



Land Tenure Systems And Horticulture Development Among The Tangkhul Naga Of Ukhrul District, Manipur

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ABSTRACT

Abstract: This study examines the intricate relationship between land holdings and land-use practices of Tangkul Naga in Ukhrul district, Manipur, and their implications for horticulture development. The customary land tenure system distinguishes community land, clan- land and private land, influencing agricultural practices such as sedentary terrace farming and Jhum (shifting) cultivation. The patriarchal inheritance regime and restrictions on land transfers create tenure insecurity and investment risks, limiting the expansion of high value horticulture. Strategies for sustainable horticultural growth must acknowledge and integrate the existing customary tenure framework.

Keywords: Land tenure, Tangkhul Naga, Horticulture development, Ukhrul, Jhum cultivation, customary land rights.

Introduction

The Tangkhul Naga land tenure system is a unique combination of communal customs and individual household rights developed over time to fit the hill country of the Ukhrul district. The system retains village control over territory as the fundamental unit. Each Tangkhul village customarily owns a defined area of land (village land) jurisdictional to the village, which to varying degrees, governed and enforced by the village chief, clan heads, and village council (Hanga) and other customary rules. These rules, alongside the state law, govern land use, its allocation for cultivation, and the resolution of disputes. Literature and fieldwork have illuminated three broad spatial layers of land claims in Tangkhul villages, which are community (village) land, clan holdings, and family/individual plots (Shimrei, 2016). Village land, held in trust by the village authority, is under customary law and cannot usually be alienated to strangers. Internal transfers are governed such that land reallocation is primary to clan members or villagers. Clan heads and lineage groups allocate tenure of jhum (shifting cultivation) plots, terrace fields, and access to the forest, while households have rights, which are inheritable, over permanently cultivated plots. This three-tier pattern is common in multiple case studies of Tangkhul landholding.

It is a commonly observed phenomenon that shifting cultivation (jhum) or cultivation of wet terraces is allocated according to customary laws. Families do not obtain the rights to practice cultivation with a legal title deed, but rather through enduring practice and socio-geographical mechanisms. It is highly abstracted, but customary legal codes, for example the Tangkhul customary laws, often called within the locality "Shiyan-chikan," which kinship and land use, inheritance and the council of villages, thus giving the customary legal order a pseudo-legal status in day to day governance. These laws secure land for families and enable use to multiple generations, but do not allow free sale or the permanent transfer of ownership to an outsider. Tenure systems influence the structure and ease of undertaken investments, and the type of horticulture practiced. Households tend to engage in the cultivation of fruit trees and citrus orchards, or perennial horticulture, where family plots with a de facto situation of long-term tenure security in place, for example, terrace gardens or orchards (Chiphang & Roy, 2018). Conversely, jhum plots designated for communal or commonly allocated use, tend to support the cultivation of seasonal crops. Such a dichotomy, provides a very rational explanation for the differences in horticulture practice and subsistence or shifting cultivation practice, as seen in the case of the village of Kachai, which is famous for the community organization around the cultivation of citrus fruit, centralized around lemon.

Fieldwork and agrarian studies on the Tangkhul have shown that the integration of a market economy has promoted gradual changes from a system of shifting cultivation to more permanent horticultural land uses in areas where shifting cultivation customary tenure offers enough security. Contemporary forces are

challenging the current tenure arrangements. These forces—population growth, road-initiated access to markets, high-value crop cultivation, and state programs such as horticulture and allied sector interventions—are altering the intensity and tenure practices of land use. Studies report an increase in land fragmentation, competing claims from migrants and returnees seeking land, and conflicts between customary land allocation and statutory land controls (Punitha et al., 2016). Customary institutions and village councils still possess significant legitimacy, yet the presence of legal pluralism conflicts between state institutions such as courts and the administrative branches and customary legal systems, creates a paradox of negotiated solutions and conflict. Customary tenure arrangements and institutions have been placed at the forefront of any horticulture promotion policy in Ukhrul to ensure equity in investment and access to the resources. Its relative strength in granting de facto tenure security for family plots boosts horticultural expansion while its customary restrictions on alienation and demographic and market change shape the sustainable scaling of horticulture in Ukhrul. There is thus little choice for effective policy and project design: these have to accommodate customary tenure rules, operate via village-level institutions (Tangkhul Naga Long, village council, clan heads), and then blend technical assistance with tenure-responsive strategies to unlock investment barriers posed to horticulture.

