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Community Forestry and Indigenous Livelihoods: The Experience of the Limbu Community in Eastern Nepal

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Abstract

This study examines the role of community forestry in shaping local livelihoods, participation, and benefit-sharing practices in Dundamari Village, Jhapa, Nepal, focusing on the Chulachuli Community Forest User Group (CFUG). Using a mixed-methods approach, data were collected through semi-structured interviews and participant observation among CFUG members. The findings show that forest biomass is widely used for firewood and fodder, directly supporting household subsistence, while timber resources contribute mainly to housing and fuel needs. Livelihood benefits from community forestry are most evident in agriculture and livestock activities; however, income generation through the sale of forest products remains minimal, and employment opportunities in forestry are limited relative to its potential. The study also highlights significant inclusion challenges, particularly from a gender perspective. Women's participation in community forestry governance is constrained by time burdens, lower educational attainment, and limited influence in decision-making. Consequently, a gender gap persists in planning, implementation, and benefit-sharing processes within the CFUG. While community forestry in Dundamari functions as an important livelihood support system, its long-term sustainability depends on more equitable benefit-sharing, greater gender inclusion, and culturally sensitive governance. The findings further underscore the importance of integrating indigenous knowledge and socio-cultural forest practices in community forestry research and policy.

Keywords

Community forestry, Livelihoods, Limbu (Yakthung), indigenous knowledge, Gender inclusion.

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1. Background of the Study

The Limbu, also known as Yakthung, are one of the major indigenous nationalities of Nepal. They have historically lived in the eastern region of Nepal known as Limbuwan. Since ancient times, the Limbu people have maintained a close relationship with land, forests, and natural resources. This relationship with natural resources has shaped their livelihood system, culture, beliefs, and ecological knowledge. As an indigenous community of the historical Limbuwan territory, the Limbu have a distinct socio-cultural identity that is closely connected to forest ecosystems and community development (Chemjong, 2006).

Forest resources are central to the daily life of Limbu community. Historically, they depend on forests for fuelwood, timber, fodder, medicinal plants, and other non-timber forest products. Forests also play an important role in their social and religious practices and community believes. Many forest areas and tree species are considered sacred as explained as for cultural values by them. This shows the spiritual and symbolic bond between the Limbu community and nature or particularly community forestry.

Forests are important and embedded for human society in general. They support agriculture, maintain ecological balance, and sustain rural livelihoods even in this modern society. For rural and indigenous communities, forests remain a major source of basic needs (Bhatia, 1999). In Nepal, forests provide directly fuelwood, timber, and fodder. They also contribute to household income through non-timber forest products and traditional crafts and trade (Bajracharya, 1987). Community forestry is often described as a modern system with in modern development practices. However, indigenous groups like the Limbu have long practiced their own customary forest management systems. It is based on collective responsibility and indigenous knowledge.

After the political changes of the early 1990s, Nepal expanded the Community Forestry (CF) program immensely. The program mainly aimed to address deforestation. It was focused to control environmental degradation, and rural poverty. Under community forestry, parts of national forests are handed over to CFUGs for management and use (Nepal Forest Act, 1993). Users receive rights to use the forest, but they do not receive land ownership was main issues persisted till the now. If operational plans are not followed, the state can reclaim the forest (Gilmour *et al.*, 1989). Although CF promotes participation and collective decision

making is significant. The conditional nature of tenure has created uncertainty among some indigenous communities.

Community forestry operates as a partnership between the state and local users in Nepal is successfully run since decades. Government officials act as facilitators to operate it, while CFUGs manage themselves and protect the forest significantly. Over time, CF has become the largest forest management program in Nepal. It has received strong support from NGOs and INGOs. Studies show positive results in forest regeneration, biodiversity conservation, and local institution building in Nepal. Participation in planning and benefit sharing has strengthened the program significantly (Pokharel *et al.*, 2007). It has also helped communities build leadership skills and collective capacity which is an example of community forestry (Hayes & Nadkarni, 2001). In Eastern Nepal, forest management is often carried out through user groups where decisions are made collectively. Local rituals, beliefs, and cultural norms influence forest practices historically. Among the Limbu, forest use is closely linked with identity and social organization which is a main issues of debates. However, community forestry still faces challenges in Nepal related to ownership, equity, inclusion, and cultural recognition.

