

LIVELIHOOD REPORT
2026

New Markets for Pastoralism

A project report focusing on
Mago, Arunachal Pradesh

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**Centre for
Pastoralism**





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**New Markets for Pastoralism: A project report focusing
on Mago, Arunachal Pradesh**

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Livelihoods Pilot in Arunachal Pradesh

Brokpa women in Mago-Jethang lead the way in boosting the Yak dairy economy – from contributing their own money to managing the procurement, production, and sales collectively.

Introduction and purpose

Can yak ghee function as a viable value-added product for pastoral households facing constraints in selling butter and other dairy products, particularly those grazing livestock in remote pasture areas?

This report documents a livelihood pilot undertaken by the Centre for Pastoralism with Brokpa pastoral communities in Mago and Thingbu villages of Tawang district, Arunachal Pradesh. The report brings together evidence from community consultations, first of a kind women-led ghee production and sales

pilot, and a detailed market assessment conducted across the Monpa region.

The purpose of the report is to document the process through which the pilot emerged, describe its implementation and outcomes, situate these within the wider yak dairy economy, and draw lessons relevant to future livelihoods work with pastoral communities. The report is intended as both an internal learning document and a foundation for potential engagement with donors and government agencies.



Yak dairy forms an important part of the pastoral economy of the Monpas (Brokpas) in Arunachal Pradesh.

Regional and livelihood context



In the Tawang District of Arunachal Pradesh, Brokpas practise transhumant pastoralism moving yak herds between summer and winter pastures.

The Brokpas of Tawang district practise transhumant pastoralism centred on yak herding across distinct seasonal grazing landscapes. Households move livestock between summer and winter pastures, and these pasture linkages form the basis of social organisation, collective decision-making, and cooperation. In Mago and Thingbu villages, pastoralism continues to be the dominant livelihood system, with dairy products playing a central economic and cultural role.

Butter and chhurpi (cheese) constitute the most important dairy outputs, serving household consumption needs while also feeding into local and regional markets. Yak hair and meat contribute additional income streams, although meat sales are increasingly constrained by social norms and religious influence. Pastoral livelihoods in the region

are therefore embedded in both ecological systems and evolving moral and institutional frameworks.

Focus group discussions conducted in October 2024 in Mago and Thingbu highlighted significant changes affecting these livelihoods. Participants described declining pasture quality, partly linked to the reduced use of traditional management practices such as controlled burning. Religious ideas associated with Buddhism, particularly concepts of non-violence and karmic consequence, were cited as influencing decisions around land management and meat consumption. These shifts have contributed to increased reliance on purchased feed and fodder, rising production costs, and declining net returns for pastoral households. At the same time, the overall number of households engaged in pastoralism is shrinking, further altering production dynamics.

A further constraint shaping pastoral dairy production is the highly seasonal nature of milk availability itself. Yak and hybrid yak milk production declines sharply during winter months, particularly in higher-altitude grazing areas, limiting the possibility of maintaining continuous dairy processing throughout the year. This seasonality affects not only household consumption patterns but also the viability of value-added production and market supply. Subsequent experimentation with cheese-making in Jang and Mago repeatedly highlighted the extent to which pastoral dairy economies remain structured around ecological rhythms of breeding, grazing mobility, and seasonal fodder availability.

These constraints became especially visible during winter trial batches, when producers struggled to

source sufficient milk even for small-scale experimentation. In Mago, women participating in cheese-making activities observed that existing yak and hybrid yak herds could not sustain regular production through colder months without affecting household needs and ongoing ghee production. In response, participants began exploring the use of hybrid Mithun milk sourced through relationships with Brokpa households in Jang. This adaptation emerged not through formal planning, but through practical attempts to work around seasonal scarcity while continuing experimentation.

Such responses indicate that pastoral dairy enterprises operate within highly variable ecological conditions and cannot be understood through assumptions of stable or continuous production cycles.



Religious ideas associated with Buddhism influence decisions around land management and meat consumption and have contributed to increased reliance on purchased feed and fodder, rising production costs, and declining net returns for pastoral households.

Yak dairy markets and value chains

Across the Monpa region, demand for yak-based dairy products remains consistently high. Interviews with traders and consumers indicated that chhurpi is consumed in large quantities throughout the year, with estimates suggesting that an average Monpa

household consumes approximately fifty kilograms annually. Ghee consumption is lower in absolute terms but rises sharply during Losar, when butter tea forms an important part of household and ceremonial consumption.