Customary land rights and horticulture land uses

In the case of the Tangkhul Naga of Ukhrul District (Manipur), the customary land rights system functions as the underpinning of land use and horticulture. The custom system is an integral part of village administration and the clan's control and provides the system within which land is acquired, used and given up. This part of the essay aims to examine the use of land rights in Ukhrul and the effects of these rights on the further development of horticulture as an economic branch (Aheibam, 2017).

Customary tenure framework:

In the Tangkhul Naga villages, the community primarily holds tenure to the land based on custom rather than formal, state attested rights. Research indicates that the community, with the permission of individual households, grants occupation and use rights to the village territory for agricultural or settlement purposes on designated plots sourced from community land. One source captures this when they say that, "If a household stops the operations, the plot reverts automatically to the community." Very importantly, in the hill region of Manipur including Ukhrul, there is no "khas land" under the state, in other words, state-owned surplus land. Under the hill villages, the land ownership, and management, is under the villagers. In legal actions it was determined, "the ownership of land situated in hill villages of Manipur vests in the villagers. The land is not held under the pleasure of the State Government."

Implications for horticulture land use:

Since land is not titled in an individual manner, the horticultural investments interact the case with such customary arrangements in unique ways. In the case of horticultural crops – often-high value, perennials and requiring constant care and attention – land permanence and the rights to continued use becomes important (Singh et al., 2023). In Tangkhul culture, use it or lose it applies to cultivation rights on a plot: a household can fence or dig a ditch, but if there is no use, it belongs to the community. In the context of horticulture, particularly tree crops like citrus or kiwi, this situation has both benefits and challenges. Collective tenure, on the one hand, diminishes the risk of outsider expropriation and facilitates communal management; while on the other hand, the absence of individually transferable full ownership may discourage heavy investment and ownership tenure construction in longer-term horticulture if households perceive tenure to be conditional or limited.

Functions of village councils and customary leaders:

In setting up functions of village councils and customary leaders, it is often the cases that, village councils with the assistance of clan elders and customary bodies like the Tangkhul Naga Long (TNL) at the top, have considerable power over access to, inheritance of land, the transfer of land, and land disputes. Under customary law, no sale or transfer of land may take place, even to a fellow Tangkhul, without the permission of the village council, and the purchaser might have to obtain permission to settle as a clan and village member (Singh, 2018). For the case of the expansion of horticulture, this means that institutional authorizations and customary legitimacy are equally important as technical agro-inputs. Any horticultural programme must interact with the village council, clan leaders, and customary legal systems to obtain stable user rights.

Land uses and patterns:

In ukhrul, there seems to be an emphasis in the cultivation of Ware fruits and vegetables of which Kachai lemon and chilli are flagship crops of great value as horticulture plays an important role in the region. Land use patterns are visible as an amalgam of customary tenure and practice-specific cropping systems. Customary used land of the 'sloped terrace' and 'hill-sides and village community' patches are commonly used having horticulture. According to socialresearchfoundation.com, Recent research conducted in Tangkhul villages indicate that the terrace fields are rare because 'medium of the terraced arable land has got

exhausted' and are, therefore, horticultural activity is practised as upland. della and Gabrielle argue, 'Customary land tenure systems do constrain innovation and the investors will have to be creative in their land use systems.' Primary Innovation land that is bordered by surface contours, existing hedges, and irrigation bunds (Shimray, 2024).

It is worth to mention that a major issue that remains is the ambivalence of land tenure systems, Gi's et Gutenberg's 2018 'Land Tenure Restrospective Document' refers to Ukhrul acquiring no records of rights surveys that delineate land in the hilly villages, and as a result land remains unsurveyed. In addition to that, without land registration, investing in and increasing the horticulture's value, pertaining collateral, credit, or large scale investment is unfathomable. As it stands, a bank loan is most readily accessible under the pretext of customary rights and is representatively secure as an investment to the more horticultural enterprises. From an opportunity perspective, the customary system allows the village councils to control and defend against large-scale alienation of land, which can be converted to sustainable horticulture by local farmers. If horticulture programs are aligned with tenure systems of the village councils, and customary tenure governance systems are fostered which village councils demarcate, secure, and incentivize the investment, then horticulture can flourish within this tenure environment.