Nepal's forest cover more than 46.8% of the total land area of Nepal as of 2022, but concerns remain about forest degradation and declining need to cover quality life of people (World Bank, 2025). Forests are often described and give slogan as "*Hario Ban Nepal Ko Dhan*", meaning green forests are Nepal's wealth in Nepal. Community forestry was introduced at first to address these issues while improving rural livelihoods. In Dundamari Village of Jhapa District, community forestry has been implemented. However, it has not always linked with the socio-cultural practices of local communities and livelihood priorities particularly of the Limbu community.

Community forestry was formally introduced in 1978 and later strengthened by the Master Plan for the Forestry Sector in 1989. However, its outcomes have not been equal for all social groups (which) is a question on this sector. Research shows improvements in forest regeneration and income generation (Chhetri *et al.*, 1992). However, it has also created challenges such as unequal benefit distribution and limited livelihood improvement for poorer households (Adhikari *et al.*, 2006). Women are actively involved in forest activities, but they often lack decision-making power (Agarwal, 2009). Wealthier households tend to gain more benefits than poorer and indigenous households (Khanal, 2004).

Climate resilient strategies at present global crisis on forest context should be integrated into community forestry management. Indigenous knowledge system to protect forest from community level, it need to develop long-term interaction with the environment and community remains important but underutilized (Nimcachow *et al.*, 2011). In Dundamari Village, forests continue to shape the livelihood of local community, culture, and ecological practices of the Limbu community. This

continuity is rooted in the Limbu community's close relationship with forests and forest beings, as articulated in the foundational principles and ritual guidance of the *Mundhum*, particularly in the narratives of Tangsing Takmâ (the ritual of upholding the trees of life) and Tâmbhungnâ, the forest deity (Kainla, 2023).

Despite many studies on community forestry in Nepal and even abroad, there is limited research focusing specifically on the Limbu community of Dundamari, Jhapa. There is rarely found detailed empirical study on this reason and issues. Limited studies only found examining how community forestry affects their livelihood strategies and socio-cultural practices. Forest issues in Nepal are not only technical and instrumental. They are also social, political, and economic significances need to be explored. Differences in language, culture, and political orientation can limit meaningful participation in CFUGs (Baral, 1993). Therefore, it is important to understand the lived experiences of indigenous communities and their livelihood practices and identity which has associated to the forest within the community forestry framework.

In this context, the present study examines the impact of community forestry mainly on the livelihood practices of the Limbu community in Dundamari Village, Jhapa. The study identifies how forest resources contribute to their livelihoods. Similarly, it explores how community forestry has changed their livelihood strategies. This research focuses on indigenous perspectives and local practices on community forestry activities. It aims to provide a deeper understanding from local perspective of community forestry as a tool for sustainable livelihoods.

2. Objectives of the Study

The present study aims to examine the relationship between community forestry and the livelihood practices of the Limbu community in Dundamari Village, Jhapa, Nepal. The specific objectives of the study are:

1. To analyze the contribution of community forest resources to the livelihoods of the Limbu community in Dundamari Village.
2. To examine how community forestry has influenced or transformed local livelihood strategies within the Limbu community.
3. To explore indigenous perspectives and local practices associated with community forestry activities.
4. To understand the role of community forestry as a tool for supporting sustainable livelihoods from a local and indigenous perspective.

3. Literature Review

Research on community forestry in Nepal has increased over time mainly for development perspective. Many studies examine different sectors like, forest regeneration, institutional development, participation, governance, and livelihood. However, fewer studies focus on the social aspect of livelihood experiences of

specific indigenous communities from community forestry perspective. Present review brings together major theoretical and empirical works related to community forestry. It further discusses on forest dependence, indigenous knowledge, and livelihood change. It focuses on how community forestry management interacts with indigenous practices and local socio-economic realities at local context. Although there is extensive and diverse literature on community forestry in Nepal, there is no focused study on the Limbu community of Dundamari Village, Jhapa. In particular, there is limited research on forest based livelihoods and effects of community forest management in this context.