Despite this strong demand, local supply is insufficient. A significant portion of the market is therefore supplied by Brokpa producers from Bhutan, particularly from the Sakteng and Merak regions. These products enter Arunachal through informal trade routes and are generally available in larger quantities and at lower prices than locally produced dairy. Market interviews revealed that Bhutanese traders often require Indian buyers to

purchase ghee and chhurpi together, which can result in surplus ghee accumulating in some Indian villages, especially those distant from major markets. The presence of cheaper Bhutanese products exerts downward pressure on prices received by local Brokpa producers, even in contexts of high demand. This competitive environment shapes both the constraints and opportunities facing pastoral households in Arunachal Pradesh.

Identifying the livelihood opportunity

Early consultations undertaken by CfP revealed that access to markets is uneven even within a single village. Brokpa groups associated with grazing areas closer to motorable roads, such as Chuna, Wole, and Zhybjunala, reported relatively few difficulties in selling butter and chhurpi. In contrast, households grazing livestock in Jethang face more pronounced constraints.

Jethang pasture is located approximately one to

two hours' walk from the nearest vehicular road. This remoteness makes it difficult to transport and sell butter and ghee, both of which are more perishable than dried chhurpi. As a result, households using Jethang pastures reported that surplus butter and ghee are sometimes fed back to animals, consumed beyond preference, or donated to monasteries. These observations suggested a spatially specific livelihood constraint that could potentially be addressed through targeted value addition.



Women taking part in a cheese-making workshop.



The demand for yak-based dairy products remains consistently high across the Monpa region. Chhurpi is consumed in large quantities throughout the year and ghee consumption sees a sharp increase during Losar.

Community consultations and emerging interest

CfP conducted three community meetings in Mago, each organised around distinct pasture-linked groups. The first two meetings, held with groups associated with Zhybjunala and Wole, indicated little interest in commercialising ghee, as surplus butter was not perceived as a problem. However, subsequent discussions, combined with exposure to market information, led these groups to reconsider their position.

On 21 January 2025, CfP facilitated a meeting in Mago with twenty-three Brokpa household members who use Jethang and nearby grazing areas. The discussion focused on existing butter and chhurpi

value chains, storage and transport challenges, and declining local consumption of butter.

Participants confirmed that remoteness limited their ability to sell surplus products. After internal deliberation, the group expressed collective interest in experimenting with ghee production, while also emphasising the need to explore ways to improve returns from chhurpi.

The discussions around ghee production also opened space for broader experimentation with dairy value addition beyond the original pilot itself. Following subsequent cheese-making workshops conducted

in Jang and Mago, a small number of women participants began independently testing new forms of dairy processing, including feta-style and halloumi cheeses. These experiments did not emerge uniformly across villages or households. Rather, participation developed unevenly through existing social networks, labour arrangements, and individual willingness to assume risk.

In Jang, one participant, Ama Sangey, emerged as a particularly important local organiser. Rather than waiting for formal institutional support, she assembled a small working group of Brokpa women and initiated repeated trial batches with minimal external assistance beyond initial technical guidance and access to rennet. The group progressively improved production quality through repeated practice, experimentation, and peer learning. Trial batches demonstrated gradual improvements in texture, handling, and processing confidence over time, suggesting that technical capacity developed

incrementally rather than through one-time training interventions alone.

In Mago, interest in cheese-making emerged primarily through existing women's self-help group networks, particularly among women already involved in ghee production. However, discussions within these groups revealed that enthusiasm did not necessarily translate into broad participation. Many women were already balancing substantial household responsibilities alongside existing dairy work and were unable to commit additional time to experimental processing activities. In response, participants collectively proposed that a smaller group of existing ghee entrepreneurs initially take responsibility for cheese production while gradually involving others over time if the activity proved viable. These discussions revealed that participation was shaped less by abstract willingness than by practical constraints related to labour, mobility, time availability, and existing livelihood commitments.



New forms of dairy testing including Halloumi and feta style cheeses were tested out independently by a small number of women in Jang and Mago. These women had participated in earlier/ previously organised cheese-making workshops.

Pilot design and institutional engagement

Following the January meeting, CfP incorporated the proposed pilot into its internal planning and shared the concept with village leadership. Discussions with the tsorgan (village head) focused on the feasibility of the initiative, potential profit margins, and appropriate leadership for the pilot.

The tsorgan expressed strong support for the idea and committed a sum of ten thousand rupees as seed capital, without expectation of repayment. He suggested that the initiative be led by village youth if possible, and by women's groups if youth were unwilling to participate.



The pilot was led by four women and the group functioned as an independent entrepreneurial unit, with CfP providing facilitation.