About horticulture in Ukhrul, it is important to understand that the customary land rights are not merely a socio-cultural backdrop but an institutional resource that contours land-use practices, investment risk, and the design of the horticulture system (Roy et al., 2018). In considering the adoption of horticulture, the yields, connected cost and benefit, or value-chain participants, the principles of land tenure under customary law are pertinent: the ways households secure plots, their expectations, operational constraints within which they anticipate to function, and the dynamics of village governance in aggregation to external structures. The contemporary horticulture in Ukhrul has to be founded on the accomplishment of securing customary land rights to farmers, integrating the horticultural cropping systems with land tenure realities, and working with the village as well as clan governance systems of land tenure within the Tangkhul Naga society.

Impact of clan-based landholding structure on investment in horticulture

In Ukhrul, both clans (Shang) and villages organize the Tangkhul Naga surrounding area. Defined, and rooted in traditions, parcels of forests and farm fields are controlled by collective mechanisms, rather than the individual freehold title system. Inside clan boundaries, clans are governed by primary privileges and village councils, alongside clan councils, which grant the council the ability to manage, allocate, and pair, along with inheritance, and solve conflicts (Singh, 2021). Such tenure in Ukhrul is heavily ingrained in local identity and governance. Most of the hilly terrain is held by clans communally, or as clan based rather than as individual private property. The perceived tenure and the ability to make long-term investments in perennial horticulture are interconnected. Farmers are less likely to invest in horticulture where land is held communally or where documentation is customarily primitive. A general observation, along with policy formulation in the Northeastern hilly landscape, suggests that, in the absence of formal, transferable land titles, investments in capital and long-lasting horticultural improvements (for example, terracing, irrigation, grafted citrus orchards, and soil-conserving structures) are discouraged. This is particularly the case as the land is expected to be communally controlled in the future within layers of customary governance or with conflicts that arise from large clans (Shimray, 2018).

As highlighted in previous studies and policy notes supporting limited recognition of customary rights to unlock investment in NE India, this phenomenon is also present in NE India's hilly regions.

Access to formal finance is another crucial aspect of the problem. Commercial banks and various government subsidy programs, as with many other suppliers of credit, demand legal documentation showing possession or mortgage-able title to land as a prerequisite. Thus, clan and communal land, unencumbered by formal documentation, is considered 'unterrained' and diminishes the borrowing capacity of smallholders for farm inputs, planting stock, or on-ground processing. NABARD's and district planners' documents for Manipur have emphasized the small size of land holdings and fragmentation as well as community ownership as barriers to mechanization and credit uptake, which in turn, constrains the ability to scale cultivation of horticultural crops (Singh, 2022). The Ukhrul growers' constrained access to credit is a factor, which increases the effective cost of capital, and discourages the adoption of horticultural technologies with high predicted returns.

The clan land tenure system is also influential in determining the distribution of farm size and the associated economies of scale that derive from it. Land fragmentation, which results from the clan system of inheritance, and the division of clan land into smaller, more useful, parcels, constrains the land that a single household is able to devote to the cultivation of a commercial branch of horticulture. Consolidation of land for the cultivation of horticulture such as lemons, avocados, and kiwi, is economically advantageous due to the ease of management, mechanization, and coordinated pest management. Bounded plots which remain diminutive and dispersed continue to lose marketable valuation along with their respective managerial value, slowing down profit acquisition which in turn hampers investment into value-adding facilities or planted orchards. Focused research into the shifting and land use patterns of cultivation in the state of Manipur has captured this disjuncture and connected it to low commercial productivity.

The clan based system might equally possess some features which are the decisive enabling factors for specific kinds of investment to grow. Deep-rooted clan customs along with their strong governance enables

the consolidation of individual initiatives into joint actions, such as coordinated development of perennial nurseries, communal irrigation works, village processing centres, cooperative disease and pest management, and collective marketing. Where the village councils support such initiatives, they are able to harness social control to safeguard common pool resources such as community forests and watersheds, and mobilize surplus labour to support horticulture, all of which substitute to some extent social guarantees for formal contracts, as they lower the transaction costs for smaller producers (Laishram et al., 2023). Multiple case studies captured in some of the villages of the Tangkhul ethnic group have shown how the community members along with their leaders control their village forests and land use, which can then be redirected to increase the adoption of community driven horticulture and agroforestry. From these observations, the consequences for policies and institutions become self evident. The formal recognition or registration of some kinds of borders to example non alienable customary rights, especially with community based mapping, practical documentation can achieve within the community an positive atmosphere perception of tenure security, and at the same time strengthen the customary systems to facilitate investment in perennial horticulture.