3.1 Theoretical and Analytical Foundations

The Sustainable Livelihood Framework (SLF) is commonly associated with DFID (1999) is well recognized. It is widely used to understand rural livelihoods. The SLF defines livelihood as a combination of capabilities, assets, and activities. It required for a means of living. In forest dependent communities, the SLF helps analyze how natural resources support their livelihood security. Ellis (2000) explains that livelihoods are dynamic based on diverse factors. They are shaped by surrounding ecological conditions, policies, markets, and institutions. In the context of community forestry, these dynamics appear in access participation, harvesting systems, benefit sharing, and institutional changes. Forest products may increase financial capital which support people's livelihood while participation in forest governance can strengthen social capital (Ellis, 2000).

Community forestry in Nepal is also understood through Community based Forest Management (CBFM) theory. This approach emerged as a response to centralized forest control system by the state. Arnold (2001) argues that when forest rights and responsibilities are transferred to local communities, the possibilities in both ecological and livelihood benefits can occur. Nepal's community forestry as internationally recognized for improving forest conditions and supporting rural livelihoods (Acharya, 2002).

Chhetri *et al.* (2013) emphasize that CBFM is based on rights and responsibilities. As them, user groups are responsible for sustainable management themselves. However, formal rights do not always ensure equitable outcomes beyond examinations of socio-cultural context. In indigenous settings, it is important to examine whether forest governance reflects cultural practices and livelihood priorities is primarily significant.

Common Property Resource (CPR) theory is also relevant. Ostrom (1990) challenges the idea that common resources inevitably degrade. She shows that communities can manage shared resources effectively when rules are clear and locally enforced. Community forests in Nepal follow this model through operational plans and internal rules to make it effective.

Dahal & Chapagain, 2008 note that CFUGs are legally recognized institutions with authority to manage forests. However, these institutions may also reflect local

hierarchies. Participation and benefits may not be equally distributed. Indigenous knowledge and cultural ecology provide another important perspective. It explains that indigenous knowledge is embedded in culture, beliefs, and lived experience. It includes sacred forests, ritual restrictions, and customary harvesting norms. Nimachow *et al.* (2011) show that tribal communities often regulate resource use through culturally based rules and practices. Indigenous knowledge as a system of beliefs and practices that promote respect for nature and culture equally (Gadgil *et al.*, 1993).

For the Limbu community, forest relations are not only based on economic. They are linked to identity, religion, and culture equally. Therefore, community forestry can influence both livelihood and cultural continuity. Social capital theory also helps explain community forestry consequences of the local community. Social capital as networks, norms, and trust that support cooperation between the members of community forestry (Putnam, 1993). In community forestry, collective decision making can strengthen social capital which is based on community perceptions differently. Adhikari and Lovett (2006) argue that CF can build both internal and external relationships for its better outcomes. However, empowerment depends on meaningful inclusion and participation. Similarly, Chambers and Conway (1992) define livelihood as the ability to secure basic needs using available resources and strategies. These ideas are especially relevant for indigenous communities, where forest access is knotted to culture and ancestry is significant for sociological research.

Many studies show positive impacts of community forestry in Nepal. Bhattarai (2016) explained that forest nationalization in 1957 weakened local access rights to the forest. Community forestry later restored user rights and enhance access of people on forest resources is seen significant in Nepal. Luintel & Banjade (2017) describe Community Forestry as one of Nepal's most successful forest programs which internationally recognized. However, inequality and unequal participation based on caste and gender remains a concern. Bijaya *et al.* (2015) report that benefit distribution can favor wealthier households compare to marginalized people. Similarly, Richards *et al.* (2003) questions on equity challenges on community forestry. Gender issues are also significant for the community forestry research. Nightingale (2002) argues that women's participation may be symbolic without real authority. It indicates gender gap in community management system. In an another side access to community forests reduces household costs for fuelwood and fodder at local level. Agrawal, & Chhatre, (2006) find out that based on their research timber and NTFP income supports local development. However, Shrestha and McManus (2008) argue that indigenous knowledge is often under-represented and ignore in forest plans and management. Recent studies show a need of deeper research on internal group dynamics and long term outcomes from community forestry (Bhandari *et al.*, 2025).