When no youth volunteers came forward, four women were identified to lead the pilot. These women also contributed their own funds and agreed to manage procurement, production, and sales collectively. The group functioned as an independent entrepreneurial unit, with CfP providing facilitation rather than direct operational control. As the initiative evolved, forms of local institutional support also began to emerge around the pilot and subsequent dairy experiments. Village leadership in both Mago and Jang expressed interest in facilitating dairy value-addition activities through support for infrastructure, workspace,

coordination, and public legitimacy. In Jang, the Gram Panchayat leadership indicated willingness to help establish a more suitable production space for women-led cheese processing initiatives following repeated trial batches conducted in improvised household settings.

Support also emerged through interactions with district officials and festival-based public events. During subsequent tasting sessions conducted around the Torgya Festival and Republic Day celebrations in Tawang, local administrators and government

representatives expressed interest in the initiative and encouraged further experimentation. One district official formally invited participants to discuss the initiative further and encouraged village leadership to support the activity locally.

At the same time, efforts were initiated to obtain basic food safety certification and improve hygiene practices associated with dairy processing. Training sessions increasingly incorporated discussions around packaging, handling, and cleanliness alongside production techniques. These developments suggest

that livelihood initiatives become more viable when recognised as legitimate within existing local institutional structures rather than functioning solely as externally facilitated pilot projects. The gradual emergence of such support also reflects the importance of public visibility, demonstration, and institutional recognition in shaping the trajectory of small-scale livelihood experiments. Although CfP initially suggested a higher butter procurement price, the women decided to begin at five hundred rupees per kilogram for the first batch, with the intention of revisiting prices once market response was clearer.

Pilot implementation

Butter for the pilot was procured from three Brokpa households located in Jethang and Chuna, amounting to approximately forty-two kilograms. The butter was converted into ghee, bottled in two hundred and twenty 250-ml bottles sourced from Guwahati, and labelled using a locally designed sticker. Decisions regarding packaging, pricing, and sales strategy were taken collectively by the women entrepreneurs.

The ghee was sold during the Mago Festival held on 11 and 12 October 2025. The festival experienced lower-than-expected footfall due to repeated schedule changes and the cancellation of high-profile attendance, which constrained sales. Despite these limitations, approximately half of the bottles were sold during and shortly after the festival.



The ghee stall put up during the Mago Festival in October 2025. Approximately half of the two hundred and twenty bottles were sold during and shortly after the festival.

Financial outcomes

Based on records maintained by the group, total income from the pilot amounted to approximately thirty-seven thousand five hundred rupees, with reported profits of around fifteen thousand rupees. The per-bottle sale price during the festival was three hundred and fifty rupees. While sales volume was limited by external factors, the pilot demonstrated that ghee production can yield positive margins even at a small scale and under suboptimal market conditions.

Community response

The pilot also revealed important social dynamics. Within the women's group, participation levels varied due to differences in availability and existing livelihood commitments. Two members were more active in production and sales, while others contributed less directly. The group acknowledged these imbalances and expressed confidence in managing participation internally.



The pilot demonstrated that ghee production can yield positive margins even at a small scale and under suboptimal market conditions.

Market assessment methodology

Between February and April 2025, CfP conducted a series of interviews with traders and resellers operating in Mukto, Khalaktang, Dirang, Bomdila, and Tawang. These interviews focused on procurement sources, pricing, seasonal variation, volumes traded,

wastage, and perceptions of demand and supply. The interviews were complemented by informal observations of market flows and interactions between traders and producers.

Key market findings

Across all locations, traders reported that they were rarely unable to sell ghee or chhurpi. Demand was described as strong throughout the year, with prices increasing during Losar. Bhutanese products were found to play a central role in meeting demand, particularly during winter months when local production declines. Traders faced relatively low risk, with transport and spoilage representing the primary costs beyond procurement. Local Brokpa producers, however, received prices significantly lower than final retail values, reflecting their limited bargaining power and market access.

Subsequent experimentation with cheese production also highlighted a second layer of constraints extending beyond production itself. While trial batches of cheese were generally evaluated positively in terms of taste, freshness, and consumer response, significant limitations emerged around packaging, storage stability, hygiene management, and shelf life. Producers found it difficult to maintain product quality over longer storage periods, particularly in contexts where refrigeration infrastructure, transport systems, and appropriate packaging materials remained limited.

Repeated trial batches conducted in Jang revealed that while production techniques improved steadily through practice, post-production handling remained a persistent challenge. Cheese often lost quality during storage, reducing its suitability for wider distribution or delayed sale. These observations led to increasing attention toward packaging methods, food safety practices, and basic compliance requirements during subsequent workshops and market trials. Hygiene training, handling practices, and discussions around certification gradually became integrated into the initiative alongside production itself.