Alongside this, direct public expenditure on subsidized saplings, cold storage, extension services, etc, coupled with lending instruments that accept community based guarantees or group collateral, can help overcome the credit barrier posed by land without title. Recent assessments of land records in the Northeast region emphasize the need to digitize and use hybrid approaches that combine traditional maps with formal records as steps to unlock rural investments, while observing tribal self-governance (Devi & Sangma, n.d.). In Ukhrul, the clan based system of landholding both constrains and enables investment in horticulture. It reduces personal incentives to invest in long-term capital on untitled plots of land and excludes untitled land from formal financial access, while also providing the framework for collective investment and local self governance. In Ukhrul, the horticulture economic potential of Kachai lemons, chillies, and kiwi, can easily be turned into long lasting private and social benefits providing policy action to adapt financial instruments, strengthen tenure recognition, and leverage self governance for cooperative projects.

Land fragmentation and its effects on horticultural enterprise size

The characteristic 'land fragmentation' in Manipur and Ukhrul similarly applies to their hill agriculture region: division of agricultural land into numerous and separated smaller areas. The region Ukhrul has hill land and steep slopes which is coupled with traditional land holding by clans, land inheritance, and territorial land use by the Tangkhul Naga land users. As a result, the agriculture practiced is quite subsistence oriented with many dispersed scattered land areas which are cultivated both for self sustenance and for sale. Recent research on Ukhrul documents an increase in fragmentation and land use patchiness with the development of shifting cultivation, dispersed settlement patterns, and incremental division of farmland for cultivation.

To better understand the scale of the problem a practical snapshot of the situation at the state level helps. Manipur has a relatively easier problem with the registered area under operational agriculture and holdings (Ansari et al., 2021). The average holding is consistent with the low average holding in hill region patterns. NABARD's state profile (citing Agriculture Census) reports about 172,000 ha of operated area by ~151,000 farmers in Manipur (Agriculture Census 2015-16 basis) implying an average operational holding is about 1.14 ha. The National Agriculture Census reports the average operational land holding in the country decreased to about 1.08 ha in the year 2015-16, which shows the trend of fragmentation.

Table 1: Key landholding indicators for Manipur

Indicator	Value	Source
Total operated area (Manipur)	172,000 ha	NABARD state profile (Ag. Census 2015-16).
Number of operational holdings (Manipur)	~151,000	NABARD (Ag. Census 2015-16).
Average size of operational holding (Manipur)	≈ 1.14 ha (172,000 / 151,000)	Computed from NABARD figures; national average (2015-16) 1.08 ha.

The average size of a holding at around ≈1.1 hectares indicates that most of the households do not possess a single plot of land large enough to develop commercial orchards or plant high density citrus, let alone make block-level investments on irrigation, pack-houses, and graded mechanisation. The commercialisation of horticulture requires consolidation. in the form of coordinated aggregation (FPOs, lease-pact ventures), to attain an enterprise-level scale. Transaction cost fragmentation increases the cost of aggregation. Numerous studies in the literature have examined the relationship between high fragmentation and low productivity, and low adoption of capital-intensive practices. Practically, the high levels of fragmentation are held to be a greater hindrance to productivity gains than capital adoption. Non-contiguous plots require investment in land, and investment in non-contiguous plots lead to greater wastage of labour time and investment in plant inputs (fertiliser, plant protection), and therefore more than is economically justified on mechanisation. Efficient investment in high-value, labour-abundant horticultural crops (Kachai lemon, chilli, kiwi) is made unattainable by the lack of post-harvest infrastructure and investment in neglected quality management.

Research reviews show a negative relationship between fragmentation and farm performance and in case of high spatial dispersion the relationship is stronger.

These factors alongside weak management lead to small, scattered production volumes that lack predictability and uniformity, which further diminishes the producer's bargaining position and increases reliance on market brokers, ultimately resulting in reduced profit margins. This lack of scale, coupled with the pooling collection mechanism, enables access for Ukhrul producers to regional inter-state markets like Imphal and the upland trade. Ukhrul producers, like many others, need to overcome the issues of fragmentation and topographical challenges, which include steep slopes and poor quality soil. This is heterogeneity, which leads to lowered incentives to adopt standard practices for best yields and uniform quality obtaining thereby constraining value addition as well as Geo-Referenced value addition GI and premium marketing opportunities. They occur due to value addition fragmentation. They stems from the Interregional imbalance in productive capacity policy. A consolidation through voluntary land leases and land banking, financing of Farmers Producer Organizations and value-chain aggregation, consolidation of low value addition and low cost post-harvest services at the village, and example of land tenure to encourage long term investments.