Indigenous knowledge literature emphasizes cultural values and ecological ethics regarding the community forestry research (Nimachow *et al.*, 2011). These perspectives are directly relevant to the Limbu community, whose identity and rituals are closely linked to forests historically. However, there is limited research on how formal community forestry interacts with specific indigenous practices among Limbu community. In Dundamari Village, Jhapa, there is no focused study on the Limbu community's livelihood patterns under community forestry governance is the research concern of the present study. This study addresses a gap by examining community forestry and livelihood generation among the Limbu community of Dundamari Village, Jhapa. The study aims to assess the impacts of forest resources on the Limbu community in Dundamari Village and to examine changes in their livelihood strategies under community forestry governance.

4. Research Methodology

This study employed a mixed-methods research design to examine the impacts of community forestry on the livelihood practices of the Limbu community in Dundamari Village, Jhapa, Nepal. By integrating quantitative and qualitative approaches, the study captures both measurable livelihood outcomes and the socio-cultural meanings associated with forest use and management within the community.

The research adopted an exploratory and descriptive design within the mixed-methods framework. The exploratory dimension facilitated the investigation of an under-researched area, particularly the relationship between community forestry and indigenous Limbu livelihoods. The descriptive dimension enabled the identification of patterns of participation, benefit-sharing, and livelihood strategies within the community forestry system.

The field study was conducted in Dundamari Village, Ward No. 8 of Shivasatakshi Municipality, Jhapa District, focusing on users of the Chulachuli Community Forest (CCF). Fieldwork was carried out between November and December 2025. The study site was selected purposively because the area represents a context where forest resources play a significant role in both livelihood practices and cultural life. The indigenous Limbu community in this region has historically relied on forest resources for subsistence, income generation, and socio-cultural and ritual activities.

Primary data were collected through semi-structured interviews, participant observation, and informal interactions with community members. Secondary data were obtained from government publications, census reports, community forest operational plans, policy documents, and relevant scholarly literature on community forestry and livelihoods.

According to the Central Bureau of Statistics (CBS, 2021), all households in Dundamari Village constitute the research universe. From this population, 100 respondents were selected through purposive sampling, ensuring that participants

possessed direct knowledge and experience of community forestry activities. The sample included individuals from diverse age groups, gender categories, and social roles to capture varied community perspectives.

Quantitative data were coded and analyzed using descriptive statistical techniques, including frequencies and percentages, to identify patterns of forest use, levels of participation, and livelihood activities. Relationship analysis was further employed to examine associations between socio-demographic variables (such as age, gender, occupation, and economic status) and participation in community forestry activities. Qualitative data were transcribed and analyzed through thematic analysis to identify key themes related to indigenous knowledge, governance experiences, cultural values, livelihood strategies, and issues of inclusion.

Ethical standards were maintained throughout the research process. Participants were informed about the purpose of the study prior to data collection, and informed consent was obtained from all respondents. Confidentiality and anonymity were ensured by removing personal identifiers during data coding, analysis, and reporting. The data were used solely for academic research purposes.

5. Data Presentation and Analysis

5.1 Respondent Profile and Social Structure

This analysis is based on 100 sampled households from the Chulachuli Community Forest User Group (CCFUG). Among the respondents, 70 percent are male ($n=70$) and 30 percent are female ($n=30$). Although men more often represent households formally, later findings show that women actively participate in forest-related activities and decision-making processes within the community. In Chulachuli the Limbu community has the highest representation, constituting 60% of the sampled households. This suggests that Limbu is a dominant ethnic group in the study area

The age composition shows a strong presence of economically active groups. Respondents aged 30-39 years constitute 40 percent. It followed by 40-49 years at 24 percent. Together, these two groups represent 64 percent of the sample. Younger respondents aged 20-29 account for 16 percent. Participation declines among older age groups, with 14 percent in the 50-59 age range and 6 percent above 60 years. This distribution suggests that community forestry participation and benefits are concentrated among households in active livelihood and productive stages.