These experiences indicate that successful value addition in pastoral settings depends not only on production capacity or market demand, but also on access to less visible systems of storage, transport, packaging, hygiene management, and institutional compliance. In remote pastoral regions, these infrastructural constraints may become as significant as production challenges themselves in determining whether small-scale enterprises remain locally confined or achieve broader market reach.

Synthesis and learning

The yak ghee pilot in Mago–Jethang offers several interlinked insights into the functioning of pastoral livelihoods, local markets, and community institutions in the Monpa region. At an economic level, the pilot confirms that value addition through ghee production is technically and financially feasible, even at small scale and under constrained marketing conditions. The conversion of butter into ghee allowed surplus production to be stabilised, stored, and sold at prices that generated positive margins for the women entrepreneurs, despite low festival footfall and minimal promotion. This suggests that the primary constraint faced by some Brokpa households is not

lack of demand, but the spatial and logistical barriers that limit their ability to participate in existing markets on favourable terms.

The subsequent cheese-making experiments further demonstrated that markets for unfamiliar dairy products do not emerge automatically through production alone. Producers participating in tasting events and festival-based trials found that consumer acceptance depended heavily on demonstration, explanation, and opportunities for sampling. Considerable effort went into learning how products could be prepared, served, and presented to potential



One of the cheese dishes presented during the tasting sessions around the Torgya Festival, to familiarise participants with possible modes of consumption.

consumers. During tasting sessions organised around the Torgya Festival and later public events, cheese was pan-fried in butter and served with honey in order to familiarise participants with possible modes of consumption. Organisers also relied on informal online resources and repeated experimentation to develop serving methods appropriate for local audiences.

Responses during these events indicated that consumers were often intrigued precisely because the products were unfamiliar. Local residents, tourists, and government officials frequently described the cheese as something they had “never eaten before,” while still responding positively to taste and texture. Participants were also able to distinguish between different cheese varieties during tastings, suggesting that product differentiation and consumer learning were gradually emerging alongside production itself. In several cases, tourists expressed interest in

purchasing products beyond the event and requested future access to supply.

These experiences suggest that market creation in pastoral settings involves processes of cultural translation and familiarisation alongside technical production. New dairy products require not only producers but also consumers capable of understanding how such products are consumed, valued, and incorporated into everyday or commercial food practices. Market formation therefore emerged as a social and educational process rather than simply an issue of market access.

At the same time, the pilot demonstrates that such economic feasibility is highly uneven across pastoral households. Households grazing in remote pastures such as Jethang, experience systematically different market conditions compared to those located closer to motorable roads. For these households,

value addition does not merely enhance returns but compensates for structural disadvantages related to distance, perishability, and transport costs. This finding underscores the importance of geographically targeted livelihood interventions, rather than village-wide or uniform approaches that risk benefitting those already better positioned.

The pilot also revealed the extent to which pastoral economies are embedded in social norms and collective expectations. Pricing of dairy product among Brokpas is not purely a market decision but is subject to community-level scrutiny and informal regulation. The emergence of tensions around

perceived profit margins and participation reflects long-standing norms of price stability and collective accountability. These dynamics indicate that even modest entrepreneurial initiatives can be interpreted as socially disruptive if their rationale and benefits are not clearly communicated. Livelihood interventions in such contexts must therefore pay close attention to social legitimacy, transparency, and processes of consultation, rather than focusing solely on technical or financial viability.

Gendered dimensions of entrepreneurship emerged as another important learning. The women who led the pilot demonstrated considerable agency,



The pilot highlighted pastoral women's ability to collectively manage procurement, production, and sales, challenging assumptions about their role in market-facing activities.

organisational capacity, and willingness to take financial risk. Their ability to collectively manage procurement, production, and sales challenges common assumptions about women's limited roles in market-facing activities in pastoral regions. However, the pilot also highlights the additional burdens women

face due to existing livelihood commitments, care responsibilities, and social expectations. Variation in participation within the group was shaped less by motivation than by structural constraints on time and mobility. At the same time, the pilot and subsequent dairy experiments also revealed forms

of cooperation and adaptive organisation extending beyond individual entrepreneurship. Existing women's self-help group structures played an important role in shaping how labour, participation, and risk were distributed among participants. Discussions within these groups often functioned as spaces where participants collectively assessed the feasibility of new activities, negotiated responsibilities, and adapted production plans around existing livelihood commitments.

