providing water requirements for the water-scarce months of March to May. The farmers themselves dug pond structures, while Nabard provides kiwi saplings and pond liners. The water is stored and conserved from rain, and excess water from water supplies during the rainy months. Those farmers with access to plastic liners are growing kiwis and other horticultural crops in and around the area—coriander green leafy veggies (mustard, spinach, beans, garlic, etc.). Households can meet their household food requirements and can market it at least once a year. Accessibility to water enables these farmers to grow sufficient saplings at the right time to transplant into growing crops such as cabbages, cauliflower, broccoli, onions, green chillies and bitter balls or bitter eggplant. The availability of saplings requirements at the right time and season ensures farmers plant sufficient crops for that particular season. These, in turn, will reflect in the income generation of the farmers. Onions, cabbages.

The state government of Madhya Pradesh has introduced farm-level water resource augmentation through farm ponds and recharging of dug wells through Madhya Pradesh Rural Livelihoods Program (MPRLP) Madhya Pradesh [21]. The project is to conserve rainwater for irrigating agriculture and cattle rearing. The project involves constructing farm ponds, open wells with recharging structures, field bunding, and undertaking plantations by adopting a watershed approach to fight against rural poverty. The state capitalises on the funds of National Rural Employment Guarantee Scheme (NREGS). By channelling scarce resources into crafting to the local needs, the state can work on the most crucial areas impacting rural livelihood. It states that “the increase in soil fertility and water availability achieved through watershed management contributed to increased productivity and production, enabling farmers to take two or more crops annually, with food security and cash income benefits”. The Maharashtra state government also carries out similar projects. Our state government can also emulate such practices by establishing the farm ponds at individual farm level. Meanwhile, diversify crops which requires less water, such as chia seeds, fruit trees, etc., are better avenues for short-duration crops

## **b) Approach Roads**

Approach roads from the farm gate to the market have two positive effects on farming at the production level: 1) machines and technology can be used to tilt the land, and 2) transportation of the produce from the farm to the market.

These two activities require exertion of physical activity and are time-consuming. They transported the produce from farm to market by smaller vehicles (autos, tata mobile, small trucks). Using machines to tilt land cuts down on the person-days farmers have to spend tilling the land and transporting the produce themselves. The amount not spent engaging in physical activities can be used to expand the farm size and use the resources intensively. Losa, a 58-year-old farmer, cultivates cabbages, onions, broccoli, cauliflower and beans in her paddy field. She has a farm pond fed by spring discharge that irrigates the farm during the lean months. After the rice harvest, the fields are put to dry and tilled by machines. She could market 4500 kgs of cabbage, 700 kgs of onion, and extra earnings from beans, cauliflower and broccoli. The farmer expanded her cropped area as a new approach road was laid just below her farm. With the approach road, the farm can access machines for tilling and transporting the produce from her farm to the village market. A 58-year-old drained away of energy could not have produced such a variety of crops in huge quantity with the dependence on machines and transport systems.

In addition to the two approaches, farmers are organised into farmer producer organisations can relax some of the institutional hindrances farmers at individual level experiences. Being a member of an organisation gives certain privileges when pursued collectively. The challenges can range from access to credit, acquiring the right skill set, disseminating technology, and reducing input costs. Producer Organizations (POs) are established under the 12<sup>th</sup> Five-Year Plan to mitigate the challenges of small and marginal farmers in India. Promoting and strengthening Farmer Producer Organisations is key to achieving inclusive agricultural growth. However, they continue to experience issues with institutional documentation and requirements to register or disburse. Facilitating easy access to social capital formation without a lengthy documentation process is required to facilitate farmers registering their companies. For an institution to be sustainable, there should be a special effort to incentivise the farmers who join the institution. The banking sector must be transformed with a diversified banking system rather than a uniform system to meet the needs of those economies with different social and economic structures.