Among the Limbu community of the study area 39 out of 60 households are belong to joint families, while 21 are under nuclear family structure. Similar patterns are observed among them. Rai households, where 8 out of 9 are joint families, and among Magar households, where 7 out of 9 follow joint family structure

This predominance of joint families has analytical significance. Extended households generally provide greater labour availability for forest-related tasks such as fodder collection, fuelwood gathering, and livestock care. Joint families also

allow pooling of resources and shared responsibility, which strengthens forest-based livelihood systems.

The caste and ethnic composition of the sample is uneven. Limbu households constitute 60 percent of the total sample. Rai represent 9 percent, Chhetri 5 percent, Tamang 5 percent, Brahmin 4 percent, Sunuwar 3 percent, Kami 3 percent, and Damai 2 percent. This distribution indicates that indigenous households, particularly the Limbu community, are the primary stakeholders in forest governance and forest-resource dependence. Smaller groups may have relatively limited representation in institutional processes.

Educational status is mixed. About 30 percent of respondents are illiterate, while 36 percent are literate without formal certification. Formal education levels show that 14 percent are below SLC. About 10 percent have completed SLC. Around 6 percent have intermediate education. Only 4 percent have a bachelor's degree or above. This educational profile helps explain communication practices. Forest rules and operational procedures are often shared through meetings. They are also communicated through oral discussions. Written documents are used less frequently.

Occupational patterns indicate strong reliance on agriculture. Agriculture is the primary occupation for 62 percent of respondents. Another 21 percent combine agriculture with wage labour. Smaller proportions combine agriculture with service (4 percent) or business (3 percent). Traditional occupations such as priestly work (2 percent), tailoring (3 percent), carpentry (4 percent), and blacksmithing (1 percent) appear in limited numbers.

These patterns of data show that community forestry is more closely linked to agricultural and subsistence support to the Limbu community. It shows lesser impact on generation of formal employment. Forest resources primarily strengthen farming systems and household-level survival strategies in the study area.

5.2 Forest Dependence: Livestock, Biomass, and Timber Use

Livestock ownership is widespread in the study area. This reflects the strong integration between farming and forest resources. The total livestock count in the sampled area reaches 5,624 animals. Poultry dominates and represent 46.6 percent. Pigs represent 27.8 percent, and goats 18.7 percent. Larger livestock appear in smaller proportions. Cows represent 1.9 percent, buffalo 1.7 percent and oxen 1.6 percent. The high number of pigs and poultry suggests livelihood strategies that combine subsistence consumption and local level income generation. Goats and cattle require regular fodder supply. It reinforcing the importance of forest based grazing and biomass collection.

Daily consumption patterns further demonstrate forest dependence. The average household size is 7.1 members, and the average livestock holding is 12.3 animals per household. On average, each household consumes 0.9 bhari of firewood per day and 5.2 bhari of fodder per day.

These figures indicate that both household energy needs and livestock feeding systems are structurally dependent on forest access. Therefore, CFUG rules regarding collection schedules, product distribution, and access restrictions directly affect livelihood stability.

Timber use through the CFUG is also significant. Two major timber types are reported. *Kukat* (less valued) timber is used by 85 percent of households, with a total use of 1,145 logs. *Sâl*, *Shorea robusta* (valuable timber) timber is used by 60 percent of households, with 1,120 logs recorded. Although fewer households use *Sal* and the total volume is nearly equal to *Kukat*. This suggests relatively higher consumption per household among *Sal* users. It was possibly due to its durability for housing and structural construction. At the same time, community forest is not the only source of subsistence materials. Community forest supplies 26 percent of grass and green fodder, 21 percent of leaf litter, 30 percent of fuelwood, and 37 percent of house timber. The remaining share comes from private land, natural forest, and other local sources.

This data show that community forestry is a major contributor for the livelihood of Limbu community. However, it is only a partial part of a diversified resource system. Households depend on multiple sources to meet their subsistence and livelihood needs.