Ukhrul for example, targeted, spatial watershed and terrace reinforcing studies suggest which Geo-Referenced value addition policy should convert slash and burn style segmented parcels to contiguous diverse horticultural field blocks where Geo-Referenced value addition is feasible. From Ukhrul and the entire state of Manipur the land fragmentation low value constraining the growth of medium size 'enterprise which raises the cost, the supply and the capital for capital technology use' having horticultural value and resorting capital and value added technology for responsiveness. Social and physical policy responses enable dis-aggregation taken independently, in the case of Ukhrul and Manipur that enable value added investments.

Community forests, jhum shifts and horticulture interactions

The average countryside in Ukhrul district is made up of community forests, homegardens, and jhum fallows; these land cover types work in optimism or synergy with the prospects and practices of horticulture. The community forests and homegardens of the Tangkhul Naga villages have historically exported and preserved vast quantities of food, medicine, and other planting materials and serve as valuable biocultural reservoirs of agrobiodiversity and Tangkhul studies have documented dozens of cultivated and semiwild species within household gardens and community groves, showcasing the local capacity for on-farm agrobiodiversity conservation and on-farm conservation horticultural diversification (Zou & Muan, 2020). Within Ukhrul and the hill districts of Manipur, shifting cultivation is still a very important economic activity. Regional and field level studies show that in some parts of the Northeast, fallow land jhum area is decreasing, but in the state of Manipur, the jhum area is increasing, and in some blocks the jhum cycle has shortened, thus increasing pressure on fallows and adjacent community forests. This in turn has increased the rate of shortened fallow cycles, thus decreasing soil fertility and increasing the demand for land. This encourages households to increase the remaining land for horticulture or to community forests that have been cleared for cultivation.

As for managed plantings like citrus orchards (famous Kachai lemons), managed chilly plots and backyard citrus gardens, they are examples of permanent income and food sources while alleviating the need for slash-and-burn techniques through systems of rotational jhum. Numerous pilot interventions in adjacent Tangkhul areas (e.g. integrated farms near Hungpung) demonstrate the ability of mixed horticulture, paired with enhanced saplings and extension services, to increase yields and income while stabilizing land use (Singh, 2016). Still, the absence of clear and secure community boundaries can hinder outcomes of horticultural advancement on village land. The recognition and legalisation of community forest resource (CFR) rights under the Forest Rights Act (FRA) allow Gram Sabhas to manage, protect and use the forest sustainably; where CFR is absent or the bureaucratic system is stagnant, planted and cultivated land for tree crops or orchards become a gamble because of the reduced chance of positive returns. This gamble discourages the adoption of longer-term horticulture. Loosely organized national and regional community ex-USSR CFR assessments demonstrate that community governance is critical to the scaling of perennial horticulture to the Northeast.

If not managed properly, the conversion of community forest to orchards or permanent fields might lower secondary forest regeneration and change hydrological services. On the other hand, thoughtfully crafted homegardens and agroforestry systems might improve soil conservation, raise carbon stocks, and enhance biodiversity, such as the protective buffer zone around the Shirui endemic site (Rajan et al., 2023). Transitions from jhum to horticulture must be sustainable and hence, will combine technical methods—such as terracing, contour planting, soil fertility improvement, and integrated pest management—with institutional approaches like community management plans and benefit-sharing frameworks.

Ukhrul has begun to benefit from both community level and academic work on policy and programme issues: (i) the potential CFRs and participatory forest plans that community-based approaches to forest management (CBFM) incentivize, enable villager investment in permanent horticulture; (ii) in-basin (Kachai, Hungpung) market linkage, extension, and nursery support accelerates the movement of traditional homegardens to commercial orchards; and (iii) integrated land-use planning that expands agroforestry and retains community agroforestry corridors addresses the dual aims of conservation and income-generating agroforestry. These innovations increase the capacity of horticulture to steadily incorporate investment and

labor, along with reduced jhum fallow land, to improve the agroecological and socio-economic resilience of Ukhrul (Shimrah et al., 2022).