Inter-village cooperation also began to emerge through attempts to address seasonal milk shortages. In response to declining winter milk availability in Mago, participants involved in cheese-making began sourcing hybrid Mithun milk through relationships with Brokpa households in Jang. This arrangement developed informally through existing social ties and practical necessity rather than through formal coordination mechanisms. Such adaptive strategies indicate that pastoral livelihood transitions are not solely driven by isolated entrepreneurial actors, but frequently depend on networks of cooperation, resource sharing, and collective adjustment across households and settlements. Recognising and accommodating these realities is essential for designing inclusive and sustainable women-led enterprises.

Conclusion

The yak ghee pilot undertaken in Mago–Jethang provides a grounded illustration of how livelihood opportunities in pastoral regions emerge at the intersection of ecology, market access, and social organisation. The pilot did not introduce a new product or create new demand; instead, it reconfigured how an existing product was processed and marketed by a group of households facing particular disadvantages. Its modest scale is therefore not a limitation but a reflection of the realities within which pastoral livelihoods operate.

Equally significant is the fact that the initiative

The broader market assessment reinforces these insights by situating the pilot within a regional economy characterised by persistent demand, informal trade, and asymmetric bargaining power. The dominant role of Bhutanese dairy products in regional markets illustrates how cross-border dynamics can simultaneously sustain consumption and undermine local profitability. For local Brokpa producers, competition from Bhutan does not eliminate demand but compresses margins and increases vulnerability, particularly for those with weaker market access. In this context, small-scale value addition initiatives can improve household level outcomes but cannot, on their own, offset structural pressures arising from regional trade dynamics and policy gaps.

Taken together, these findings suggest that livelihood interventions in pastoral settings are most effective when they are focussed, socially embedded, and realistic in their ambitions. The ghee pilot worked not because it transformed the dairy economy, but because it addressed a specific constraint faced by a specific group, using an institutional form that aligned with local capacities and norms. Attempts to rapidly scale such initiatives without similar attention to social and spatial differentiation are likely to generate resistance and uneven outcomes.

continued to evolve beyond the original pilot itself through processes of experimentation, uncertainty, and gradual adaptation. The emergence of independent trial batches, women-led cheese experimentation, festival-based market testing, and new forms of institutional support indicates that livelihood interventions can create conditions for further locally driven innovation even without large scale expansion or formal enterprise structures.

At multiple stages, participation remained partial, uneven, and tentative. Some households chose not to engage, others experimented briefly before

withdrawing, while a smaller number of participants continued investing time and labour into repeated trial-and-error processes. New activities were incorporated cautiously alongside existing livelihood systems rather than replacing them outright. Technical knowledge developed incrementally through repeated practice, while decisions around participation were continuously shaped by labour availability, milk supply, household responsibilities, and uncertainty regarding market demand.

What emerged was therefore not a linear pathway of enterprise development, but an iterative process through which pastoral households selectively incorporated, modified, and reworked new livelihood possibilities according to ecological conditions, social norms, and practical constraints. These dynamics suggest that livelihoods work in pastoral settings is most effective when approached not as a model for rapid replication, but as a long-term process of collaborative experimentation grounded in the realities of everyday pastoral life.

The experience underscores that pastoral economies are dynamic. They are shaped by changing grazing practices, religious and institutional influences, cross border trade, and shifting patterns of consumption. Interventions that overlook these dynamics risk either irrelevance or unintended disruption. The ghee pilot

succeeded to the extent that it remained attentive to local differentiation, respected existing community institutions, and allowed producers themselves to retain control over key decisions.

Equally important are the limits revealed by the pilot. Value addition cannot substitute for broader policy engagement on grazing access, market regulation, or cross-border trade. Nor can small enterprises resolve the tensions that arise when market logics intersect with collective norms of equity and price stability. These limits suggest that livelihoods work with pastoral communities must be approached as an iterative process of learning and adjustment, rather than as a linear pathway to scale or replication.

In this sense, the most significant outcome of the pilot lies not in the volume of ghee sold or the profits generated, but in the insights gained about how pastoral households navigate risk, opportunity, and social obligation. These insights point toward a mode of engagement that privileges depth over breadth, responsiveness over prescription, and collaboration over intervention. Future work by the Centre for Pastoralism in Arunachal Pradesh is hence cut out. It must build on these lessons by supporting livelihood strategies that are incremental, socially legitimate, and firmly rooted in the lived realities of pastoral communities.



An important learning from the pilot is that livelihoods interventions in pastoral settings are most effective when approached as a long-term process of collaborative experimentation rather than a model for rapid replication.







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