5.3 Governance and Participation

Awareness of governance rights and responsibilities appears high among member's community forestry. About 90 percent of respondent's report that they are aware of their rights and duties as CFUG members. Such information is mainly shared through meetings with user groups and discussion. Rule enforcement is perceived as strong seen in different task of work among members of user group. Around 72 percent replied that rules are always enforced by its rules and regulation procedures. Only 2 percent report that rules are never enforced. This trend of data suggests that compliance mechanisms are functioning. Institutional authority is recognized within the community.

Participation across different stages of community forestry is seen consistently high and remains at significant level. Respondents report involvement in formation decisions (82 percent). They also participate in plantation decisions (85 percent). About 88 percent are involved in site selection and seedling selection. Around 81 percent take part in nursery management. Participation in conservation and management activities is 91 percent. About 81 percent are involved in weeding or replantation activities. Participation in benefit sharing reaches 100 percent which is significant for community forestry system. This universal engagement is significant because benefit sharing directly affects livelihood outcomes and its support to the members of user group. These patterns show that community forestry in Chulachuli is not limited to nominal membership alone. It involves participation in planning, implementation, and benefit distribution processes of community forestry.

Women's participation is widely acknowledged but shaped by structural constraints seen in this community forestry. About 79 percent confirm that women are actively involved in community forestry activities, while 21 percent disagree. However, barriers remain cause of gender gap. Cultural restrictions are reported by 40 percent. Lack of education is identified by 23 percent. Household responsibilities limit participation for 22 percent. Another 15 percent mention exclusion from decision-making.

Comparing overall participation in community forestry in Chulachuli, 55 percent consider women's involvement to be equal to men's participation. Around 35 percent believe it is lower, while 10 percent consider it greater. These figures of data suggest that women are visibly present in community forestry activities. However, deeper influence in leadership and strategic decision-making may still be limited by social norms and time constraints.

The executive committee reflects partial diversity. It consists of 15 members. Most fall within the 31-50 age group. Twelve members are married. Ten members belong to Janajati (Ethnic) communities. The committee includes 6 women and 9 men. This composition shows movement toward inclusion, though male dominance continues.

Monitoring practices are regular and institutionalized. About 75 percent report that community members are involved in monitoring forest activities. All respondents report that the committee conducts monitoring on a weekly basis. This structured oversight supports consistent rule enforcement and forest protection. External support is primarily government based. Respondents report no involvement from NGOs or INGOs. All respondents indicate that government agencies provide support. This support includes training and resource provision (90 percent), monitoring and evaluation (85 percent), and communication with government offices (80 percent). These findings suggest that community forestry in this site is significantly attached in state facilitation rather than donor driven intervention and external imposed.

5.4 Livelihood Outcomes of Community Forestry

Perceptions of livelihood change found are largely positive. About 60 percent report that household income increased after joining the community forest is significant of this community forestry. Around 15 percent of respondent report no change. Ten percent respondents said they have felt a decrease, and 15 percent state that they do not know about the direct impact of community forestry.

These responses under different level of impact are based on perception rather than precise monetary data. The dominance of the "increased" category, which is significant size, suggests that community forestry is viewed as a supportive livelihood institution. The main livelihood activities influenced by community forestry are agriculture and livestock rearing for rural community. About 85 percent

report expansion of farming activities due to forest access. Seventy percent of them told increased involvement in animal husbandry.

In the study area, around 40 percent of respondent report engaging in the sale of forest products such as fuelwood, fodder, or timber from the community forestry. This figure indicate that community forestry contributes more indirectly through strengthening farm and livestock production systems and ensuring resource access to the local farmers. Direct employment generation from the community forestry remains limited.

Energy security emerges as a central livelihood benefit from its beginnings. Seventy percent of respondents meet more than 75 percent of their household fuel needs from the community forest. Similarly, 15 percent meet between 51 and 75 percent of their fuel needs through forest access. Only small proportions of respondents depend less on the community forest. Consistent data with this, 80 percent rate the community forest as “very important” for household livelihood is significant for rural livelihood system. These findings show that position of community forestry for rural livelihood as a core livelihood infrastructure in the local economy. It plays a central role for the community subsistence in biomass energy provision, livestock feeding systems, and agricultural sustainability. Community forestry in Dundamari therefore functions not only as a conservation mechanism and protect eco-diversity but also as a foundational support system for rural livelihood stability and community change.