Inheritance practices and land consolidation for horticulture

Inheritance and land holding within the Tangkhul Naga people in Ukhrul continue to be influenced primarily by local custom, and by the rules governing land ownership and patriarchal lineages. Land is predominantly understood as a shared and inherited property managed through clan and village administrative structures. Under the land tenure system, inheritance is along the male line, while some form of flexible distribution can be made to movable property. The traditional system of inheritance still governs people's access to, transfer of, and long term investments in, a plot of land set aside for horticulture. Since entitlement to land is tied to membership in a clan and affiliation to the village, individual farmers have a much reduced freedom to purchase, sell, or mortgage land (Dimashree et al., 2023). Studies on the Tangkhul and other Naga people landholding systems show that tenure systems generate varying modes of access: jhum/ shift-cultivation, individual holdings around and peri- homesteaded, and some portions of communally managed forests, and each with varying inheritance rules. These differentiated rights to land are crucial with respect to horticulture. Secure tenure greatly enhances the prospects of permanent, high-value horticultural investments (saplings, irrigation, and terracing) unlike lands that are communal or the prospects of future access are unduly restricted.

Recent studies in Ukhrul, especially those on the adoption of Kachai lemon, highlight the real life implications: farmers show reluctance to make long term investments in orchards located far from settlements with blurred boundaries of ownership or high rates of land fragmentation as a result of inheritance. Adoption chronicles boundaries adoption of recommended techniques of kachai lemon cultivation as land tenure confusion and small fragmented holdings. The study directly traces common practice of imitating land and fencing in kachai lemon and its horticulture unit stagnation and not future ready.

Through division of land where in each generation, fragmentation arises. In such cases, the easy land division custom among the sons and daughters, land projects value, horticulture becomes less and more difficult economically (Romabai et al., 2023). Conflicts become costly, and investments are either postponed or returned to. On the other hand, if there is a dominant household, or single household, and a block of land is consolidated, the level of cultivation as well as productivity of kachai or other citrus fruits is increased. Ethnographic case studies indicate, there is greater rationality of consolidation being done informally in Ukhrul. Constituting new systems through cultural and boundary social evolvments are the main determinants of the evolution of horticulture and consolidation thematic. Out migration, employed wage and education, particularly those steps transform socio cultural dimensions and elementary land claims systems in the family. Conscripts may provide, and help, in the consolidation of fragmented claims.

Social engagement such as KVK/ICAR pilot projects and the creation of the FPOs is now in the process of establishing clear tenure arrangements and pooled investments incentives many of which can substitute for formal consolidation and enhance the scale economies of horticulture like community nurseries and communal irrigations which remains and undermined aspect of horticulture (Jayanti et al., 2023). The recent Kachai lemon agribusiness reports observe a new paradigm of FPO/agripreneur activity expansion as a means of overcoming the constraints of fragmented land ownership.

The relevant policies are clear: the horticulture sector is likely to benefit the most from policies combating demolition of tenure insecurity and inheritance-driven land fragmentation. Such policies may consist of: a) promotion of family land consolidation to be achieved through buy-out and other compensation schemes, b) long term usufruct or lease arrangements investment, c) collective institutions (FPOs and community leased orchards) that combine smallholdings into economically viable parcels, and d) small-scale, fragmented fields (intercropping, close-planted monocultures) for which extension services could develop appropriate crop packages. Any new policies need to be cognizant of the social context and engage constructively with district level councils and other traditional authority structures to build support and minimize potential conflict (Roy et al., 2018). Tangkhul inheritance customs produce fragmentation, which, individually, lowers the incentives for investments in orchards, which simultaneously constrain and direct the horticulture development in Ukhrul. If these practices are constructively engaged with, through community governance and the right framework, targeted policies like those that land consolidation (both legal and informal) with significantly enhanced horticultural productivity can also be achieved.

Security of tenure, risk perceptions, and farmer decisions in horticulture

Territorial tenure insecurity is crucial for farmers adopting long-lived higher-value investments, especially horticulture. Farmers with secure, transferable titles and long-term customary rights are more likely to convert subsistence plots into orchards, plant lemons and kiwis, adopt soil-conserving practices, and invest capital into long-term returns subsidized by tiered additions, irrigation, and fencing. In contrast, fragmentary rights mitigate the incentives to adopt subsequent investments since the farmer disproportionately absorbs the capital cost and the ongoing risk of tenure (Ngasainao & Sangeetha, 2023). A large body of literature resulting from Indian studies has made robust claims on the relationship between the security of land ownership and the on-farm investments along with diminished variability in the latter. Of these claims, the

generalization of tree horticulture investments along with other diverse financial commitments consider the tree and horticulture investments for more sustained claims, regarding the latter as capital the most. In the Ukhrul district, the dominant land regime is Tangkhul customary tenure. Customary rules at the village level and rights alongside decisions from village councils allocate, inherit and use land alongside clan customary structures. Though these structures promise local control and community success, they also complicate the issue of personal long-term statutory land title ownership.