Focused group discussions with the producer companies show that farmers can reduce 30 percent of their input cost by purchasing directly through the company that produces them. Inputs include machinery, fertilisers, water pumps, etc. Institutional hindrances to farmers in accessing credit farm inputs: machinery, fertilisers and agricultural extension services get reduced when approached as an organization. They have higher credibility, with government and non-government institutions aiding farmers to organise into such institutions, allowing them to avail government schemes and benefits at subsidised rates. One important aspect is marketing their agricultural produce through the organisation. This was observed during COVID-19, when farmers' Organisations aggregated their produce, getting passes for commuting and transporting personnel and goods. Getting pass and permission at the individual level was difficult, but as a cumulative, it increased the chances of obtaining it. Farmers turn entrepreneurs by selling agricultural inputs to other farmers procured directly from the producing companies at a cheaper rate from the producing company, generating profits. The greatest benefit for these farmers working and corporating in groups is the collective knowledge obtained at meetings and individual knowledge sharing among members. This knowledge can be related to controlling pest and disease attacks on crops, introducing new seed varieties, and simple techniques

that ease farm work. Most farmer producers' organisations operate within the guidance of certain government and non-government bodies. These government and non-government bodies train farmers to develop their skill set by accessing agricultural extension services on technological dissemination, soil testing, and disease and pest control. Farmers organisations are the best avenue to disseminate new knowledge and technology to the tillers and generate progressive farmers. Thus, farmer organisations help address issues which cannot be addressed at the individual level.

## V. Conclusion

The approaches to preferencing priority areas are not the end in resolving the agrarian challenges in the hill. However, they sure are areas to be given more appreciation and thought into considering future development programs and schemes in augmenting farmers' income and livelihood. When resources are scarce, it is of utmost importance for policymakers to channel into frugal areas, yet its impact on the targeted population is possible. Funds from central Governments like the National Rural Employment Guarantee Scheme can be channelled into areas like structuring farm ponds that can directly affect farmers' income in the short and long run.

<sup>i</sup> Shajouba is a village within Senapati district under Song-Song block. It is occupied by the Mao Naga tribe of Manipur. It is an agrarian village with 80% of its population dependent on agriculture (cultivators and agricultural labourer) according to 2011 census.

<sup>ii</sup> The recognized Naga groups are Anal, Chiru, Chothe, Kabui, Kacha-Nagas, Koireng, Kairao, Lamkang, Mao, Maram, Maring, Monsang, Moyon, Sema, and Tangkhul etc

<sup>iii</sup> The Kuki-Chin-Zomi includes Zou, Vaiphei, Simte, Paite, Aimol, Gangte, Thadou, Shuhte, Ralte, Kom, and Hmar (U.A Shimray 2001).

<sup>iv</sup> It also hosts sizable amount of tribals group as well as Indians from other states of the country (Punjabi, Jains, Marwaris, Bengalis, and Nepalese).

<sup>v</sup> The nine hill districts of Senapati, Kangpokpi, Tamenglong, Noney Districts, Churachandpur, Pherzawl, Chandel, Tengnoupal District, and Kamjong.

<sup>vi</sup> Within health includes: Nutrition, child & adolescent mortality maternal health; education: years of schooling, school attendance; living standard: cooking fuel, sanitation, drinking water, housing, electricity, asset, bank account.

<sup>vii</sup> The operation holding categorisation is based on the size of their unit or operators. Marginal operators fall into two categories a) below .5 ha, and b) between .5 ha < 1 ha; the small operate on land that is 1 ha < 2 ha, semi medium a) 2.0 ha < 3.0 ha, b) 3.0 ha < 4.0 ha; medium a) 4.0 ha < 5.0 ha, b) 5.0 ha < 7.5 ha, and 7.5 ha < 10 ha and 10.0 ha < 20.0 ha and above. This categorisation method was used Department of Agriculture, Co-operation & Farmers Welfare, Ministry of Agriculture & Framers Welfare, Government of India.

<sup>viii</sup> The field visit was conducted in 2019 for a paper presentation at Manipur University on the Topic ". Shajouba Village was revisited between February and April 2023 to update the data.

<sup>ix</sup> Collecting farmers' documents of elected board members to form the Producer Company.

<sup>x</sup> Rasul and Karki (2007), quoted by Golmei (2013), reveal that in all hill states in India, the flow of institutional credit per hectare of cultivated area is much lower than the national average. Per hectare, institutional credit in the Indian Himalayan states varies widely from 3-63 per cent of the national average, with the lowest per hectare credit registered in Manipur (3 per cent) and the highest rate registered in Himachal Pradesh (63 per cent).

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