6. Discussion

This study shows and justified that community forestry in Dundamari, under the Chulachuli CFUG, operates both as a livelihood support local institution and as a local governance structure faced by local community. Its outcomes are shaped by forest dependence, participation patterns, and the socio-cultural structure of the mainly Limbu community. The discussion below connects the empirical findings with the relevant literature which focusing specifically on community forestry and Limbu livelihoods at local level.

6.1 Community Forestry as a Livelihood Support System

The findings clearly indicate that community forestry contributes directly to household livelihoods. It strengthens energy security, supports to the farm and livestock systems. It provides access to timber for construction and maintenance equally. A large proportion of households meet more than three quarters of their fuel needs from the community forest. Most respondents also describe the forest as very important for their livelihood justified that community forest work as livelihood support system.

These results found under different nature and level of data link with the Sustainable Livelihood Framework (DFID, 1999). The framework emphasizes the role of natural capital in strengthening livelihood security and sustainability. In this

context, forest products function as natural capital that reduces household vulnerability and supports resilience (Ellis, 2000).

In rural and forest dependent households such support is expected because they are historically connected to the forest based livelihood. Forests supply fuelwood, fodder, timber, and other products that reduce direct household expenditure and it may support household saving indirectly. They also serve as a livelihood safety net, particularly where agriculture remains the dominant occupation (Bhatia, 1999). The occupational data from this study confirm that agriculture based livelihoods dominate in Dundamari. Livestock ownership is also extensive in those community setting. These patterns reinforce the argument that forests are structurally integrated into rural farming systems. Forest resources reduce production costs and stabilize subsistence strategies is significant among people of Dundamari. This reflects earlier observations that natural resources are central to livelihood security in agrarian communities (Chambers & Conway, 1992).

However, the study also shows partial dependence on forest. The community forest supplies a significant share of fodder, leaf litter, fuelwood, and timber. At the same time, private land and other forest sources continue to contribute it. This diversified pattern supports Ellis's (2000) argument that livelihoods are dynamic and depend on local context. Households rarely depend on a single resource base. Instead, they combine multiple sources to manage uncertainty and seasonal fluctuation.

6.2 Livelihood Change through Agriculture and Livestock Intensification

The most visible livelihood shifts in this study relate to farming and livestock expansion from the support of community forest. A large proportion of respondent's told increased agricultural activity and animal husbandry after joining the community forest. In contrast, direct employment opportunities provided by community forestry remain limited. This suggests that community forestry in Dundamari does not function primarily as a wage generating mechanism. Instead, it strengthens existing livelihood systems. It stabilizes biomass supply, ensures fodder access, and supports livestock production which indirectly make easy their livelihood.

This finding is consistent with earlier research in Nepal. Community forestry often improves subsistence security and farm productivity rather than creating formal employment (Adhikari *et al.*, 2006). From a theoretical perspective, this outcome supports with the Sustainable Livelihood Framework and livelihood theory. Improved access to natural capital and institutional support can enhance household strategies and livelihood without fundamentally changing occupational structures and direct income generation (DFID, 1999; Chambers & Conway, 1992). In Dundamari, community forestry reinforces agriculture based livelihoods rather comparison to transforming them into wage based systems.

Participation in different stages of community forestry is seen significant. Respondents report involvement in formation, plantation, site selection, and conservation activities. Participation in benefit sharing is important. This shows that the CFUG functions as an active local institution which supports to their long-term livelihood system. These findings of this research are associate with Common property resource theory in some extent. Ostrom (1990) argued that common resources among community members can be managed successfully if rules are clear for all and monitoring is regular and impartial. In Dundamari, monitoring is frequent and rule enforcement is strong.