Recent studies on Tangkhul landholding patterns show the impact of subdivision of clan lands on ownership structure and farmland fragmentation, and the role of clan ownership on reconfiguring farmers' investment patterns regarding the establishment of permanent orchards and nurseries. Decisions pertaining to land-use conversion and its subsequent administration have the potential of investment deterrence due to the perceived administrative friction (Hazarika & Singh, 2018). Three core inter-related risk dimensions structure the risk perception of Ukhrul horticulturists, which are, (a) the risk of relinquishing access to land due to inter-family animosities and re-customary allocations, (b) transactions of lemons and chilies having unpredictable prices in the regional markets, (c) hostile weather and pest attacks which obliterate crops. Crosshill agricultural studies in the state of Manipur show that the underestimated, communal and collectively owned small landholdings create, amplify and reinforce risk, which, in return, depresses investment into improved cultivars and modern methods. Farmers, in most situations, favor short-cycle low-input crops, practice low-input farmers' mixed cropping systems, or fail to seal high-expected perennial horticulture investments despite its high-yield potential.

According to national and state reports revitalizing the example of land records and supporting Farmer Producer Organisations (FPOs) and community consent mechanisms on long term leases can significantly increase investment in horticulture infrastructure and tree crops. For instance, the recent administrative agricultural plans in Manipur have enhancing area under horticulture and providing targeted (nursery, training, credit facilitation) support, as measured investments which, in conjunction with tenure security, can unlock investments (Handique et al., 2022). Other reports show that when such measures enhance access to formal credit (which sometimes needs some evidence of tenure) and extension services, there is an increased likelihood of high value perennial crops such as Kachai lemons and improvements in post harvest techniques being adopted. Practical plans that have worked at the village level include (1) formalizing as simple usufruct village records that can be sanctioned at the district level, (2) supporting long term leases with boundaries of crop tenure during the life of an orchard, and (3) facilitating investment through FPOs to consolidate tenure risk and reduce transaction costs. These measures enhance tenure security, reduce the agricultural risk premium, and shift the expected net present value of horticultural investment to be positive even with the changing climate and market conditions.

Role of village councils and customary institutions in land allocation for horticultural crops

In the territorial command area of Ukhrul district (Manipur), the horticultural land use zoning and its social institutions are part of the cultural institutional structure. A village is internally self-contained with its own bounded territory, and land use planning within each village is determined primarily by customs and tradition. Village councils (often presided by the Headman/ 'Awunga' along with village authority/council/ 'Hanga') control land as common property, and allocate land for cultivation, orchards, or horticulture within the village and under community norms as opposed to individual freehold rights (Thong et al., 2019). As an example, the box-elders system does not permit unrestricted sale or land transfer beyond the village boundary without the authorization or clearance of the village council and chief.

In horticulture, as an example, a village institutional arrangement would determine which household is entitled to use land for the cultivation of orchards or other high value crops, and under what terms. Given Ukhrul's recognised potential for horticulture, (Manipur techno-Feasibility Report estimates approximately 214,864 hectares of horticulture potential area in the district, much of it still undeveloped), the task of assigning land for horticultural use becomes all the more important. Thus, the village council has the responsibility to allocate land for cultivation as well as make decisions to convert some of the fallow land and jhum to more permanent horticultural use. Customary authorities such as the Tangkhul Naga Long (TNL) and the zonal "Longphang" act as arbitrators on disputes concerning land and resources and inter-village relations. They defend community land tenure and support the village councils' jurisdiction on land (Kharibam & Senjam, 2023).

In the domain of horticulture, the case of a farmer intending to start a lemon orchard in a Tangkhul village, for instance, illustrates the point. He will not get the village council's endorsement, no matter how good the economic argument is. Council's ownership is community owned, and the council has the power to allocate land parcels, or grant use rights, to communal land. The land tenure is structured such that ownership is not freely marketable, and this has implications for horticulture investments, land as collateral, and increase in scale of horticulture operations.