Nepal's community forestry model recognizes CFUGs as local institutions with authority over forest management (Dahal & Chapagain, 2008). The findings from this study support the view that participation in planning, implementation, and benefit distribution strengthens institutional sustainability (Nadkarni, 2000). However, participation is not socially neutral. Most respondents belong to economically active age groups. Men are often household representatives under patriarchal social structure. This reflects common rural institutional patterns where decision making authority is associated to age and gender. Participation therefore follows existing social structures is need to be further explored.

6.3 Gender Inclusion and Structural Constraints

Women are actively involved in community forestry activities. They are also present in the executive committee. However, size of participation is low. This suggests that inclusion has improved eventually. Community forestry can create opportunities for leadership and institutional learning (Adhikari & Lovett, 2006). In practices, barriers remain significantly imbalance. Cultural norms, household responsibilities, and limited education restrict women's participation in the study area. Some women are excluded from key decisions due to the cause of structural exclusion. These findings match earlier studies showing that women often contribute labour but have less influence in governance and control system (Agarwal, 2001; Nightingale, 2002). Participation is therefore meaningful for community forestry but not seen fully equal.

6.4 Indigenous Identity and Household Organization

Joint family households are common in the Limbu community forms the majority in the sample. This structure affects how community forestry operates. Joint families provide labour for forest related activities. They share responsibilities and pool resources appropriately. Livelihood theory explains that households act as units that organize labour and assets for survival (Chambers & Conway, 1992; Ellis, 2000). In this case, joint family organization mainly among Limbu community strengthens engagement in forest use. Forests also have cultural importance. They are linked to rituals, beliefs, and identity. Community forestry therefore influences both livelihood and cultural practices. When formal rules do

not fully recognize indigenous knowledge, cultural dimensions may be overlooked and regulate community based institutions (Shrestha & McManus, 2008).

6.5 Equity and Representation

The CFUG includes several caste and ethnic groups. However, the Limbu community is numerically dominant in the study area. This dominance affects representation in community forestry and influence in the process of community forestry. Research shows that local institutions can reflect existing social hierarchies (Kanel & Dahal, 2008). In this study, participation levels are high among respondents. Benefit sharing among members of community forestry is widely described positive which is significant. However, influence in operating community forestry based on caste, ethnicity and gender may still be influenced by their social affiliations. Some households report income improvement significantly. At the same time while others report no change to their economic status. This pattern reflects findings from other studies showing that livelihood benefits are not equal for all in different context (Bijaya *et al.*, 2015). Outcomes from community forestry of the study area depend on household capacity, social composition, and access.

7. Conclusion

This study shows that community forestry in Dundamari of Jhapa is not only a system of forest protection. It functions as a livelihood support institution for the local community. It also serves as a local governance structure within an indigenous socio-cultural setting of Eastern Nepal. Community forestry affects daily life through access to fuelwood, fodder, timber, and livestock support within the Limbu community. At the same time, it shapes decision making among members of community forestry user group (CFUG), patterns of participation, and local authority structures. The findings indicate that the meaning of benefits and supports from community forestry goes beyond material products. It also includes stable access to resources, participation, and recognition within local institutions. Community forestry organizes forest dependence through formal rules and collective management from social and cultural mind set. However, it does not automatically transform economic structures because of androcentric way of thought. Instead, it stabilizes existing agriculture-based livelihoods of local community which is significant for community based support system.

The study also confirms a broader pattern found in Nepal's community forestry experience. Participation alone does not ensure equity or equal social ownership. Even where monitoring is strong and engagement is high the differences remaining a significant level. Gender roles, education, age, and household structure influence decision-making processes. Women participate actively in its all process, on the other hand structural barriers remain that make hinder to get vital role and control. Although, representation exists significantly unequal, authority may still follow existing social patterns.

For indigenous communities, cultural association is an additional concern when examining community forestry and its practices. Forests are not only economic assets among them, but it in Limbu community is also part of identity, belief, and customary practice. Formal operational plans and governance procedures do not always fully reflect these cultural dimensions in Nepal. Long-term sustainability therefore depends not only on government rule encroachment. However, it also on whether governance becomes inclusive and culturally responsive and socially respectful to the local community.

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