Changi et al (2021) argue that the local land tenure system, and by extension the village council, grant considerable leasehold rights and rights to land use. This leasehold is often transferrable; thus, secondary users outside the council's economic zone can obtain land that may be lost to the primary socio economic system (Ningthoujam et al., 2022). This has implications for the sustained growth of horticulture in land constrained settings. The village council, alongside customary authorities, thus, can offer an effective

mechanism to support horticulture development. Hence, their role is equally important in evaluating the economic potential of horticulture in Ukhrul.

Prospects for land-reform supporting horticulture under the Tangkhul Naga system

In Ukhrul District, the Tangkhul Naga people customize land based on clan structures, village councils, and customary rights—this type of land governance system still exists today, alongside the system of collective labor and reciprocal farming practices. Any proposed land reforms are unlikely to succeed without addressing mnemonic governance structures. Recent changes to policies and the legislation (Manipur Land Revenue & Land Reforms amendments, 2022) indicate the government's desire to implement land administration reforms, simplify the processes of land titling and leasing, and grant institutional leases under regulated frameworks. These policies could guarantee tenure for horticulture investments if they were made to provide active protection for tribal customary rights (Sadananda et al., 2019). Carefully structured policies enabling registration and leasing could result in the attainment of community-level long-term leases or usufruct for orchards (kiwi, Kachai lemon, cardamom) without dispossessing households.

The prospects depend on an: (a) system to record community/parish land alongside maps of customary parcels; (b) community-level agreements for long-term use for horticulture; and (c) simplified registration systems (Maithani, 2023). This hybrid form of formalization lowers the risk of investment and bolsters access to credit, land insurance, and public subsidies (micro-irrigation, polyhouses, and post-harvest)—while centralized village systems maintain land governance. Horticulture Stand to Gain from Sensitive Land Reforms as Secure Tenure Enables the Aggregation of Planting of Perennial High Value Crops Then Community Consent Allows the Merging of Fragmented Plots into Feasible Orchard Blocks and Allowing FPOs to take time-bound Registered Stewardship Over the Processing and Marketing Assets is Permissible. This Enhances Farm Gate Productivity and Economically Viable Value Addition Reforms

The top down approach to land law changes in Manipur has with the Laissez Faire era inflamed ethnic tensions hence the need for constitutional Tribe Custom Law. Ethnic reforms should be monitored, educated, and participatory. Drafted legislative tools should include legal guarantees for collective and inheritance rights, council grievances, and monitored pilot projects like in Hungpung and Kachai Escalated by Districts in Cooperation with NABARD Planners (Meetei et al., 2015).

Conclusion

This chapter explores the intricate relationship between the land holdings and the land-use of the Tangkhul Naga of Ukhrul district (Manipur) and their implications for the development of horticulture. The Tangkhul Naga land tenure system is deeply rooted in the customary institution and practices, which define three main tenure types: community-land, clan-land and private, which is dominantly used in land allocation, inheritance and transfer. The inheritance system, in particular, is almost entirely a patriarchal. Ancestor's properties comprising of terrace-fields, jhum-lands, and house plots are bequeathed to males whereas daughters and outsiders are largely excluded from acquisition. The land use systems are diverse: in the northern and central zones of Ukhrul, certain villages mainly practising sedentary terraced agriculture, and small-scale jhum (shifting cultivation) while in the south-eastern part, certain villages still practice jhum farming on steep slopes. These systems tend to determine the ways in which horticulture can be practiced. Jhum lands offer much starker limitations because of tenure insecurity, steep slopes and fragile ecology, while terrace plots enable the practice of perennial horticulture.

The constrictions on land transfers to outsiders, as well as the required authorizations from village authorities and clan organizations, gives rise to additional investment risks for the farmers, especially with the possibility of defaulting on loans, leasing land to institutional investors, or scaling operations on the land at hand. Moreover, fragmentation of the landholdings coupled with the absence of formal title deeds diminishes the possibility of Tata establishing his long-term enterprise, particularly on the large and contiguous land. Though the land system of the Tangkhul Naga has its merits, including the preservation of tenure communal rights and the customary land tenure system, it simultaneously creates systems boundaries to the integration and expansion of high-valued land horticulture in Ukhrul. Thus, strategies to be adopted for the horticulture development Ukhrul must, as a matter of urgency, appreciate the existing reality of land tenure systems. Such strategies shouldn't disregard the established local systems, and as a minimum, be coupled with carefully planned interventions to achieve the desired land tenure security, collective investment schemes at the predetermined cooperative leasehold levels, and land consolidation that meets the community standards.

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